

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.	)	

September 1, 1981,

1:30 o'clock p.m.

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

PRESENT:

MR. JAMES T. HYNES,

MR. MICHAEL A. POPE,

MR. JEFFREY C. FORT,

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, was there ever a time, to
your knowledge, when people at Monsanto attempted to
quantify the amount of PCB out in the environment in
the United States?

A Not to my knowledge.

Q To your knowledge, was Monsanto asked to do
that by any outside persons outside the employ of
Monsanto?

A Not to my knowledge.

Q I have some additional customers' letters I
want to show you, but before I do that, I would like
to ask you this:

Is there a place where a list maintained
or was maintained of customers who were sent letters
directly from Monsanto on the subject of PCBs?

A I don't know. I have never seen such a list.

Q Has anyone told you that such a list was
being kept?

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A No.

Q Did you ever talk with anybody at Monsanto about the subject of who particular letters regarding PCBs would be sent to?

A Oh, yes. Our discussions always centered on customers' records at that time.

Q That is as far as your involvement got with that matter?

A Yes.

Q Were you asked at any time to assist in interpreting whether one customer was on one list or another list with regard to the amount or the type of product it was receiving?

A No.

Q Did you do any consultation with other people at Monsanto regarding whether a particular letter should go to one customer as opposed to another?

A No.

Q Let me show you a document which I will ask the reporter to mark as Papageorge Deposition Exhibit No. 50 for identification, being a 2-page letter, the first page of which is a letter entitled Dear Customer, dated June 11, 1970, from Norm Johnson.

(Papageorge-OMC Deposition

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WATER_PCB-00055275

Exhibit No. 50 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q I show you the document we have marked as
Papageorge Deposition Exhibit No. 50 for identification,
Mr. Papageorge, and ask you if you have ever seen
a copy of that letter before.

A I recall this letter, yes.

Q Did you assist in the drafting of that letter?

A Yes.

Q Can you determine from this letter to whom
it was Monsanto's intent that it would be sent?

A It was the users of the products listed.

Q Specifically?

A The Pydraul products.

Q All of the Pydraul products or Pydraul 625,
Pydraul AC, Pydraul AC Winter Grade and Pydraul 540
only?

A I don't know that. I don't know that that
distinction was made.

Q Calling your attention to the substance of
the letter which advises customers that those four
products are being phased out, doesn't it?

A Yes.

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Q As far as you recall, was it Monsanto's practice during 1970 in the PCB areas to advise customers of all products or all Pydraul products that certain types were being phased out?

A I don't personally recall distinctions being made.

Q Would it be fair to say that based on your recollection, letters such as Exhibit No. 50 were sent to all Pydraul users?

A That is my recollection.

Q I take it similarly in the other uses when Monsanto products containing the higher Aroclors were phased out, it was the practice to send a letter to that effect to all the purchasers of the various uses within that category?

A Yes.

Q The reference in Paragraph 3 of Exhibit No. 50 refers to:

"During the next 90 days, as inventory is depleted in warehouses around the country..."

Can you tell me what inventory that is referring to?

A It is referring to the inventory of the replaced Pydrauls listed in the second paragraph.

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Q Are those Monsanto inventories of those four Pydrauls?

A Yes.

Q Do you know why the introduction of new fluids was put off until those inventories were depleted?

MR. SCHINK: I object to the form of the question. There is nothing in that document that suggests that the introduction was put off until those inventories were depleted.

BY MR. POPE:

Q Bearing in mind Mr. Schink's comment, Mr. Papageorge, is it your understanding that Mr. Johnson is advising customers that as inventory depleted, the new formulations will be shipped and not sooner?

A Yes, on a warehouse by warehouse basis.

Q But if the customer wanted the new fluid immediately and he was in an area where the warehouse had not yet been depleted under the normal circumstances as of June 1970, he would have to wait until that inventory was depleted, is that right?

A Yes, normally, yes.

Q Why was that practice employed?

A That seemed to be the most effective way to supply customer needs, at the same time introducing the

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new material without any disruption and unnecessary movement of material.

And the fluids were all compatible, they worked in the systems equally well.

By that time, the program or the suggestions to customers for control of losses was well entrenched so it was perceived as being a situation that would not result in further problems.

Q If the customer control techniques were well entrenched, what was the necessity for bringing out a new product as well?

A That is to make doubly certain that the future uses for the material would not, because of accidents and the like, introduce PCBs into the environment.

Q Isn't it a fact, Mr. Papageorge, that the practice of depleting the inventory before filling orders for new formulations was designed to avoid any financial losses to Monsanto arising from those previous formulations?

A Not to my knowledge.

Q You never heard anybody suggest that?

A That is right.

Q The subject was never discussed in your presence?

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A That is right.

MR. POPE: I would ask the reporter to mark as Papageorge Exhibit 51 for identification, a one-page exhibit, being a letter from Norman Johnson dated August 27, 1970.

(Papageorge-OMC Deposition
Exhibit No. 51 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q I show you that exhibit, Mr. Papageorge, and ask you if that is a document you have seen before.

A Yes, I have seen this.

Q Did you help draft that one as well?

A I reviewed earlier drafts. Yes, I participated.

Q Can you tell me what the purpose of that letter is?

A This was to announce to users of Pydraul that the formulation referred to as Pydraul F-9 has been reformulated to remove the use of PCBs.

Q Is it your understanding that that letter was sent to all users of Pydraul products?

A That was my understanding.

Q As opposed to simply customers of F-9?

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A That is correct.

Q Do I correctly understand that the practice with this new formulation, F-9A, was the same as the other Pydrauls we saw in the last exhibit; namely, that the new formulations will be shipped only after the inventories on hand in warehouses around the country were depleted?

A That's what it states, yes.

Q Is it also correct that the replacement of this fluid was the reformulation of higher chlorinated Aroclors which had previously been in F-9?

A As I remember, F-9 had the PCBs -- let me see now.

It was my understanding that F-9 did not have the PCBs and 60 percent chlorine in it. Now, I am confused. I didn't think that F-9 had the '54 and '60 in it.

Q If that was the case, what was the significance of the reference in the first paragraph to Aroclors 1254 and 1260?

A It was intended to remind the recipient of this memo of the previous mailing to refresh his memory in the event, so it doesn't catch him totally unprepared of what is going on here.

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Q Was it the practice of Monsanto in sending customers letters such as this to make reference to Aroclors 1254 and 1260 in letters where the balance of the letter did not deal with products that contained Aroclor 1254 and 1260?

A I don't know. No, I wouldn't call it a practice. I would say that was one, I don't think it was an established practice as a must.

Q In a letter such as Exhibit 51, was it your view that this practice was confusing or likely to be confusing to a customer?

MR. SCHINK: What practice are you referring to now, Mr. Pope?

MR. POPE: Writing a letter where the subject matter of the letter is a product which does not contain Aroclors 1254 and 1260.

MR. SCHINK: I thought at this point the witness had indicated that he wasn't sure with respect to F-9 whether it did or didn't contain Aroclor 1254.

MR. POPE: If that is true, Mr. Papageorge, we can use another example or I can just make it as a general proposition, either way, whatever you prefer.

(Mr. Jeffrey C. Fort entered
the deposition room.)

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BY MR. POPE:

Q Did you understand my question? I don't want to mislead you.

A You are asking if the inclusion of this paragraph leads to the confusion on the part of the reader?

Q And where the subject matter of the letter is a product which is a product that does not contain Aroclor 1254 and 1260.

MR. SCHINK: Mr. Pope, you showed the documents earlier with respect to the formulation of Pydraul F-9 that, as I recall, made reference to 1254 -- excuse me, Aroclor 1248.

BY MR. POPE:

Q The question to you, Mr. Papageorge, is did you consider whether in sending a letter to a customer regarding a product that did not contain Aroclor 1254 and 1260 there was no potential confusion to him in starting the letter by reference to the fact that Aroclor 1254 and 1260 had been found in the environment?

MR. SCHINK: The reference is not to Aroclor 1254 and 1260. The reference in the first paragraph of Exhibit 51 is to chlorinated biphenyls containing 54 percent and 60 percent chlorine by weight. I don't believe that is the same as 1254 and 1260, Mr. Pope.

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BY THE WITNESS:

A As best I recall on this letter, when this letter was composed, the intent of the first paragraph is to give some continuity in the recall of the recipient of the memo regarding what he had been told about the PCB situation. It was not perceived at that time as being confusing to the recipient.

BY MR. POPE:

Q Was it a matter that was given consideration?

A Yes.

(Brief interruption.)

MR. SCHINK: Could we take a break for a couple of minutes?

MR. POPE: As a matter of courtesy, I would be happy to.

(Brief recess had.)

BY MR. POPE:

Q Mr. Papageorge, I show you what I will ask the court reporter to mark as Papageorge Deposition Exhibit No. 52 for identification, being a copy of a letter from Mr. C. L. Bradford to Dear Sir, dated February 1, 1971.

(Papageorge-OMC Deposition
Exhibit No. 52 marked for
identification, 9/1/81, TLU.)

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BY MR. POPE:

Q Mr. Papageorge, I hand you that exhibit and ask you if you have seen it before.

A Yes.

Q Can you tell me the context in which you have seen it before?

A I was involved in the review of an earlier draft and I saw the finished copy before it was mailed.

Q Can you tell me the purpose of the letter and to whom it was intended to be sent?

A As I understood it, this was again sent to Pydraul customers on record and it announced the re-formulation of five Pydrauls listed and their eventual availability to the customer.

Q Is it your understanding this letter went to all Pydraul customers?

A That is my understanding.

Q And the five Pydrauls being referred to were 312, 135, 230, 540-A and A-200, is that right?

A Yes, that is correct.

Q These reformulations were intended to contain no polychlorinated biphenyls, is that correct?

A That is correct.

Q Is it true that notwithstanding Mr. Bradford's

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statement there that Pydraul A-200B did contain chlorinated biphenyls --

MR. SCHINK: You are not asking about the formulation but what the product as manufactured contained?

MR. POPE: As the product sold, yes.

BY THE WITNESS:

A Yes, eventually Pydraul A-200B was announced that it contained trace amounts of PCBs.

BY MR. POPE:

Q That is the subject matter we talked about this morning. There was no analysis done at the time it was sold because you had no understanding there would be PCBs in that?

A That is correct.

Q Do you know how long the product was sold before somebody at Monsanto analyzed it for the presence of PCBs, referring to A-200B?

A Pydraul, no. It was months later.

Q At the time that analysis was done, months later, were customers immediately advised of the presence of PCBs in A-200B?

A There was some written material, I vaguely recall the existence of some written material that did refer to the presence of PCBs in the reformulated product.

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Q Was that in the form of a letter from Bradford to customers advising they had made a mistake earlier?

A I don't recall it as a letter.

Q Did any of the reformulations referred to here in Exhibit 52 have a similar situation; namely, that there was ultimately a determination made that those products contained PCBs?

A I don't recall the exact formulation of all those Pydrauls listed, so I cannot really respond to that.

Q Go ahead, tell me --

A The inadvertent presence of PCBs is associated with use of the chlorinated terphenyls in a reformulation.

Q Were there other Pydraul products reformulated with the chlorinated terphenyls, is that the proper terminology?

A Yes.

Q Were there some additional Pydraul products with that reformulation which ultimately were determined to contain some amounts of PCBs?

A Yes.

Q Were those hydraulic fluids?

A Yes.

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Q What action was taken with regard to those once that determination was made by Monsanto? I take it you don't remember which Pydrauls those were?

A That is correct.

Q What action was taken?

A Eventually all of those formulations were reformulated to remove all chlorinated hydrocarbons.

Q With respect to those other formulations where it was determined that the product contained some PCBs, were customers advised in writing of that fact?

A I don't know.

Q Who would know that?

A I don't know.

Q Would Mr. Bradford be a likely source of information on that subject?

A Yes.

MR. POPE: Miss Reporter, please mark as Papageorge Deposition Exhibit No. 53 for identification, a one-page exhibit, being a letter from C. Larry Bradford dated April 15, 1971.

(Papageorge-OMC Deposition
Exhibit No. 53 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

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Q I hand you that document, Mr. Papageorge, and I ask you a similar question with regard to that exhibit. Have you seen it before?

A Let me read it.

Q Take your time.

A I don't remember specifically, this letter.

Q You have no doubt that you saw a copy of that letter, either prior to its being sent out or shortly thereafter, do you?

A I don't remember the letter, per se. I do remember the contents.

Q My question is would I be correct to presume that you received a copy either shortly after it went out or before?

A Yes.

Q There was not anything about your job that had changed right before April 15, 1971, was there?

A No, sir.

Q What was the purpose of this letter, do you know?

A I do not know.

Q Do I understand that you are aware of the basic subject matter discussed in that letter, is that what you said?

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A Yes.

Q Tell me what you recall about the events leading up to your knowledge of those events, what do you recall about the subject matter of that letter?

A It all ties in with Corporate Management Committee approved program to phase out of all the hydraulic fluids containing PCBs and there was a target date, as I recall, of doing so by the end of 1970 and certainly by the early part of 1971. That was all implemented, completed, so this letter reflects the success of that part of the withdrawal program.

Q Did Mr. Bradford discuss with you the idea of sending out such a letter to customers?

A I don't remember.

Q Is there any reason that you know of why you would play less of a role in your reviewing of that letter prior to its being sent out than the role you played with respect to Exhibit 52 or some of the other various letters we have reviewed?

A Well, the other letters contained new information for the benefit of the customer. This sort of summarizes all the previous activity that took place. That is the difference I perceive.

Q You don't know what the purpose was in sending

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this letter out at that time?

A As I said earlier, I don't know.

Q By April 15, 1971, had Monsanto discovered that there were PCBs in the A-200B as manufactured and sold?

A I don't recall when the analysis was made. My vague recollection is that this was still early.

Q We better make a reference to what you mean by "this."

A This reference, Mr. Bradford's letter, Papageorge Exhibit 53, in which he states there are no PCBs present. I believe that was the state of our knowledge on April 15, 1971.

Q But as of that date, you subsequently learned there were in fact PCBs in A-200B, is that right?

MR. SCHINK: What do you mean "after that date"?

MR. POPE: Strike that.

BY MR. POPE:

Q Subsequent to April 15, 1971, you learned there were PCBs in A-200B as manufactured and sold, is that right?

A That is correct.

Q Did Mr. Bradford, to your knowledge, clear the statements in this letter with anybody in the Research

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Department before he sent it out?

A I don't know.

Q Did he clear it with Mr. Bergen before he sent it out?

A I don't know.

Q Was it a subject of discussion at any of your task force meetings?

A The subject of discussion was the letter itself or the contents?

Q Either. I don't know. If one was, just tell me what it was.

A The lack, presence of PCBs in the reformulated Pydraul products was common knowledge by April 15, 1971 to every member of the task force. It was an old subject by then.

The task force, as best I recall, did not address itself as to whether or not Mr. Bradford should send out a letter on that subject.

Q As to whether or not the customer should be advised or what the specifics of that advice would take was not something that was discussed by the task force, so far as you recall?

A Not to my knowledge.

Q The task force was still in place at that time,

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was it not?

A Yes.

Q Do you know what basis Mr. Bradford had to advise customers that the reformulated products would give them equal or better performance than the previous products?

A It was based on the studies made by the Research Department to demonstrate proper performance by the reformulations and this was passed on to the Marketing people. In fact, that performance had to be demonstrated before the material would be manufactured.

MR. POPE: I would like to ask the reporter to mark as Papageorge Deposition Exhibit No. 54 for identification, a one-page exhibit, being a letter from Mr. Howard Bergen dated February 28, 1972.

(Papageorge-OMC Deposition

Exhibit No. 54 marked for

identification, 9/1/81, TLU.)

BY MR. POPE:

Q I hand you that document, Mr. Papageorge, and ask you if you have ever seen that before.

A Yes, I recall this memo or letter.

Q Is the reference in Mr. Bergen's first line to a previous letter, does that refer to the letter

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dated January 31, 1972, as far as you know?

A It refers to early February, the customer being informed about the removal of all chlorinated compounds.

(Papageorge-OMC Deposition
Exhibit No. 54 previously
marked for identification was
withdrawn.)

(Papageorge-OMC Deposition
Exhibits Nos. 54 and 55
marked for identification,
9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, do you recognize Exhibit 54 for identification?

A I recognize this.

Q Is it your understanding that this letter was to go to all Pydraul users?

A Yes.

Q That would be all Pydraul users as of January 31, 1972, correct?

A Correct.

Q Was it your practice to send such letters to users of Pydraul?

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A Not to my knowledge.

Q What was the purpose of the January 31, 1972 letter as far as you know?

A This is to inform all customers on record of Pydraul fluids that by January 30, 1972, the new Pydrauls --

MR. SCHINK: Do you mean June?

BY THE WITNESS:

A (Continuing.) I mean June 30, 1972, that all the Pydrauls available from that point on would contain no chlorinated components.

BY MR. POPE:

Q Was Pydraul A-200B included within that category?

A Yes.

Q Do I correctly understand that that practice or policy was going to be that the reformulation or the product to replace A-200B was going to be made available as soon as inventories of A-200B were depleted?

A Yes.

Q Similar to the practice, the references we saw in other letters, is that right?

A Yes.

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Q Is it true with respect to those other Pydraul products we discussed a few minutes ago, the chlorinated terphenyls which Monsanto discovered contained PCBs as manufactured and sold, those also were going to be included within this letter of January 31, 1972, is that right?

A That is my understanding, yes.

Q And similarly, were those products, the replacement fluids, going to be made available after the warehouse inventories had been depleted? Is that right, Mr. Papageorge?

A To the best of my understanding, yes, sir, yes.

Q As of January 31, 1972, do you know whether customers of those fluids, the A-200B and the other chlorinated terphenyls which were learned to contain PCBs, had those customers been advised of the fact that their fluid, the new fluid they were purchasing, did contain PCBs?

A I don't know.

Q Did you ever discuss that subject with Mr. Bergen prior to January 31, 1972?

A Yes, yes.

Q Tell me about that discussion if you would.

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What was the context in which that discussion took place, if you recall?

A I remember our discussing the findings of the laboratory and the surprise that both of us felt at the time. We also discussed the fact that it was in there, in very, very low quantities.

Q What kinds of quantities? Do you have a way to estimate that for us?

A As I remember, they were in the low parts per million. I don't remember the magnitude.

Q The 10 to 20?

A Yes, that's close. That's close.

Q Certainly detectable by the technology available at the time, was it not?

A Yes.

Q I am sorry. I interrupted you, excuse me.

A And it was believed that if the fluids were properly controlled as we had been advising our customers, that the small amount of PCBs should pose no serious problem when compared to the millions of pounds already out there in use in thousands of systems.

Q Did you and/or Mr. Bergen at that discussion conclude that there was no need to advise customers of the presence of PCBs in these fluids?

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A No, we did not reach any conclusion.

Q Was the question raised by either of you as to whether or not customers should be advised of that fact that Monsanto had just learned?

A I don't recall that being raised.

Q As far as you know, it wasn't raised at that meeting?

A I don't remember it as being raised.

Q Do you remember it ever being raised by Monsanto?

A No.

Q Calling your attention to Papageorge Deposition Exhibit No. 55 for identification, I believe you started to say you were familiar with that letter dated February 28, 1972.

A Yes.

Q Did you participate in the drafting or review of that letter prior to it being sent out?

A Yes.

Q What was the purpose of that letter?

A As I recall, this was sort of a, I'm going to call it status report, to the customer from Mr. Bergen following up on his January 31 letter informing them of the newly formulated Pydrauls with a promise

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to again write within a month or so to bring them abreast of any further concerns or plans.

Q As you read those letters, is there additional information in Exhibit 55 that was not conveyed to the customer in Exhibit 54?

A Well, the text speaks for itself, I believe it does. The second letter elaborates or reinforces the fact that these materials are approved by Factory Mutual as a less hazardous fluid. And it does inform the customer that the new products are compatible with the material already in use in the system.

Q Were those facts that were not known to Monsanto as of January 31, 1971?

A No, they were known.

Q What was the thought process involved in sending these letters? Were they to go to the same customers?

A Yes.

Q Was that policy adopted by Mr. Bergen to start sending out the monthly letters to customers regarding Pydraul?

A He never expressed that as a policy.

Q Did you ever ask him why all of a sudden these letters are going out?

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A No, I didn't.

MR. SCHINK: I object to the characterization of all of a sudden. This is about the eighth letter we have seen within a two-year period.

MR. POPE: Twice in one month.

BY THE WITNESS:

A They were different months.

BY MR. POPE:

Q 30 days --

MR. SCHINK: I don't believe that is correct. You showed the letters before from February 9 and later dated February 1970.

MR. POPE: Different customers, to my understanding.

MR. SCHINK: Well, I didn't know you were under oath.

BY MR. POPE:

Q Was Mr. Bergen, to your knowledge, asked by the Marketing Department to write letters to customers on the Pydraul replacement fluids?

A I don't know.

Q As of early 1972, were there expressions from the Marketing Department of resistance by customers to reformulation of Pydraul fluids, second reformulation of

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Pydraul fluids?

A I didn't hear of any resistance.

Q It is true, is it not, that the fluids we are talking about in these letters in 1972 were a second replacement fluid within about a two-year period, were they not?

A Yes.

Q For example, a customer had been changed from A-200 to A-200B and then --

A Yes.

Q -- from A-200B to a new product containing no PCBs, is that right?

A Yes.

Q Was a similar situation occurring or had it occurred with respect to the other Pydraul fluids?

A Yes.

Q You did not hear of any resistance from customers to this current change in early 1972, is that right?

A That is correct.

(Papageorge-OMC Deposition

Exhibit No. 56 marked for

identification, 9/1/81, TLU.)

BY MR. POPE:

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Q Mr. Papageorge, I show you Papageorge Exhibit 56 for identification, a two-page document, first page of which is a letter from Mr. Bergen dated March 15, 1972. Attached thereto is a sheet entitled Conversion.

I would like to show you Exhibit 56 and ask you if you participated in the drafting of that letter.

A Yes, I recall this and I did participate. I was involved.

Q What was the purpose of that letter?

A This was a follow-up on the previous letters and previous two exhibits. And it included with the letter a list of the Pydraul fluids showing how the new designations compared to the old and which formulation replaced the old formulation.

Q Consistent with the letters we have seen before, the practice with these was to make them available when the old formulations were depleted, the inventory of the old formulations was depleted, is that right?

A Yes, that is correct.

Q And that is inventory in the area where the customer is, is that right?

A It is inventory from which his shipment would

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be made. Generally it is from the area, but not always.

Q I see.

Do you know what additional information Monsanto had as of March 15 on this subject that was not available at February 28, 1972?

A No, I don't.

Q Can you tell me why Mr. Bradford wrote letters to Pydraul customers in 1971 while it appears the three letters we have looked at so far in 1972 were sent by Mr. Bergen?

A I don't know why.

Q Similar to the other letters, the March 15, 1972 letter was intended to go to all Pydraul customers, is that right?

A Yes.

MR. POPE: I would ask the reporter to mark a 14-page exhibit, first page of which is a letter dated August 3, 1973 and various pages of attachments as Papageorge Deposition Exhibit No. 57 for identification.

(Papageorge-OMC Deposition

Exhibit No. 57 marked for

identification, 9/1/81, TLU.)

BY MR. POPE:

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Q Mr. Papageorge, I hand you that exhibit and ask you if that is a letter you are familiar with, the first two pages.

A Yes, I remember this.

Q Can you tell me what the purpose of that letter was and to whom it was sent, if you recall?

A The purpose is to inform our Pydraul customers that the Food and Drug Administration had published some regulations regarding the presence of PCBs in food, animal feed, food packaging and we sent along with the letter, a copy of those regulations as published in the Federal Register.

It was also the purpose to assist our customers in determining whether or not they were users of the old PCB hydraulic fluids by attaching the list of those Pydraul designations that did contain the chlorinated hydrocarbons and those that did not contain chlorinated ingredients.

Q Chlorinated hydrocarbons, did you mean to use that as opposed to chlorinated biphenyls?

A That's what this letter does.

Q So you were not advising people about PCBs in that letter as such?

A No. The letter talks about advising them of

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those Pydraul fluids which contained PCBs, but the list attached refers to chlorinated ingredients which is the broader.

Q Was that term used to designate products that contained chlorinated terphenyls as well as those that contained chlorinated biphenyls?

A Yes.

Q Was there any category intended to be included within that term?

A Not that I know of.

Q I take it those were a list of the Pydraul products that had been sold in the past to customers, is that right?

A Yes.

Q That is the top part, I take it, and the bottom part is current Pydraul fluids that did not contain any chlorinated ingredient, is that right?

A That is right.

Q I take it this order from the Food and Drug Administration actually went into effect, did it not?

A Yes.

Q That order governed the food packaging materials as well as animal food and feed itself?

A Yes.

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Q Did you assist Mr. Paton in the preparation of this letter, Exhibit No. 57?

A Yes.

Q Did this letter go to a broader category of persons than the other letters we have discussed, Exhibits 57, 56, 55, 54?

A Not to my knowledge.

Q It was intended to your knowledge to go to people who were customers of Monsanto as of August 1973, is that correct?

A Yes.

Q The reason I asked the question, there is reference in the third paragraph:

"Because you may have purchased Pydraul fluid prior to our changeover activities... you may wish to review your procedures..."

As far as you know, that simply is an instruction to current customers that may want to go back with regard to the past purchases, is that right?

A Yes, but as I understood it, it contained customers or purchasers of Pydrauls of record to Monsanto.

Q Now I am confused.

Would that include the past customers of

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Pydraul who were no longer present customers, as of August 3, 1973?

A To a degree, yes. I don't know how far in the past, but there were some customers on that list that go back several years, yes.

Q Even though they hadn't purchased Pydraul for several years, sales to would show zero, but they would still be on the list, is that true, with regard to the earlier letters we have discussed?

A Customer letters, yes, yes.

Q So your terminology of a customer would be one who had been a customer and some who either were currently a customer or had been a customer in the near past. You don't know exactly how far back the customer record would go?

A Right, yes.

MR. SCHINK: You are asking now with respect to customer? Before you asked with respect to Pydraul users with respect to this letter, and I think that is perhaps where the difficulty lies.

MR. POPE: I am sure Mr. Papageorge is able to pick up more particularity than I intended.

BY MR. POPE:

Q Did I correctly state it?

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A Very closely, yes.

Customer of record, as I understand it, is a customer who has recently purchased, has purchased Pydrauls in the recent past. What I don't know is how far back that list goes and if it is kept active for sending out brochures, advertising matter, letters of information of this kind, all kinds of communications.

Q Would it be your assumption that it would at least be someone who had purchased within a few years?

A Yes, at least.

Q Does Exhibit No. 57 refresh your recollection as to whether Pydraul A-200A was ever sold?

A No, it doesn't.

Q The intent in making this list in the third paragraph of this exhibit was to include Pydraul fluids which had been sold, right?

A That was the intent, yes.

Q I would like to show you, Mr. Papageorge, a 4-page document which I will ask the court reporter to mark as Papageorge Deposition Exhibit No. 58 for identification, first page of which is a copy of a memorandum from you dated August 31, 1970.

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(Papageorge-OMC Deposition
Exhibit No. 58 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q I hand you that exhibit, sir, and ask you if you would take a look at it and tell me if that in fact is a copy of a memorandum you sent on or about the date it bears.

A Yes, this is a copy of a memorandum I sent at that time.

Q Can you tell me what the purpose of that memorandum is?

A The intent was to give our salesmen some suggestions which they could share with the customers so that we could control the entry of PCBs into the environment.

It was part of the overall plan approved by the Corporate Management Committee, as I remember, one of the items in the total plan.

Q Would it be fair to say that you were dealing with other matters in the Corporate Management Committee plan of higher priority in August until you got to this and then prepared a first draft here?

A I don't know about the reference to higher

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priority. It took awhile to work up my own versions, several drafts of which I worked and reworked to end up with this version.

Q It says "first draft of suggestions," but in fact it was the first draft you were circulating outside of your own office, is that correct?

A That is correct.

Q Where did you get the information that is in that rough draft?

A Some of it reflects my personal experience, others reflect my understanding of suggestions that I got from other plant people who handle PCBs as well as engineering people.

It is really a consensus of suggestions primarily from Monsanto people.

Q Was the intent of this waste control and disposal memorandum to assist in control and disposal of PCBs at Monsanto's plants?

A No.

Q Where was this focus to be on?

A It was primarily intended for our customers and in some instances, our customers' customers.

Q What instances would those be?

A Well, outstanding example would be the

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dielectric industry.

Q How would that be a good example, how do you mean?

A The users of transformers or the companies that service transformers.

Q Was Monsanto in the practice of discussing PCB waste disposal and control with those entities?

A On occasion.

Q Were there any other areas where you would deal with customers of your customers in connection with PCBs?

A At what point in time?

Q August of 1970.

A August of 1970?

Q Or anytime during 1970 that you can recall.

A In early '70, there were a few customers of the miscellaneous application which included the NCR paper applications. They would consult with us on waste control. Some of the paint companies, there are miscellaneous users on occasion that would seek some advice on how they should manage their wastes.

Q And that was one of the purposes for preparation of this memorandum, to put into one place the kinds of general advice that should be given to a

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customer or customers?

A Yes.

Q Was it also to be used by Monsanto in connection with personnel in connection with Monsanto's plants?

A Certainly. This reflected our practice in many cases.

Q Were you sending it to the then current members of the task force within Monsanto?

A These are members of Functional Fluids Marketing organization and their supervision, as well as the representatives of the Research group.

Q Is there a totally separate document prepared for the other groups with respect to PCB control and waste disposal?

A There is only one more group. This was the Plasticizer Group and as of August 30, they were out of business totally.

Q Did you receive comments back in response to your request for suggestions on closing the loop?

A I don't remember specifically, no.

Q Did you meet with those members of the task force or those members of the group and discuss that subject?

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A Individually, not as a group.

Q Did you reduce their thoughts to a final draft?

A As I remember, that became the final draft, the best of my knowledge.

Q That document here, Exhibit 58?

A Yes.

Q Did you ever attend any further meetings with Monsanto representatives regarding this subject matter of this memorandum?

A I don't recall any other meetings.

Q What ever happened to the final draft?

A The Marketing Department disseminated the information.

Q In what form?

A I don't recall the format it was used in. I can't remember.

Q Do you remember that it was oral or written?

A The impression I have is it was written. On the other hand, the thoughts which really are old thoughts, many respects, previously expressed thoughts were used by salesmen in their discussions with customers.

Q Was this one of those areas where each of

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the Marketing Directors had discretion to determine how their salesmen would use this information?

A Yes.

Q They also had discretion whether the salesmen would use the information?

A Yes.

Q Did you ever see this information to the group in a form of a brochure?

A My memory fails me on that. I don't remember it in any other form.

Q Do I correctly understand that it is the intent that this memorandum be applicable to the hydraulic fluid uses of PCBs as well as to the electrical?

A Yes.

Q Or the heat transfer fluids?

A Yes.

MR. POPE: If no one has any objections, I have four memoranda on the same subject matter that I would staple together and introduce as a group exhibit.

MR. SCHINK: Let me see.

No objection.

MR. POPE: I would ask the court reporter to mark this document as Papageorge Exhibit No. 59 for

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identification, consisting of four pages, first page of which is a memorandum dated September 22, 1970 from Mr. Pogue to Dr. Keller.

The second is a memorandum dated October 14, 1970.

Let us make it a three-page exhibit.

MR. SCHINK: Why don't you keep it as a four-page exhibit. That refers to the same interchange.

(Discussion off the record.)

MR. POPE: (Continuing.) The third document in the exhibit is a memorandum from Dr. Tucker to Mr. Pogue, dated October 2, 1970, and the fourth is a memorandum from Dr. Tucker to Mr. Pogue, dated October 19, 1970.

(Papageorge-OMC Deposition

Group Exhibit No. 59 marked

for identification, 9/1/81, TLU.)

BY MR. POPE:

Q I show you Group Exhibit 59, Mr. Papageorge, and ask you to take a look at that and tell me if you received a copy of those four memoranda shortly after the dates they bear.

The question is whether you received those in the ordinary course of business shortly after

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the dates they bear.

A As best I recall, yes.

Q Did you participate in any discussions with anyone with respect to those analyses that are referred to in that group exhibit?

A I was involved in helping Mr. Pogue get the necessary help that he requested from the laboratory and my role was to convince Dr. Keller to make certain that the priority was given to the placing of this request in the laboratory.

I was also involved in keeping abreast of Dr. Tucker's findings.

Q What priority was placed as a result of your intervention on these?

A Very high, very high.

Q Why?

A Well, as I recall, the other analyses, other samples pending analyses were of the type that could be postponed to a degree. The amount of time that this effort referred to in this exhibit was not unduly excessive and the customers involved were respected customers and we felt they deserved some response.

Q Was the other customer General Motors?

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

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Q You don't remember who the other customer was?

A No, I don't.

Q Besides the fact that it was a respected customer, was there anything else about those particular samples that called for a rush review or a high priority review?

A This was part of our program aimed at the evaluating reclamation and obtaining of this information that would speed up that program.

Q Mr. Papageorge, is it true that the initial focus of Monsanto's reclamation project was in the Midwestern part of the country?

MR. SCHINK: Are you referring to the work Mr. Pogue did, Mr. Pope, or are you referring to something other than that?

MR. POPE: I am not thoroughly familiar with everything Mr. Pogue did, nor everything even that he testified to, Mr. Schink, but the witness has referred to the reclamation efforts. I am trying to determine if that reclamation effort focused on customers in the Midwest as opposed to other parts of the country.

BY THE WITNESS:

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A The reclamation effort as it related to hydraulic fluids focused on the industrial Midwest, yes.

BY MR. POPE:

Q Why?

A Well, that is where many of the major customers were located. I think that is the principal reason.

Q Did Monsanto have available to it during this period of time information that there were heavy concentrations of PCBs in the Great Lakes area?

A Concentrations?

In 1970 the only information we had was limited from the WARF Laboratories at that time.

Q Is it your testimony that that information, whatever you had available at the time, was not one of the reasons why the reclamation project initially focused on the Midwest?

A Not to my knowledge, no.

Q Do I understand, focusing on Group Exhibit 59, what takes place here in the first memorandum is information from Mr. Pogue to Dr. Keller regarding some of the other contaminants that might be in the sample, is that right?

A Yes.

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Q That does assist Dr. Keller in screening those out in order to make his analyses of what is in the sample, is that right?

A I don't know how Dr. Keller used that information in establishing his priorities. Mr. Pogue was attempting to describe the sample.

Q The reference is to die lube, Chemtrend, Milwaukee Metal lube No. 25, Mobilplex EPO, et cetera; are those indications of other chemicals that are in the sample beyond those which would relate to Pydraul?

MR. SCHINK: What Pydraul are you referring to? In the leading sentence it states Scott Tucker has samples of the following. What samples are you referring to, Mr. Pope, in your question?

BY MR. POPE:

Q Do you understand my question?

MR. SCHINK: I would like you to clarify the document. The document speaks of samples of water effluent from Johnson Motors have been analyzed for PCB content and then it skips from there that Dr. Tucker has samples, apparently, of other materials.

What are you referring to in your question?

BY MR. POPE:

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Q My question is what is Mr. Pogue telling Dr. Keller based on this memorandum, besides the fact that Scott Tucker has samples of some certain materials?

A Besides that, he ends up with, "I would appreciate the analyses as soon as practicable."

Q What is the relevance for the analyses that is being done here of all those other substances that are listed?

A "We would like for you," reading from the memorandum, "to identify the 'approximate' percentage content of other products (non-Pydraul) in the same effluent."

And reading further, under No. 2 referring to Johnson Motors, it refers to "Milwaukee Metal lube 25, Mobilplex EPO, Mobil Solv-A-Sol."

Q Is it your understanding that Mr. Pogue is telling Dr. Keller that those other substances are in the sample?

A No. All he is saying is look at the sample and see if those materials are in there in percentage quantities.

Q Is that a methodology that was regularly followed with regard to samples from customers' effluent; namely, identifying certain other materials?

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A Your use of the word methodology confuses me. Methodology is the technical procedure followed to make a determination.

Q As of September 1970, maybe we should talk about it this way. When the laboratory at Monsanto and Dr. Keller's laboratory was making an analysis for purposes of determination of the feasibility of the reclamation project, was it standard practice to seek information about other materials, such as Milwaukee Metal lube No. 25?

A Only when requested.

Q What does Dr. Keller do with that information?

A Dr. Keller -- I don't know what Dr. Keller as an individual does, but his laboratory personnel would modify their procedures in the appropriate way to make certain that they are able to identify the lack or presence of these specific requested materials.

Q What relevance does that have to a determination of whether or not the reclamation project can go forward, as far as you know?

A It is my understanding that the method used to reclaim will be dependent upon the contaminants that are present, be they water, lubricating oil, solvents, dirt particles, metal shavings and so on.

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Q Evaluations of the feasibility of the particular reclamation of Pydraul from a particular customer's location would depend on how many of these other contaminants are in a particular substance. Is that a fair way of saying it?

A Yes, as well as the type of contaminant.

Q It depends on how much and what it is?

A Correct.

Q That is why these other substances have been identified for purposes of analysis of the Johnson samples, is that correct?

A That is my understanding, yes.

Q And Organic Log 198 (or 201) and Log 199 (or 200) refer to the analyses that are already done at Johnson Motors, do they not?

A They refer to the sample on which previous analyses had been done as reported above. They have been analyzed for PCB content.

Q And now they are going to be reanalyzed for other materials?

A Correct.

Q The second page of this group exhibit is that evidence of discussion with Dr. Tucker by certain parameters were given as to the analyses?

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A Yes. This is a confirmation in writing to proceed with the studies as proposed in the previous memorandum.

Q Is the significance there of the percent soluble and/or emulsified oil and grease one of the things they are going to be looking for?

A Yes.

Q And also a percentage of each specific material, is that right?

A Of those listed in the previous row.

Q What is this (i.e., DCRF-CT3)?

A A commercial product with which I am not familiar.

Q The third page of the group exhibit is dated October 2, 1970. Is that kind of an interim report to Mr. Pogue regarding the analysis that Dr. Tucker did on the other materials?

A This is a report of what Dr. Tucker found in some of the listed materials. It suggests to Mr. Pogue that for the purpose of the study, it would be satisfied as described in the next to the last paragraph and he is further stating that if Dr. Pogue agrees to let Dr. Tucker know, then they will proceed with the suggested approach in the next to the last

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paragraph.

Q So the same approach was going to be applied for Johnson Motors and some other customer, right?

A Yes.

Q And in fact, you don't remember who that other customer is?

A That is correct.

Q Am I correct that the fourth page of the exhibit dated October 19, 1970 is the final result for this project of Dr. Tucker's work?

A Yes.

Q This is a reporting to Mr. Pogue of the work that was done on the samples from Johnson Motors and from some other customer, is that right?

A That's right.

Q And the customer, you don't recall?

A That is correct.

Q This is the percent oil and grease, is that correct?

A That's what it says, yes.

Q What is this report telling us with respect to these other percents of the other materials that were identified?

A It doesn't tell you that because the results

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in the memo dated October 19 from Dr. Tucker to Mr. Pogue implies that the suggestion of the next to the last paragraph of the memo, Dr. Tucker to Mr. Pogue, were acceptable.

Q I see. He just went ahead and did that as opposed to arranging for --

A As opposed to the specific chemical, yes.

Q Do I understand that Dr. Tucker's analysis of Log No. 198 was that it contained 89 to 90 percent Aroclor?

A That's what it says.

Q What is the column here on the right-hand side? Does that indicate parts per million?

A That is what it says.

Q What does IR and EC stand for, do you know?

A Infrared, which is a method of analyses, and electron capture, which is a part of the GC procedure, the gas chromatographic procedure.

Q I note this unnamed customer on OR Log No. 207 seems to show a 260 parts per million by infrared and 477 parts per million by EC method, is that correct?

A That's what it says.

Q Is that an unusual difference in the two methods, based on your experience?

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A Not necessarily. It depends on the other contaminants in that sample that did interfere with the analyses.

Q What do those reports show as to Johnson Motors of the approximate percent of Aroclor in those samples?

MR. SCHINK: You are not talking about the entire sample? You are talking about the residues?

MR. POPE: No, here --

MR. SCHINK: I think you mischaracterized and said that is the entire sample in view of the description in the preceding paragraph. It is the residues, 89 to 90 percent of residue with PCB, not the entire sample.

BY MR. POPE:

Q Residue after what, Mr. Papageorge?

A It is my interpretation that there are two phases analyzed here. There is an oily phase and a water phase.

Q I see.

A The oily phase is expressed in percent Aroclor and the water phase is expressed in parts per million by two methods.

Q Parts per million of Aroclor?

A Of Aroclor, yes.

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Q There are two different aspects or two ways of measuring the same thing?

A No. It is the two, the layer and the weight per layer of the waste streams is how I interpret this.

Q That report, the fourth page of the group exhibit, what does that tell Mr. Pogue with respect to the feasibility of reclamation at Johnson Motors?

A I cannot be presumptuous and try to guess as to what Mr. Pogue was thinking here.

Q Why don't I ask what it tells you about the feasibility of the reclamation of Johnson Motors.

Does it tell you anything?

A Yes. I would say that I would be optimistic.

Q Why is that, because of the high percentage of Aroclor in the oily segment?

A Yes, and the higher the level, the potential is greater for reclamation.

Q Does that report indicate that there was good separation between the oil and the water in those reports?

MR. SCHINK: Excuse me, there was good separation in the report?

MR. POPE: In the samples!

MR. SCHINK: That is not the question you posed to

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the witness.

BY MR. POPE:

Q Does that report indicate that there was good separation between Aroclors and the water, or can you tell one way or the other?

A I don't think I understand your question.

Q The measurement in the first column, approximate percent Aroclor, did you say that was good separation of the oily substance?

A Yes, yes.

Q And the measurement of parts per million by either of the two methods, that was in the water?

A Yes.

MR. SCHINK: PCB in water, as I understand.

BY THE WITNESS:

A Yes.

BY MR. POPE:

Q Now, my question is does that indicate a separation of water from the oily substance?

A It indicates to me the laboratory analysis was successful in separating the two. I do not know what form because earlier in this letter, he talks about soluble or emulsified.

Q Is it true that if they had not separated, you

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would have a great deal more parts per million under this column?

A True.

On the other hand, if I can elaborate, if it had been an even higher separation, this can be lower, so when you say is this a good one or -- I forget your exact words, is it a good separation, I would say it is a typical separation.

Q Does it indicate a greater separation than Log No. 207 from the unnamed customer?

A It does.

Q Do you have any knowledge as to whether these results were communicated to Outboard Marine Corporation, Mr. Papageorge?

A No, not specifically.

Q Did you talk to Mr. Pogue after you received this report dated October 19, 1970 with respect to the feasibility of the reclamation project at Johnson Motors?

A It was certainly after that report, but I don't recall how soon after.

Q At that time, do you have a recollection as to what your assumption was as to the form in which the Pydraul was that was intended to be reclaimed?

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A I was still under the impression from all my discussions that whatever was reclaimed would be very high in hydraulic fluid content, acknowledging that there would be some other contaminants, might be some water, some particulate matter, lubricant matter, other things that are present in the industrial environment.

Q Did the reclamation project go forward as far as you know at Johnson Motors, the one we have been discussing?

A I don't know what you mean by reclamation project.

Q When you and Mr. Pogue discussed reclamation at Johnson Motors after receiving this memorandum dated October 19, 1970, were you talking about a reclamation project?

A We were talking about the feasibility of reclamation.

Q Do you agree that that subject was implemented, feasibility of reclamation at Johnson Motors after your discussion with Mr. Pogue?

A I do not recall the final outcome as it relates to Johnson Motors.

Q Did you have any further discussions with him

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about the subject after October 19, 1970?

A On the subject of reclamation, yes, yes.

Q Were those discussions about how the progress was going, how the technology was improving or what?

A Well, certainly some of those thoughts were in the discussion, but as time went on, as I remember, the final outcome was that we had established that reclamation is possible and there were services available by companies to accomplish this.

That is all I remember at the moment.
There were companies in this business available to our customers.

Q So Monsanto did not get into the business itself?

A That is correct.

Q Do you know when that decision was made?

A About this time. It had to be late '70 or early '71, somewhere in there.

Q Were a number of other customers' samples given the same types of analyses that appear here in this Group Exhibit 59 prior to the decision not to go forward within Monsanto on reclamation?

A There were several, yes.

Q Were the results of those analyses, did they

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produce results that showed a feasibility of a reclamation project?

A Yes.

Q Was a decision made by Monsanto to not get into this area in part dictated by the fact that you were no longer selling PCB products?

MR. SCHINK: I object to the form of that question. I don't think the record has established that Winter of '70 or early '71 Monsanto was no longer in the business of selling PCB products.

The witness has testified on the first day of his deposition to the contrary.

BY MR. POPE:

Q Was a decision dictated in part, Mr. Papageorge, by the fact that Monsanto was going to go out of the business of manufacturing PCB products?

A No.

Q Was a decision dictated in part by the fact that Monsanto did not feel enough of its customers were interested in the service?

A No.

Q Were there any factors that went into consideration other than the fact there were other outside agencies or customers that were available to do the job?

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A I don't know of any other than that.

Q You don't know of any other considerations?

A Yes.

Q Did Monsanto have a division or a subsidiary that engaged in reclamation of hydraulic fluids or engaged in the business of evaluating the feasibility of reclamation projects?

MR. SCHINK: You have asked two questions: One, breaking it down to whether there was a subsidiary that was engaged in reclamation, and the other one was looking into the feasibility. You are asking him as of December of 1970?

MR. POPE: No, ever.

MR. SCHINK: Ever.

BY THE WITNESS:

A In response to was a Monsanto subsidiary involved in a reclamation of fluids, I am not aware of any subsidiary.

BY MR. POPE:

Q I am talking about a subsidiary or division, either. Was a division --

A I am not aware of any reclamation activity within Monsanto.

Q Does that include a company or a group

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examining feasibility of reclamation?

MR. SCHINK: You are talking about other than what we have already had under discussion here with Mr. Pogue?

MR. POPE: Sure.

BY THE WITNESS:

A I am aware of at least one laboratory that looked into feasibility of reclamation.

BY MR. POPE:

Q Which laboratory is that?

A This is the Monsanto Research Corporation laboratory in Dayton, Ohio.

Q In what way did they look into the feasibility of reclamation?

A I don't recall the details of their study.

Q Did they call on any of your customers?

A Not that I am aware of.

Q Did they examine any samples taken from premises or near the premises of any of your customers?

A I don't know.

Q Did you ever hear the firm Biodize?

A Yes.

Q Could you tell me what that company is?

A I have never been very close to that part of

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Monsanto, but as I recall, a subsidiary of Monsanto that was involved in effluent treatment and they referred to that group as Biodize, and that is all I personally know.

Q What kind of effluent were they in the business of dealing with?

A As I remember, I am not really qualified. I don't remember.

Q Do you know if that firm called on Monsanto customers in this period of time?

A I do not personally know.

Q You never heard of any such discussions?

A I don't remember that, no.

Q If the Marketing people at Monsanto had decided to bring that group in to discuss treatment of PCB discharges from any of Monsanto's customers, would that have been a subject matter that would have been discussed with you during the 1971-'72 period?

A Yes, that would have been mentioned.

Q As far as you can recall, it was not mentioned to you?

A My best recollection is if it was mentioned, it was a very casual discussion.

Q With respect to any specific customer?

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A No, within the general sense.

Q It is a subsidiary or was a subsidiary of Monsanto, is that right?

A It was a subgroup within the subsidiary of Monsanto.

Q That office, what location did it work from?

A I don't remember.

Q I take it it ceased operating or is it still around today?

A I don't know.

Q How about Environchem? Have you heard of that company?

A Yes.

Q Can you tell me what you know of that company?

A That is the subsidiary I had in mind under which Biodize operated, as best I recall.

Q One of them is the subsidiary of the other?

A One is a subsidiary division. Environchem is the subsidiary of Monsanto.

Q And what business is Environchem in?

A It is in the business of supplying technology and engineering, design of pollution abatement facilities and the selecting and marketing of sulfuric acid plants.

Q Is it officed in St. Louis, the principal

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office?

A I believe it is, yes.

Q Did you ever hear Environchem being asked to consult with any of Monsanto's customers regarding PCB problems?

A I have heard of Environchem inquiring about getting involved. I don't know about the reverse, where anyone in the Functional Fluids Group asked Environchem to participate.

Q Let me take out the concept of who asked who.

Do you recall any incident where Environchem was involved with a customer in analyzing any aspect of that customer's PCB problem?

A I recall some involvement. I do not recall the specifics.

Q Which customer is that?

A I don't recall that.

Q Do you remember what application?

A No.

Q Do you remember what division or what Marketing Director was involved?

A No, I don't.

Q What were the other companies that were available for reclamation of Pydraul fluids at the time

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that Monsanto decided not to get into the business?

A There were several. The only one that I can recall is Findett Company. I recall some others, but I don't recall them by name.

Q To the best of your recollection, those companies take PCB products for reclamation?

A Yes.

Q Did Monsanto recommend any or all of those companies to Monsanto customers?

A Well, we recommended to some that we had knowledge.

Q Was Findett one of them?

A Yes.

Q Were there others besides?

A There were at least a couple, three more.

Q And the names slip your recollection?

A That is right.

MR. POPE: Miss Reporter, if you would mark this multi-page document as Papageorge Deposition Exhibit No. 60 for identification, first page of which is a memorandum from Dr. Tucker to E. P. Wheeler, dated September 11, 1970.

(Papageorge-OMC Deposition
Exhibit No. 60 marked for
identification, 9/1/81, TLU.)

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BY MR. POPE:

Q I hand you Exhibit No. 60, Mr. Papageorge, and ask you if that is a copy of a memorandum and report that you received on or about the date it bears?

A This appears to be a report that I received, yes.

Q Can you tell me briefly what the report is, what was being reported by Dr. Tucker?

A Dr. Tucker is reporting to Mr. Wheeler his analyses of PCBs in rat tissue.

Q Is that a study that Dr. Tucker himself is doing?

A The analyses are what Dr. Tucker is doing. He is not doing the animal feeding studies.

Q I am sorry. He is doing the analyses on Industrial Bio-Test Laboratory or he is doing the studies on the rats, is that correct?

A That is correct.

Q Do you know what Dr. Tucker means when he says:

"These findings are significant in that this is the first laboratory proof we have been able to generate that supports Ralph Munch's approach to producing a more 'degradable' Aroclor product for

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controlled usage."

A Yes. Dr. Tucker is referring to the fact that his analyses of these tissues show that the lower chlorinated biphenyls are destroyed in the metabolism of the test animal.

Q You mean the rat?

A The rat.

Q Was that a hypothesis that Ralph Munch had?

A Yes.

Q Is that exhibit an interim report?

A This appears to be a final report on that study, on that part of the analysis program.

Q Is it your recollection that that conclusion which is discussed there held up throughout, was supported throughout the rest of the test program?

A Yes.

Q Can you tell me what is meant by the next sentence which refers to, "This conclusion is consistent and in agreement with the environmental findings to date"?

A I don't see that. Oh, this is with reference to the reported presence of what appears, again, to be Aroclor 1254 and 1260, so the findings in this report agree very well with the findings from outside

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laboratories.

Q Which ones?

A We had mentioned previously that the reports made known to Monsanto about the presence of PCBs of samples taken from remote areas consistently were reported as of Aroclor 1254 and 1260, pointing to the presence of higher chlorinated biphenyls. This report shows that after metabolized by the rat, the residual PCBs contained higher chlorinated biphenyls and to the unknown analyst, he could have reported it as equivalent to so many parts per million of Aroclor 1254, not knowing that Aroclor 1242 was the original PCB in the test.

Q I see.

Was it the hypothesis for which this was lending support that regardless of what form the PCBs were at the time they got into the environment, the lower chlorinated Aroclors, those with lower chlorinated isomers were degrading leaving 1254 and 1260 when the scientists came to analyze the substances, is that a fair characterization?

A Yes.

Q And is it your recollection that the various reports Monsanto had ongoing at December '70 ultimately

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support that hypothesis when they were reported?

A Yes.

Q Is that right?

A Yes.

MR. POPE: I would ask the reporter to mark a document dated approximately two months later as Papageorge Deposition Exhibit No. 61 for identification.

It appears to be exactly a 6-page document, first two pages appearing to be a memo to W. R. Richard WRICH, which refers, I guess, to W. Richard.

THE WITNESS: That is the mail code used at that time.

MR. POPE: It is dated November 4, 1970.

(Papageorge-OMC Deposition
Exhibit No. 61 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, I hand you that document and ask you if that is a summary of reports that were coming into Monsanto regarding biodegradation of Aroclor 1242?

A Yes.

Q I ask you to briefly summarize for me what

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that memorandum is reporting with regard to biodegradation.

A This report is an interim report of a degradation study being made with two materials. One is Aroclor 1242 and the other was a PCB mixture being developed and referred to at that time as MCS 1016.

Q Was that degradation study being done in St. Louis?

A Yes.

Q Was that being done by Dr. Richard's staff?

A No, this was done by Dr. Keller's staff.

Q Can you summarize briefly the interim report of that study?

A To use their syntax, it says:

"An examination of the chromatograms does give a positive indication that biodegradation is occurring for both materials, indicating that 1242 was degrading."

Q And that finding is consistent with the results of Exhibit 60, is that correct?

A That is correct.

Q The difference in Exhibit 61 is that degradation is taking place in animal tissue as opposed to elsewhere in the environment?

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A It is not animal tissue in that exhibit, that report. It is bacterial action.

Q All right.

Is that a different mode of degradation that is being reported in Exhibit 60?

A That is my understanding.

Q Had Monsanto done any biodegradation studies prior to 1970?

MR. SCHINK: We have been over that already the first day. You are going back over the same ground.

BY THE WITNESS:

A As I recall, some studies were started in 1969.

BY MR. POPE:

Q Were they done at Ruabon?

A Yes.

Q That was on PCB materials?

A Yes.

Q Prior to that, they hadn't done any?

A Not to my knowledge.

MR. POPE: Before I mark something that doesn't have anything to do with this case, Mr. Schink, can you help?

I have seen it in that form beginning

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with Page 78, so I don't know what it is or when it was dated.

MR. SCHINK: It appears to be a part of a monthly report dated April 1971 relating to among other things, biodegradation studies that were under way at that time at Ruabon.

MR. POPE: Ruabon didn't provide monthly studies to St. Louis, did they?

THE WITNESS: Not to my knowledge.

BY MR. POPE:

Q Mr. Papageorge, are you familiar with this document?

A I haven't looked at it closely enough.

MR. POPE: Let us mark it as an exhibit.

I would ask the reporter to mark as Papageorge Exhibit No. 62 for identification, a multi-page document, beginning with Page 78, entitled Biodegradation - Ruabon.

(Papageorge-OMC Deposition

Exhibit No. 62 marked for

identification 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, would you take a look at that document and see if you recognize what that is.

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(Brief recess had.)

BY THE WITNESS:

A I don't remember the multi-page document.
I recognize portions within it.

BY MR. POPE:

Q Can you tell me what the other portions are?

A There is within the document a laboratory
report from the Anniston Plant laboratory.

Q What page are you referring to there?

A I don't find the page reference. I think it
is referred to as an attachment.

Q Being a R&D report, No. 2?

A Could be.

Q You are referring to the page that has the
number at the bottom, 0007142?

A Yes, entitled Aroclor Pollution Study, yes.
And it continues through 0007147.

Q All right.

A I recognize that part of this collection of
papers.

Q Can you tell me what that part is?

A This is a report from the Anniston Plant
laboratory referring to studies on the removal of
PCBs from effluent using carbon.

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Q Is that one of the studies that had been under way for some time?

A Yes.

Q Was that study being done only at Anniston, is that what that is, an interim report on their progress that you have there?

A This appears to be a final report.

Q As to the balance of that document, the exhibit, you are not able to identify it?

A That is correct.

Q Is there any significance to the Confidential stamp on the front page?

A I don't place any significance.

Q On any or all of the pages?

A No. This is common.

MR. SCHINK: That was placed by counsel in connection with this litigation.

MR. POPE: It was?

MR. SCHINK: Yes, during document production.

MR. POPE: As to some but not all of them?

THE WITNESS: I see.

BY MR. POPE:

Q Let me show you a document consisting of 13 pages, which the reporter will mark as Papageorge

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Deposition Exhibit No. 63 for identification, the first page of which is a memorandum dated February 2, 1971 from Anniston.

(Papageorge-OMC Deposition
Exhibit No. 63 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, I would ask you to take a look at that exhibit and tell me whether you have seen this before.

A There seems to be a mixup in the paper here. I don't specifically recall the cover memo, although it shows I was sent a copy.

Q Would you presume that you received a copy of this cover memorandum in the ordinary course of business on or about February 2, 1971?

A Yes, that is a good presumption, yes.

Q My question to you is going to be how does Exhibit 63 relate to that portion you just testified about in Exhibit 62, namely, the research and development report from Anniston?

A There is a reference in the first line of the cover memorandum referring to a R&D report by number, 446-514, No. 1.

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In the previous exhibit, No. 62, there was a reference to a report under that same number, 446-514.

There is a difference, however, in that in Exhibit 62 that is reference to Report No. 2. In Exhibit 63, there is reference to Report No. 1.

Q That would be consistent with 63 referring to February '71, whereas this portion of Exhibit 62 is April 15, '71, is that right?

A Yes.

Q Would the balance of the pages in Exhibit 63 relate to the same subject matter in the covering memorandum, as far as you can determine?

A As best I can determine, the attachments to the first page of Exhibit 63 relate in part.

Q In what way do they relate?

A In the cover memorandum, there is reference to Attachments 2, 3 and 4.

I find attached something that appears to represent Attachment 2, something that appears to represent Attachment 3, but I find nothing that seems to reflect there or represent Attachment 4.

Q Can you determine from that cover sheet and Exhibit 63 what Attachment 4 would be?

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A It talks about a revised PR&D work plan summarizing status on the work and dates for future phases.

I don't see that here.

Q Would that be a reference to future work for the research team in Anniston that was doing this study?

A Yes.

Q What is the reference on the cover sheet of Exhibit 63 to clarification? Do you see that?

A I have seen it, but I would like to look at it again.

Q "Pilot clarification study."

A As I recall, we had turbidity problems at the plant, suspended material in the waste effluent.

Q At Anniston, you are talking about?

A At Anniston, yes.

This attempt, this pilot study is to find ways to clarify the effluent.

Q And clarify means to take out suspended solids?

A Take out suspended particles from the water waste effluent.

Q Is that prior to treatment for the removal of Aroclors?

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A Prior to sending it to the city municipal sewage plant.

Q Was this work being done by the research and development team at Anniston after the Monsanto plants had improved their discharge of PCBs by 90 percent?

A Yes, yes.

Q So whatever was remaining, this team was studying methods to remove Aroclor from the Anniston Plant effluent even more, is that right?

A Yes.

I would like to correct, however, or comment your reference to 90 percent. I don't know that 90 is the exact number. It is 90-plus, as best I recall.

Q That was the number that was given.

MR. SCHINK: That is the number that appears in minutes of the meeting.

MR. POPE: The Corporate Management meeting.

MR. SCHINK: You asked him at length about that.

BY MR. POPE:

Q Is that correct?

A Yes.

Q That was a combination of three plants, is

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that right?

A As I remember, it was a combination of five plants, worldwide.

Q Were two of them, one in Japan and one in the United Kingdom?

A Yes.

Q What was the purpose of this study that was being done at Anniston? Was it focusing on Anniston alone or was it for purposes of implementation at various customers of Monsanto?

A It was for Monsanto plants as well as customer plants and anyone else that might need advice or information.

Q Am I correct in my understanding from Job Report 446-514 that readings were taken at Anniston in the effluent that showed Aroclor 1221 at 4,795 parts per billion of Aroclor 1221, and 1,525 parts per billion of Aroclor 1242, and 95 parts per billion of Aroclor 1254 --

MR. SCHINK: I object to the form of the question. The language you pointed the witness to doesn't make any reference to effluent within the plant. It is about wastewater, I think. I don't think that is effluent.

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BY MR. POPE:

Q Mr. Papageorge, is there a difference?

MR. SCHINK: As that term is used in this report, is that the question?

MR. POPE: As far as he knows, yes.

BY THE WITNESS:

A Wastewater under study does not necessarily mean this is the water that eventually leaves a plant premises.

BY MR. POPE:

Q Does effluent in your understanding of the term mean water that eventually leaves the plant premises?

A Yes.

Q And evidently what was listed up here with The Problem, Evaluate the Removal of Aroclor from the Anniston Plant Effluent by Carbon Adsorption, is that right?

A Yes, that was the broadness of the problem.

Q With respect to the numbers that I read, is it your understanding that those levels of Aroclors were found in water at Anniston?

MR. SCHINK: Now are you talking about water within the plant or effluent?

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MR. POPE: I have changed the question. You made an objection and I changed the question to accommodate you.

BY THE WITNESS:

A What this says is there was a wastewater at the plant used in this study that had those levels of Aroclors reportedly analyzed.

BY MR. POPE:

Q Is it your understanding that wastewater at Anniston went through some kind of a treatment process prior to April 1971 before it was discharged?

A Yes.

Q What was that treatment process?

A As I remember, it went through a series of settling basins, collecting basins containing limestone, and those basins served two purposes. One was to remove any acid that might be present, and the other was to collect any spills that got away from us so that the PCBs would collect at the bottom of these pits or ponds.

That is the pre-treatment, before it was finally released to the city system.

Q Was that a longstanding system or had that been in place since you left in 1969?

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A Oh, that was there long before I had arrived.

Q Was that an effective treatment technique to reduce PCBs from wastewater prior to discharge?

A Well, it did reduce, yes, yes.

Q Significantly?

A It certainly helped us in those spills that we were not able to contain and we were finally able to trap them in these ponds for proper disposals. That was of significance.

Q Was that, in your opinion, an accepted form of treating wastewater prior to discharge?

MR. SCHINK: When?

MR. POPE: When it was being done prior to 1971.

BY THE WITNESS:

A Yes.

BY MR. POPE:

Q At the time this report was prepared in April of 1971, Anniston was measuring its effluent discharge for PCB presence, was it not?

A I recall some samples taken and analyzed. I do not recall that this was a routine analysis that was included in the report to the State authorities at that point in time.

Q Regardless of whether it was reported to the

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WATER_PCB-00055355

State authorities, I somehow had the impression you previously testified that each of the three PCB plants that Monsanto maintained, there were regular analyses of effluent for the presence of PCBs. Am I mistaken?

A No, I didn't mean to imply they were regular. They were spot checks.

Q When you say that, can you give me some idea of how often they were done?

A Oh, once a week, every other week, some frequency of that type.

Q When those studies were done, can you give me an estimate of what degree of presence of PCBs would trigger an alarm within Monsanto?

A I don't recall any number that stands out in my mind. I do recall conversations referring to 5 and 10 ppm's.

Q This was in the '70s, early '71, something of that order of magnitude that those numbers were being viewed as acceptable?

A Yes, yes.

Q Did this spot check that Monsanto was doing at each of its three plants, they took place at each of the plants, didn't they?

A Yes.

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Q Queeny, Krummrich and Anniston?

A Yes.

Q This spot check for PCBs was in accordance with a directive from the Corporate Management Committee that it clean up the discharge from the Monsanto plants, is that right?

A Yes, this was part of it.

Q And the purpose of the spot checks was to determine whether in fact those steps had been effectively taken to clean up --

A Yes.

Q -- the three Monsanto plants?

A Yes.

Q Did there come a point in time when Monsanto commenced doing regular analyses of the discharge from its plants for PCB presence?

A Not to my knowledge.

Q That was never done?

A No.

Q Let me show you a document which the reporter will mark as Papageorge Deposition Exhibit No. 64 for identification, being a letter to Mr. Gene L. Jessee, Plant Manager, Monsanto Company, Anniston, Alabama, from Daniel E. Cooper, Assistant Sanitary Engineer,

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under date of November 13, 1972.

(Papageorge-OMC Deposition

Exhibit No. 64 marked for

identification, 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, will you take a look at that letter, please.

A Yes.

Q Tell me whether your review of that letter refreshes your recollection that there were monthly studies made of discharge from Anniston for the presence of PCBs.

A I recall the monthly reporting, but as I recall, the plant did a little more frequently than monthly reports for its own purposes.

Q But monthly reports were submitted to the State?

A Yes.

Q Did these reports cease upon the date of that letter or shortly thereafter?

A Yes.

Q Did Monsanto continue to do analyses of its effluent at Anniston after that date on greater than a monthly basis?

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A I just don't recall if they continued sampling and analyzing.

Q How about Krummrich and Queeny? How long did they continue to sample and analyze their effluent for the presence of PCBs?

A As I remember, the Queeny Plant terminated analysis of PCBs when they discontinued blending Pydrauls containing PCBs. That was at the time the alternate Pydrauls were developed.

The Krummrich Plant continued spot checks until the unit was shut down and this was after my term of involvement. I can't specifically answer as to that time.

Q That was after what year, when did your term of involvement end?

A I was separated, if you will, from the PCB situation in February 1976.

Q The shutdown of Krummrich took place later?

A Yes.

Q Was it the entire plant that shut down or just the PCB portion of the plant?

A Just the PCB portion.

Q To your knowledge, did the State of Alabama prior to November of 1972 have any PCB limits for

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WATER_PCB-00055359

discharge from Anniston?

A They did not have any.

Q Exhibit No. 63 contains what appears to be a report dated December 29, 1970 from Betz Laboratories, is that correct?

A That is what appears here, yes.

Q Have you had any experience yourself with Betz Laboratories?

A No.

Q Were you familiar with the name?

A Yes.

Q And in what context were you familiar with Betz?

A This goes way back. My first awareness of the Betz people goes back to the 1940s, late '40s, as being one of several companies engaged in water treating services.

Q Did their work evolve in the '50s and '60s, as far as you know?

A I can't speak to that. I didn't have any personal connections or ties with Betz.

Q Do you know what their reputation was in the environmental field in the late 1960s?

A I'm under the impression they were one of a

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few reputable laboratories and service companies in the water treatment field.

Q Did they do any work for Monsanto, so far as you know, that is Betz Laboratories?

A Yes.

Q Can you tell me what type of work they had been engaged in in the past for Monsanto?

A I am not familiar with the details, but I am familiar that the Betz Company is used by many of Monsanto's plants in water treatment service.

Q To your knowledge, did they have any involvement for Monsanto in the PCB area?

A I was aware that the Anniston Plant was consulting with them.

Q That is a matter that is discussed there in Exhibit 63, is that right?

A Apparently so.

Q To your knowledge, that is the only involvement that Betz had with Monsanto in that PCB area?

A Yes.

Q Have you ever seen a report before dated December 29, 1970?

A I don't recall seeing this report.

Q The April 15 Research and Development report

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here from Anniston concluded with some recommendations and a suggestion for further study.

Do you know whether further studies were done?

A Let me think.

As I recall, there were some studies using sand or its equivalent instead of carbon.

Q Did that achieve any better results than the carbon?

A All I recall is that they were favorable results. I do not know how they compared to the carbon. I don't remember how they compared.

Q If they were favorable results, was the project thereafter abandoned?

A The study was terminated. I don't know about any project.

Q How about application of results of either the sand study or the carbon study. Was it ever implemented in any way?

A No, there was no implementation at Monsanto's plant, but that information was helpful in offering suggestions to customers.

Q In what format was that information offered to customers or through what means?

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A I personally know that many times I would suggest in response to an inquiry that the individual who had this question, that he might try a sandbed to help clean up his effluent. I know personally I have done that.

Q And you had in your files a copy of this April 15, 1971 report?

A Yes.

Q Job No. 446-514?

A Yes.

Q As well as the succeeding one?

A Yes. Whatever copies were issued, I kept in my files for reference.

Q I have a few other reports on biodegradation, Mr. Papageorge. I don't intend to spend a great deal of time with them, but I want you to take a look at them and see if we can identify what they are and for purposes of the record, Miss Reporter, would you mark a multi-page document as Papageorge Exhibit 65 for identification, the bottom of the page bearing the number 001966, and as Exhibit No. 66 for identification, a multi-page document, first page of which is dated 12/3/70, entitled Monsanto Company Organic Chemicals Division Technology Department.

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Mark as Papageorge Exhibit No. 67 for identification, a two-page document dated June 8, 1971 from Dr. Keller to Mr. Papageorge.

(Papageorge-OMC Deposition

Exhibits Nos. 65, 66 and 67

marked for identification,

9/1/81, TLU.)

BY MR. POPE:

Q Let me hand you those three exhibits, Mr. Papageorge, and I ask you to take a look at them, please.

A All right.

Q You have looked at all three of those?

A Yes.

Q Can you tell me briefly what those reports are?

A Exhibit 65 is a report on biodegradation ability of polychlorinated biphenyls from the laboratory at Ruabon, Wales.

Q Can you summarize for me what their findings were?

MR. SCHINK: Mike, it is a long report. There is a summary of results that appears right in the front. I would suggest you have asked this witness to

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summarize several documents and I haven't objected to those questions even though they were inappropriate.

Can't you get on to something more specific if you want to ask him about the documents?

MR. POPE: It seems to me the best way and the quickest way to ask a general question about what the overall biodegradation study showed. Would that meet with your approval?

MR. SCHINK: I think you have asked him that question before, but certainly we can go into that again.

BY MR. POPE:

Q Setting that one aside, can you tell me as of the end of 1970, what the status was with regard to biodegradation studies and what Monsanto had basically learned during 1970 as a result of those studies?

A We had learned that the higher the chlorine content, the less degradable the PCB was. The lower, the more degradable.

In situations which included bacteria or animal tissue, that was our understanding in late 1970.

Q That general proposition applied to either of those two situations?

A Yes.

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Q The presence of bacteria or animal tissue, is that right?

A Yes.

Q With the studies with respect to the presence of bacteria, were those studies that included PCBs under water?

MR. SCHINK: Do you mean the bacteria in water?

MR. POPE: Yes.

BY THE WITNESS:

A I'm a little confused. PCBs under water or in the water?

BY MR. POPE:

Q In the water, under water.

A The PCB bacteria studies involved PCBs present in water.

Q Were these studies with bacteria that were introduced to a system where PCBs were present?

A Yes.

Q These studies were all being done in laboratories as opposed to out in the field or in a natural environment, is that correct?

A Yes.

Q Those reports as of the end of 1970, to whom were they generally circulated within Monsanto, if anyone?

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A Do you wish me to read --

MR. SCHINK: Excuse me, are you talking about the technical report itself, Mr. Pope, or the general conclusion that had been drawn at that time?

BY MR. POPE:

Q I would take it, Mr. Papageorge, that the technical report would certainly be circulated to a smaller list than the general conclusions.

A Yes, that is right.

Q Who shared in the knowledge as to the general conclusions, people on your task force?

A Certainly, and people reporting to them.

To my recollection, anyone related in any way to the PCB problem eventually was aware of this information.

MR. POPE: Miss Reporter, if you would please mark as Papageorge Exhibit No. 68 for identification, this multi-page document with the reference number MP 10227.

(Papageorge-OMC Deposition
Exhibit No. 68 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, would you take a look at that

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exhibit and tell me what that report is.

A This is a report from our laboratory in the United Kingdom.

Q Is that Ruabon or is that a different --

A I don't know. It is either Ruabon or Newport, Wales. It is Ruabon, Wales or Newport, Wales, describing the biodegradability of Aroclor 1242 and Aroclor 1016, using bacteria cultures supplied by the professor at the University at Wales in Bangor.

Q Did that report further support the conclusions that you had as of the end of 1970 with respect to biodegradation?

A Yes.

MR. SCHINK: You are asking him when this later report was received, did it?

MR. POPE: Well --

MR. SCHINK: This report is from the end of 1971.

MR. POPE: That's right, and as I say, it confirmed or supported the conclusions that he had as of the end of 1971.

BY MR. POPE:

Q Is that right, Mr. Papageorge?

A Yes.

Q Calling your attention to Exhibit No. 67

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for identification, Mr. Papageorge, can you tell me whether you received that memorandum, the original of that memorandum from Dr. Keller on or about June 8, 1971?

A Yes, I did.

Q I take it when you received it it had a Page 2 that had more information on it than that one does?

A Yes.

Q I presume that Page 2 had a complete reference as to various other Aroclors and their degree of biodegradation, is that right?

MR. SCHINK: Do you know what else was on that page, if there was anything?

BY THE WITNESS:

A There were other materials listed.

BY MR. POPE:

Q Other Aroclors?

A Some -- no, no other Aroclors; other materials.

Q I see.

And as well, the rates as to their percentage of biodegradation?

A Yes.

Q Do you recall discussing this memorandum with

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Dr. Keller?

A Yes.

Q In effect, in this memorandum, is he asking you for clarification of what his list of priorities should be on biodegradation?

A He does ask that in the last sentence.

Q Did you talk with him about that?

A Yes.

Q What did you tell him?

A As I recall, I supported his priorities that he had established. I don't recall challenging any of it.

Q You told him that his assumptions were correct?

A Yes.

Q Can you tell me what this Table 1 attached to Exhibit 67, what does that indicate for Aroclor 1254 and 1242? Can you explain that for me?

A What this says is that for Aroclor 1254 under the condition, under the test conditions employed, in 48 hours, 15 percent of 1254 was degraded, disappeared.

Q Completely degraded?

A I don't know. And the next number says, it is a statistical expression to show the plus or minus, and as I remember, that is percent deviation from that

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15.

Q This is a statistical indication that that percent was either up or was, if you charted it out, would either be above or below the 15 percent?

A Up or below.

Q As to Aroclor 1242?

A Aroclor 1242, it says here that in 48 hours, 26 percent of the original material was identifiable any longer and that number is accurate within 15 percent plus or minus.

Q The Aroclor 1242 number is more accurate?

A That's what it says.

Q It says less deviation from the norm?

A That is right.

Q Under what conditions were those results achieved?

A I don't recall all of the conditions, that is temperature criteria. There is a rate of air flow through the equipment. There is a fixed amount of material that is withdrawn from that system and a fixed amount of material that is introduced into the system.

Q There was under the presence of bacteria as well?

A And there is a bacteria culture that is added

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and all of these follow an accepted protocol, accepted and established as I understand it, by the detergent industry.

Q Did these types of analyses that were being done by Monsanto laboratory on biodegradation continue beyond 1971?

A I would need clarification on your meaning of these types of analyses.

Q We have talked about these tests done in the United Kingdom on biodegradation, the analysis done by Dr. Keller, an analysis of biodegradation, the overall studying of PCBs by Monsanto, biodegradation of PCBs that were done in the Monsanto laboratory. Did that continue on past these dates?

A I don't recall when they were terminated.

Q Was it prior to 1976?

A Yes.

Q Why were they terminated?

A It was believed that all of the information that we could expect from such a study was already in hand and therefore it would not be beneficial to continue repeated testing.

Q Was one of the purposes of initiating these tests in the beginning to establish ways that PCBs

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which were already in the environment could be subject to increased biodegradation?

A That was one of the intended purposes, yes.

Q Did these studies produce any feasible means of enhancing that degradation in the environment?

A No, not over and above what had already existed in the typical municipal sewage treatment plant.

Q As far as you know, once those studies we have been referring to were terminated, were any additional studies later on commissioned or begun by Monsanto in-house or other laboratories?

A Not to my knowledge.

Q To your knowledge, there are none going on today on behalf of Monsanto in the area of biodegradation of PCBs?

A I wouldn't know. I am not involved any longer.

Q Whether you would know or wouldn't know, you don't know, do you?

A I don't know.

Q During the year from January 1970 to January of 1971, were there any significant ways in which your job changed? You went into great detail with regard to what your initial duties were.

The question is did your job change during

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the course of that year?

A I didn't perceive any general change, but the areas of emphasis would constantly shift as time went on.

Q In what way would they shift?

A Oh, as an example, initially I had the task of becoming familiar with the state of knowledge regarding PCBs. Following that, I found myself sharing that knowledge with customers, the public, the Government, universities.

I then found myself sort of involved in attending hearings and meetings and the public forum at which PCBs were discussed, so I would say that that role I played was one of primarily a tutorial role.

I found myself describing PCBs to people and what I happened to know about them, and then the emphasis became one of monitoring Monsanto's withdrawal program.

Q Withdrawal of products, phased withdrawal of products?

A Phased withdrawal of products, to see how it was going, if there were any problems arising from this, how best to resolve it.

I then became involved with reports of

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PCBs in all kinds of situations, some of which I had to respond through the Government and others had to respond to, again, at public forums and, of course, we did get involved in litigation.

Q As early as January of 1971?

A In January 1971, yes, they were starting to develop.

Q Is that the North Carolina case, is that the first one you were involved with?

A No, there were dairy milk cases in 1970. I don't recall when in '71 they became --

MR. SCHINK: The question was did your areas of responsibility change.

THE WITNESS: I said they didn't, but he asked me and when I mentioned that emphasis on different parts of it shifted --

BY MR. POPE:

Q As the cases were brought, that became one of your areas of responsibility, did it not?

A That got near the top of the list priority-wise. So making a long story short, I responded to and reacted to the evolving situation.

Q By January of 1971, were you still the principal spokesman for Monsanto on the PCB subject?

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MR. SCHINK: Generally?

MR. POPE: Generally.

BY THE WITNESS:

A Generally, yes.

BY MR. POPE:

Q And your area of involvement included both at the time the electrical uses as well as the other uses, did it not?

A Oh, yes.

Q Were you spending more time as of early 1971 with governmental representatives?

MR. SCHINK: More time than when?

THE WITNESS: Than when?

BY MR. POPE:

Q Than a year prior to that.

A I think that in early 1971, the involvement with Government representatives was about the same as it was during 1970 in terms of time involved, numbers of people I spoke to and discussed these things with.

Q In 1971 was it still the case that there were a number of Federal governmental agencies involved in inquiring of Monsanto or making contact with you as opposed to focusing out of one agency?

A Yes.

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Q Were they the same agencies that we discussed before: Food and Drug Administration, Department of Agriculture?

A Yes.

Q And was there also contact as EPA was set up? Did you have any meetings with them in 1971?

A Yes. EPA was beginning to form in 1970, yes, we did have connections, representatives within EPA.

Q Were there any discussions that you were a party to involving Federal Government officials in 1971 regarding the suggestion of a total ban on PCB products?

A No.

Q You referred to your work in monitoring the phased withdrawal of products.

MR. SCHINK: No, I think that was the term you used, phased withdrawal. He said withdrawal.

BY MR. POPE:

Q In terms of your work in monitoring the withdrawing of products in the area of hydraulic fluids, can you tell me what you did by way of monitoring that withdrawal in 1970 or early 1971?

A Two ways: One, I would on a person-to-person basis discuss with Mr. Johnson, with Johnson, the status

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of the program. The other would be as, at that point in time, a summary that either Mr. Johnson or his alternate would report to the task force as to the status of their part of the withdrawal program.

Q Who was Mr. Johnson's alternate?

A Oh, generally -- I am trying to recall. It depends, of course, on the point in time. Mr. Pogue would be spokesman at times. I believe he was the primary, Mr. Pogue, at the time, and of course, in conjunction with the Marketing representative, we would have the Research spokesman talk about their contribution to the withdrawal program in terms of how close are they to the finding of an alternate and evaluating it and having it ready.

Q How often would you meet with Mr. Johnson in the latter part of 1970 or the early part of 1971?

A At least once a month.

Q Would these be at your task force meetings?

A That would be the minimum. In addition to that, there would be the personal contact.

Q Would they meet monthly, your task force?

A As I remember about that time, yes, about once a month, yes.

Q Did you ever talk to Mr. Johnson or anybody

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else involved in the hydraulic fluids area about whether customers should be advised to top off their existing PCB products with the new formulations?

A Well, the discussion regarding topping off was held and it centered on compatibility and the decision on whether to top off or not remains the customers. The compatibility information is the one that we felt must be conveyed to the customer.

Q In advising customers of new fluids, Monsanto as a matter of corporate policy recommended topping off, did it not, with regard to hydraulic fluids?

A I don't understand recommended it. As compared to what?

Q As compared to not recommending that it top off.

A I don't know how to answer that. Would you repeat the question?

Q Sure. Isn't it true that in its announcement of new hydraulic fluids, Monsanto would regularly recommend to its customers that those customers could use those fluids by simply topping off with the other fluids that were already in place?

A Your very question confused me because you used the words recommended and could use. There -- they

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don't fit. When you recommend, it is positive. We recommend you use it or you may say the material that we make can be used with your present system and it might be used for topping off purposes without harming your system.

Q That latter statement, did you consider that to be a recommendation?

A No, no.

Q Do you have any recollection of what the Marketing Department told its salesmen to pass on to customers when asked whether it was a good idea to top off the new fluids with the prior PCB-bearing fluids, hydraulic fluids?

MR. SCHINK: Are you using good idea and recommendation synonymously, Mr. Pope?

MR. POPE: Yes.

MR. SCHINK: Your question before was with respect to recommended.

BY THE WITNESS:

A My recommendation is that the salesmen were instructed to inform the customers that the alternative materials being developed were compatible with the fluids already existing in its systems and could be used for topping off. That's all.

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BY MR. POPE:

Q In your terminology, does that constitute a recommendation to do so?

A Not in my understanding of the use of the word recommend.

Q In Mr. Johnson's letters, Exhibit No. 50 and 51, do you consider those to be recommendations that the customer top off the old fluid with the new fluid?

MR. SCHINK: Is there something in the letter, Mr. Pope, that you specifically would refer the witness to?

MR. POPE: I am not referring him to anything in any area.

The second paragraph may --

BY THE WITNESS:

A Looking at Exhibit 50, I see the statement which is information being conveyed to the customer, "These formulations are completely compatible with the old formulations."

The decision remains, the topping off decision remains with the reader of that letter.

BY MR. POPE:

Q What information or what knowledge does Monsanto assume the reader has with respect to how to make that

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decision?

A He has been told about the type of material he is using up to this point. He has been told about the environmental issues known up to this point. He has been told about the care and handling and disposal of the material.

He is now informed as to a new formulation at this point. He has got a decision to make, "Do I stay with the old fluid? If so, is this new material compatible or now that a new material is available, do I do something different, do I replace my system and put in a new fluid, or do I go elsewhere, forget Monsanto?"

I don't read any recommendation in this memo regarding topping off. That is the decision of the user.

Q Is your answer the same with respect to Exhibit 51?

A Yes, decision of the user.

Q Was it one of the goals of Monsanto in the reformulation process to make that fluid compatible to old fluids as that term is used in those letters?

A Yes.

Q In any correspondence or written materials

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that you have ever seen, were customers advised that topping off of the new fluid with the old fluid will infect the new fluid with PCBs?

A I don't remember any such documents.

Q It is a fact, is it not?

A Yes, that a loosely arrived at conclusion, yes.

Q Do you know if any of the hydraulic fluid salesmen were instructed to advise customers intending to top off of that effect?

A I don't know of that specific instruction being conveyed, no.

Q Exhibit No. 54 is a letter from Mr. Bergen. There is no reference at all to compatibility, is there?

A That is correct.

Q In Exhibit No. 55, the February 28, 1972 letter, do you consider that a recommendation by Monsanto to its customers to top off the old fluid with new fluids?

A Here again, it informs the customer of an approach that can be taken. It says, "No draining, cleaning or changing of seals in your system is necessary. You need only to add the new products as

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makeup."

Q To make up to your present systems?

A To your present systems, yes.

Q Is that a recommendation of Monsanto to its customers that they should, recommendation to top off the old fluid with the new fluid?

A Not in my understanding of the word recommending.

MR. POPE: Miss Reporter, I would ask you to mark a 3-page document which is dated December 2, 1970 and appears to be an edited memorandum from Mr. Gordon to Mr. Papageorge re tanktruck shipments of fluids.

(Papageorge-OMC Deposition
Exhibit No. 69 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, I hand you that exhibit and ask you if you received the original of that exhibit on or about the date it bears.

A Yes.

Q I take it when you received the original, it had the additional information on it that was since whited out, is that right?

A It appears to be some, yes.

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Q Did you ask Mr. Gordon for that information?

A I don't recall the circumstances under which this summary was prepared.

Q Is it fair to assume it was not a regular summary that you received on a periodic basis?

A That is correct.

Q Who is Mr. Gordon?

A Mr. Gordon is an individual in our corporate distribution function involved with tanktruck arrangements, shipping arrangements.

Q Do you know what you did with this information?

A No, I just don't recall what triggered it or what happened after.

Q Is it your recollection that this is a list of all of the Monsanto customers who received PCB-bearing products by tank cars?

A No, this is by truck.

Q By trucks?

A Trucks.

Q Is there something about the date which indicates why you would need information at that time?

A I do not recall.

Q Was this part of your work in regard to monitoring the withdrawal of products?

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A I don't remember.

Q Do you know if it had anything to do with the labeling?

A I just don't remember.

Q Does that report indicate that all of the Pydraul being shipped to Johnson Motors as of December 1970 came from Queeny?

MR. SCHINK: You are asking with respect to that of a tanktruck quantity or all of it, regardless of the quantity?

MR. POPE: I guess I am asking about all of it, regardless of the quantity.

BY THE WITNESS:

A All this says is that Mr. Gordon's records show that truckloads of Pydraul A-200B from the Queeny Plant to Johnson Motors, Waukegan were conveyed by the Rogers Trucking Company.

BY MR. POPE:

Q I understand.

A This doesn't tell me this is all of the Pydraul purchased, whether in drums or trucks or rail cars.

Q You were aware that about that period of time Johnson Motors was a customer that was having all of

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its hydraulic fluids supplied by Monsanto, were you not?

A No, I didn't know that then; don't know it now.

Q Do you have any reason to believe that some of the Pydraul was coming to Johnson from tanktrucks from Queeny and some Pydraul from other places?

A It is a possibility.

Q What is meant by the fluids being shipped by tanktruck? What kind of truck is that?

A That is the normal bulk truck we see on highways. I don't know how to explain it.

Q The trucks that carry the fluid in one long tank?

A One long cylinder, yes.

Q Pydraul shipped under those circumstances did not have labels on it, did it?

A Other than as required by the Department of Transportation.

Q But the label change we talked about quite awhile ago wouldn't have gone on a tanktruck shipment to Johnson Motors from Queeny, would it?

MR. SCHINK: We already covered that, how that information was conveyed to customers in great detail.

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MR. POPE: We didn't talk about that at all with regard to Johnson Motors, you know that.

MR. SCHINK: We certainly did, Mr. Pope, with regard to tanktruck customers.

MR. POPE: Tanktruck customers in general. We are talking about specifics now, Mr. Schink.

Would you read the question.

(Question read.)

MR. SCHINK: Objection, asked and answered. You may answer it again.

BY THE WITNESS:

A It had only those labels as required by the Department of Transportation.

BY MR. POPE:

Q Would the Department of Transportation require acknowledgments including the label we discussed earlier that was changed in mid-1970?

A No.

Q As of early 1971, was your title still the same as it had been a year previously?

A I don't recall.

Q Did your title change from January 1970 until 1976?

A Yes.

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Q How many times did it change?

A As I remember, I had three titles in that period of time.

Q What were they?

A Manager, Environmental Control. It then was changed to Manager, Environmental Protection.

Q Environmental Protection?

A Protection.

Then I was titled Manager, Product Acceptability.

Q Were those titles changed at your recommendation?

A No, no.

Q Did your job change with the titles?

A I don't know that the titles were -- somewhere along 1973 or so, I became involved with other chemicals in addition to PCBs and finally in about 1973 with a restructuring of Monsanto, I was one of three individuals that had the title Manager, Product Acceptability, and at that time I was assigned to the environmental response for a group of products associated with a division within the newly structured company.

Q What group of products?

A Oh, we had the Functional Fluids Group stayed

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with us and I picked up the Specialty Chemicals and eventually I picked up a group referred to as Process Chemicals. That's it.

Q In that job your position was one of being concerned about environmental effects of various products?

A Yes.

Q As of early 1970, was it your job to respond to inquiries regarding PCBs from outside sources?

A Only when those inquiries reached my desk.

Q Seems fair.

Did you have a standard response to customers or other interested people inquiring about PCBs?

A No, I had a knowledge that I had acquired and continued to acquire. Depending, of course, on the inquiry, I would respond accordingly.

Q Did you participate in any way in a Federal investigation of Monsanto and perhaps others in the Los Angeles area in the early 1970s?

A I am not aware of any Los Angeles Federal investigation.

MR. POPE: I would ask the reporter to mark as Papageorge Deposition Exhibit No. 70 for identification,

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a 3-page document dated November 10, 1971.

(Papageorge-OMC Deposition

Exhibit No. 70 marked for

identification, 9/1/81, TLU.)

MR. POPE: Before we get to that report, I would like the reporter to mark as Exhibit No. 71 and 72, copies of two letters. The first is dated December 15, 1971 to Mr. Richard Malloy, and the second letter is dated January 15, 1971, addressed to Mr. W. L. Luke, both of them being two-page exhibits.

(Papageorge-OMC Deposition

Exhibits Nos. 71 and 72 marked

for identification, 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, I show you Exhibit Nos. 71 and 72 and ask you if those are copies of letters you sent to outside people inquiring of Monsanto.

A Yes.

Q Was that as of that period of time, December and January, your basic standard response to an inquiry from an outside source?

A I am not aware that I had a standard response. Both of these refer to Pydrauls. My response to other applications might be different, would be different.

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Q Did you have a basic form response for inquiries regarding Pydraul?

A No, I would compose the responses as needed.

Q Was it your practice, Mr. Papageorge, in December of 1970, January 1971 to refrain from mentioning any of the reports Monsanto had with respect to adverse effects of Aroclors on species of animals in letters of inquiry from outside Monsanto?

A No.

Q Do you know who Jerry Davidson is?

A Yes. He is a Monsanto Product Manager of Hydraulic Fluids.

Q In what area of the country, Los Angeles?

A It must have been in that area, yes.

Q He is shown as receiving a copy on this letter to Mr. Malloy.

Can you tell me why Mr. Garcia is shown as receiving a copy?

A I don't recall now why.

Q Is Mr. Davidson working under Mr. Johnson?

MR. SCHINK: Did he at that time?

BY MR. POPE:

Q In December of 1970.

A Yes, now another supervisor. It may have been

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Mr. Garcia.

Q Mr. Johnson was his overall supervisor?

A Correct.

Q Before we get to Exhibit 70, let us mark as Exhibit 73, a 3-page document, portions of which have been edited out, the first page of which is dated February 8, 1971, entitled PCB Environmental Problem, January Status Report.

(Papageorge-OMC Deposition
Exhibit No. 73 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, is Exhibit 73 a memorandum you sent to those people indicated on or about the date that appears?

A Yes.

Q What other matters were reported in the original of that document other than what we have here?

A Oh, I don't remember.

Q I take it there were additional matters to report the status of other than Pydraul reformulation or Pydraul A-200B, were there not?

A Yes, it is a fair assumption.

Q Page 2, there is reference to the Pydraul

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reformulations.

Were these various Pydrauls listed here going to be tested by Factory Mutual at the same time, is that how that process worked, or were they done individually?

A I don't recall the procedure. All I know is it is samples of reformulations that were sent to Factory Mutual's laboratory and they were to run the tests.

Now, whether they accumulate and run all five in a battery, or one at a time, I don't know.

Q The information lower in that second page, Pydraul A-200B is now fully accepted by Johnson Motors, where did you get that information?

A That had to come from the Marketing organization.

Q What do you mean by "fully accepted"?

A Those are the Marketing plan's words. I was the editor of this.

Q Did you understand that to mean they were pleased with it?

MR. SCHINK: Fully accepted?

BY THE WITNESS:

A Without reservations of any kind.

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BY MR. POPE:

Q That was your understanding as of January, February 1971?

A That is right.

Q Would that have come from Norm Johnson or one of his associates?

A Either one or both.

Q As of February of 1971, what role did Mr. Gossage have with Monsanto as far as you know?

A He was at that time the Director of Marketing for Functional Fluids.

Q Did that put him above Mr. Johnson?

A Yes.

Q Was Mr. Johnson still working for Monsanto at that time?

A In 1971?

Q As far as you remember.

A I think he was, yes.

Q The reference in the fourth page -- we weren't provided with a third page -- is to Medical, is that right?

A Yes.

Q Under what circumstances, if you remember, was Dr. Keplinger asked questions by Dr. Fitzhugh of

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the U.S. Food and Drug Administration?

A From our discussions with Dr. Fitzhugh on the status of the ongoing studies, we had established a relationship such that Dr. Fitzhugh could feel free to call Dr. Keplinger and get a telephone status report or a response to an inquiry. That was an arrangement that we made with Dr. Fitzhugh to expedite the flow of information.

Q Was this the only study, the study being referred to there, the only study ongoing at that point in time relating to the effect of Aroclors on reproduction systems in animals?

A I don't recall when the chicken reproduction studies were completed, but they were either completed before this date or ongoing at that time.

Q When those studies were completed, the leghorn chicken studies, was the information immediately conveyed to the U.S. Food and Drug Administration?

A Oh, yes.

Q And to Dr. Fitzhugh, specifically?

A That I don't know.

Q Whose responsibility was it to convey that information to the U.S. Food and Drug Administration?

A That's Dr. Kelly or Mr. Wheeler.

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Q Am I correct you don't remember any other matters that were dealt with in your January status report here?

A No.

Q Calling your attention to Exhibit No. 70 for identification, we are now talking about November 10, 1971.

Is this a memorandum from Dr. Tucker to Dr. Keller?

A Yes.

Q Was a copy made available to you on or about November 10, 1971?

A Yes.

Q Can you tell me what the status was of Industrial Bio-Test studies for Monsanto with respect to PCBs at this time?

A I don't recall the status of all the studies. I do recall that by November of '71, the long term, the two-year studies were completed in the laboratory, and if I recall correctly, the laboratory was in the midst of studying the microscopic slides and preparing their data for eventual inclusion in a final report.

Q Was Dr. Tucker assisting in the analysis at the slides?

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A No, no.

Q Why was he present, do you know?

A Dr. Tucker was involved in an additional study in which he was to determine the presence of PCBs in animal tissue collected during the study.

Q Reference on Page 2 to Roman Number IV, "Development of written guidelines," what does that refer to as far as you know?

A This was the first experience by Monsanto and Industrial Bio-Test Laboratories in the collection of tissue, the preservation of tissue, the shipping, cataloging, the custodianship, the final handling of the samples in Dr. Tucker's laboratory, and we went through a learning process. And the intent of that part of this report is to refer to a proposal that it would be better if we would write a procedure to benefit from this experience for future studies.

Q Does Roman Numeral V accurately summarize the ongoing subacute toxicity studies that were being conducted by Industrial Bio-Test as of the date of that memorandum?

A This appears to accurately summarize the studies pending at that time.

Q Does that word Quaterphenyls --

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A Quaterphenyls is the next step above terphenyl, four benzene rings.

Q What does No. 6 refer to on Page 3, do you know?

A No.

MR. POPE: I would ask the reporter to mark as Papageorge Deposition Exhibit No. 74 for identification, a 2-page document dated February 19, 1971 re Reclamation Meeting.

(Papageorge-OMC Deposition
Exhibit No. 74 marked for
identification, 9/1/81, TLU.)

BY MR. POPE:

Q I hand you that exhibit, Mr. Papageorge, and ask if that is a copy of a document you received on or about the date it bears.

A Yes, I received a copy of this.

Q Was that a group that was regularly meeting to discuss the subject of reclamation?

A It met, not regularly, but on a need basis.

Q Was Mr. Pogue in charge of calling that group together?

A No, any participant could call the group together.

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WATER_PCB-00055399

Q What was the significance, if you know, in February of 1971 that Monsanto make firm plans on the recovery and/or disposal of used products?

MR. SCHINK: You mean what did Mr. Pogue mean when he wrote that first sentence?

MR. POPE: No.

MR. SCHINK: I object to the form of the question.
BY THE WITNESS:

A I don't know. I don't recall the significance of timing and the reference to need for firm plans at that time.

BY MR. POPE:

Q The reference to important?

A Yes.

Q Do you remember attending the meeting?

A Yes.

Q Was the subject discussed reclamation as to all uses of PCB fluids?

A Not all uses. It certainly didn't include the non-fluid uses.

Q It did not?

A No.

Q Do you recall what was decided at the meeting?
You can use the agenda to refresh your recollection.

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A I don't recall results of this specific meeting.

Q As far as you knew as of the end of February 1971, was reclamation of used fluids still viewed as a feasible ongoing project at Monsanto?

MR. SCHINK: Now you are talking about reclamation by Monsanto or reclamation by its customers?

MR. POPE: Why don't we ask Mr. Papageorge what it means. It says reclamation meeting, whatever it says at the top.

BY THE WITNESS:

A You mean what did Mr. Pogue mean?

BY MR. POPE:

Q Reclamation meeting, what does it mean in context of that memorandum?

A This group was evaluating reclamation of the fluids containing PCBs as a helpful means to preventing introduction into the environment. The term reclamation was, of course, reflected to mean the reprocessing of fluids to make them reusable. It was not addressed to any specific project on the part of Monsanto in terms of getting into that business; nor did it exclude the possibility of getting into that business.

It was the broad concept of is reclamation

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a useful way to help our customers.

Q As of the end of February 1971, had that question been answered in the positive or the negative, or had it been answered at all, or was it still under study?

A I don't remember specifically as of February 1971.

Q You don't remember whether at that meeting a decision was made to not go forward with any further evaluation?

A That is true.

(Papageorge-OMC Deposition

Exhibit No. 75 marked for

identification, 9/1/81, TLU.)

MR. POPE: I would like to call your attention to the document the court reporter has marked as Papageorge Deposition Exhibit No. 75 for identification, being a memorandum from Dr. Kelly to Mr. E. V. John dated July 23, 1971.

I show you that document, Mr. Papageorge, and ask you if you received a copy of that memorandum on or about the date it bears.

BY THE WITNESS:

A Yes, I received a copy of this memorandum.

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WATER_PCB-00055402

BY MR. POPE:

Q Can you tell me what incident Dr. Kelly is referring to when he refers to the "PCB fish meal episode"?

A This is the incident that occurred in North Carolina. The fish meal was contaminated with PCBs.

Q Is that the incident that ultimately led to the lawsuit where you testified in the Holly Farms case?

A Yes.

Q I take it it involved chickens eating this meal that had been contaminated with PCBs or allegedly contaminated?

A Yes.

Q Was the source of that PCB the heat transfer fluid, or was it ever determined?

A It was heat transfer fluid, yes.

MR. POPE: Time to break.

(At 6:00 o'clock p.m., the deposition was adjourned to resume at 9:00 o'clock a.m., Wednesday, September 2, 1981.)

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