SUPERIOR COURT OF CALIFORNIA
CITY AND COUNTY OF SAN FRANCISCO

BIRMINGHAM FIRE INSURANCE COMPANY, et al.,	)	
Plaintiffs,	)	
vs.	)	No. 840161
PACIFIC GAS & ELECTRIC COMPANY, et al.,	)	
Defendants.	)	

******

Deposition of Witness
PAUL G. BENIGNUS
on Behalf of the Plaintiffs.

******

August 8, 1987

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Reported by:
Carolyn S. Howser
Certified Court Reporter

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STLCOPCB4023154

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SUPERIOR COURT OF CALIFORNIA
CITY AND COUNTY OF SAN FRANCISCO

BIRMINGHAM FIRE INSURANCE COMPANY, et al.,

Plaintiffs,

vs. No. 840161

PACIFIC GAS & ELECTRIC COMPANY, et al.,

Defendants.

DEPOSITION OF WITNESS PAUL G. BENIGNUS, produced, sworn and examined on the part of the Plaintiffs, pursuant to Notice, and pursuant to the following stipulation between the hours of eight o'clock in the forenoon and six o'clock in the afternoon of Saturday, August 8, 1987, at the Holiday Inn, 7730 Bonhomme Avenue, Room 407, in the County of St. Louis, State of Missouri, before me,

CAROLYN SUE HOWSER
Certified Court Reporter
of
HOWSER COURT REPORTING

a Notary Public in and for the State of Missouri, in a certain cause now pending in the Superior Court of California, City and County of San Francisco, wherein BIRMINGHAM FIRE INSURANCE COMPANY, et al., are the Plaintiffs and PACIFIC GAS & ELECTRIC COMPANY, et al., are the Defendants.

A p p e a r a n c e s

For the Plaintiffs: Hall, Henry, Oliver & McReavy
Attorneys at Law
100 Bush Street - Suite 1200
San Francisco, CA 94104
By: Henry D. Dicum

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A p p e a r a n c e s (Cont'd)

For the Defendant I.T. Corp.:	La Follette, Johnson, Schroeter & De Hass Attorneys at Law 50 California Street - 35th Floor San Francisco, CA 94111 By: Matthew J. Rothschild
For the Defendant PG&E:	Sedgwick, Detert, Moran & Arnold Attorneys at Law One Embarcadero Center - 17th Floor San Francisco, CA 94111 By: Beth S. Jordan
For the Defendants Weaver and Welton Beckett:	Lempres & Wulfsberg Attorneys at Law 300 Lakeside Drive - 18th Floor Oakland, CA 94612 By: Roy A. Combs
For the Defendant Westinghouse:	Thelen, Marrin, Johnson & Bridges Attorneys at Law Two Embarcadero Center San Francisco, CA 94111 By: Gary Fontana
For the Defendant Monsanto Company:	Bronson, Bronson & McKinnon Attorneys at Law Bank of America Center San Francisco, CA 94104 By: Bernard Kearns and Susan Duvier
Also Present:	Mrs. Hazel Dicum

S t i p u l a t i o n

Before the taking of the within deposition, the parties, by their counsel, stipulate and agree that the same is being taken pursuant to Notice. Counsel further stipulate same may be taken in stenotypy and thereafter typed, signature of the witness not being waived, and regularly filed in the case, subject to objections as to competency, relevancy, and materiality.

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PAUL G. BENIGNUS

being produced, sworn and examined on behalf of the Plaintiffs, deposeth and saith:

DIRECT EXAMINATION

BY MR. DICUM:

Q. Mr. Benignus, my name is Henry Dicum and I represent the Plaintiffs in this action and I've asked you to come here to answer some questions about a lawsuit that's pending in San Francisco and it's a lawsuit that involves amongst other things PCBs, dioxins and furans and --

MR. KEARNS: We don't quite agree with Mr. Dicum that it involves dioxins.

MR. DICUM: Fine.

Q. And, first of all, have you had your deposition taken before?

A. Yes.

Q. Have you had a chance to discuss with your lawyers what a deposition is?

A. Yes.

Q. As you probably know, a deposition is a question and answer session in front of a reporter. It is under oath. Your oath has been taken and the reporter will eventually provide you a transcript which you can look at and correct if you want to, but if you

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do make corrections at that time, it would be possible for us to make any comments about those changes if you make any changes, so I would caution you to try to be as accurate as possible in this session so that that kind of possibility doesn't arise if it's at all possible.

And if at any time you don't understand a question that I'm asking, please stop me and tell me to try to rephrase the question and I would again caution you that you should do so because if you don't, I won't have any means of knowing you don't understand the question and I'll have to go under the assumption and we'll all go under the assumption that the question was understood, okay?

A. Yes.

Q. Sir, at this time is there any reason why this deposition cannot proceed at this time? Are you taking medication, for instance?

A. No.

Q. Okay. Could you state for the record your full name and address?

A. Paul G. Benignus, 47 Metcalf Drive, Belleville, Illinois, 62223.

Q. Are you retired from Monsanto?

A. Yes.

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Q. When did you start working for Monsanto?
A. In 1934.
Q. And when did you retire?
A. '74.
Q. Are you an organic chemist by profession?
A. Yes.
Q. Sir, can you tell us from what institutions you obtained your degrees?
A. Illinois College, B.A.; Washington University, M.S.
Q. Was that in chemistry?
A. Yes.
Q. The M.S.?
A. Yes.
Q. Now, at some point after obtaining those degrees, did you join the Monsanto Company?
A. Yes.
Q. And what kind of work were you doing when you first joined the Monsanto Company?
A. Analytical chemistry.
Q. Did any of this work involve PCBs?
A. No.
Q. Can you tell us at what point you first started working in the areas involving PCBs?
A. 1947.

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Q. Can you tell us what position you held at that time?

A. My assignment was to work with nonelectrical PCBs for nonelectrical applications.

Q. At what time did you start working on electrical applications of PCBs?

A. Approximately the mid fifties.

Q. Mid fifties. And what position did you hold at that time?

A. Technologist.

Q. Technologist. Did you have a formal title?

A. Technical specialist.

Q. Can you tell us what department or division that was in?

A. I started in the inorganic division and then I was transferred to the organic division.

Q. Was that in St. Louis in both cases?

A. St. Louis.

Q. Sir, I'm going to ask you certain questions concerning your work and particularly insofar as you had dealings with Westinghouse, okay?

A. (Nodding head.)

Q. First of all, I'm going to have marked as an exhibit a memorandum of some kind which bears your signature at the bottom. It's been provided us by

Monsanto and it bears a date of September 21, 1967.

(Plaintiff's Exhibit 159 marked for identification.)

MR. ROTHSCHILD: This is exhibit?

THE COURT REPORTER: 159.

Q. Have you had a chance, sir, to review that document?

A. Not entirely.

Q. Take your time.

A. Yes.

Q. What position did you hold by 1967, do you recall?

A. I was in the technical area, marketing technical. There was no change in my position.

Q. Did you hold a position at this time of product manager or some position of that kind?

A. No.

Q. Were you working -- reporting to a product manager?

A. Yes.

Q. Who was that product manager?

A. George Buchanan.

Q. Were there occasions when you visited Westinghouse plants in South Boston?

A. I visited that location as I recall one

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time. I was not in the plant.

Q. Did you visit that location on any occasions when you did go into the plant?

A. Where?

Q. At South Boston.

A. No, I was never in the plant.

Q. I direct your attention to Paragraph 5 of this memorandum. First of all, do you recall this memorandum now that you've had a chance to read it?

A. Yes.

Q. Did you prepare this memorandum?

A. Yes.

Q. And it was addressed to Westinghouse Electric, Bloomington, I take it?

A. Yes.

Q. Is Gerald Miller, is that the person who was in charge of the plant at Anniston?

A. No.

Q. Who was Gerald Miller?

A. He was the chief chemist.

Q. And can you tell us who Harvey Pickett and James McNally were?

A. I know they were at Westinghouse Bloomington. I did not know those people.

Q. I direct your attention to the first, in

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fact, both sentences of Paragraph 5 and it says, "In addition to the above, this would also be a good time for Jim Bryant to tell Westinghouse of our experiences with upgrading Aroclor 1242 through use of Porocel," okay. Let's take that sentence first. What exactly was Porocel?

A. Porocel is a filter aid.

Q. Can you tell us what substances it was intended to remove from Aroclor 1242?

A. Ionic impurities.

Q. Have you heard of a substance called chlorinated dibenzofuran?

A. Yes.

Q. And can you tell us what your understanding was at the time of your work at Monsanto of chlorinated dibenzofuran?

A. It's a chemical compound.

Q. And is it a compound that's intended to be in PCBs?

A. No.

Q. It's some kind of impurity, is that the case?

A. I don't know that.

Q. But it's not intended to be in PCBs?

A. It's a chemical compound.

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Q. Not intended to be in PCBs?

MS. DUVIER: That's what he said. That was his testimony.

Q. Now, do you know if chlorinated dibenzofurans was one of those ionic compounds that Porocel was supposed to remove?

A. No.

Q. Can you tell us, sir, as an organic chemist speaking to a layman, that's me, how exactly Aroclor 1242 was actually made?

A. It was the chlorination of biphenyl.

Q. Okay. When you say a chlorination, you mean you would have some kind of process that would add chlorine to biphenyl?

A. Substitute chlorine into the iron.

Q. And you'd start off with what? Biphenyl?

A. Biphenyl.

Q. And was there any kind of chemical agent other than biphenyl and chlorine that was added in order to start some kind of chemical reaction?

A. Iron.

Q. Iron. Anything else?

A. No.

Q. Now, was there any other kind of chemical at all during the process of manufacture of Aroclor

1242 that was required other than the ones you've mentioned, biphenyl and chlorine and iron?

A. In the final distillation, the purify, the crud to purify it is distilled. There I think your question resides and it is distilled over lime. Lime is present as I recall in our process. I was not in the manufacturing end of it. I think I've given you the right answer.

Q. Can you tell us what the chemical term is for lime?

A. Lime is calcium oxide.

Q. Was sodium used in any stage of this distillation process?

A. No.

Q. Was there any -- strike that. Now, you've just testified you weren't actually at the manufacturing end of the process, right?

A. Right.

Q. Were there occasions when you had to analyze Aroclor 1242s after it was manufactured?

A. Of course.

Q. And this was in St. Louis or at the plants where it was being manufactured?

A. At the plant.

Q. Did you have occasion sometimes to analyze

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other products in the Aroclor line of products?

MS. DUVIER: Do you understand his question?

THE WITNESS: No, I don't.

Q. Okay. Monsanto manufactured, sir, as I understand it other products under the Aroclor name such as Aroclor 1254?

A. Yes.

Q. Do you remember that?

A. Yes.

Q. And Aroclor 1248?

A. Yes.

Q. And 1260?

A. Yes.

Q. A number of others as well?

A. Yes.

Q. Correct?

A. Yes.

Q. I was wondering whether you had also occasion to analyze at different times in your career any of those other Aroclors other than Aroclor 1242?

A. I didn't do it myself, but the analytical lab did, yes.

Q. Where was the analytical lab?

A. At the Anniston plant, Anniston, Alabama.

Q. Did you give that lab directions on how to

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do the analysis or did you go out there yourself from St. Louis to do that?

A. The directions came from the electrical industry originally. The specifications which are the official specifications to the American Society for Testing of Materials, they are all documented there. They originated with General Electric Company, Westinghouse, and the electrical industry.

Q. Do you know if at any time during your career you saw written specifications from Westinghouse for the manufacture of Aroclor 1242?

A. Westinghouse didn't manufacture Aroclor 1242.

Q. Okay. I understand that, but do you remember if on any occasion Westinghouse provided you with directions on how to do it?

MS. DUVIER: Are you asking him if he ever saw Westinghouse specifications for Aroclor 1242?

MR. DICUM: Yes.

MS. DUVIER: Did you ever see that, Paul?

THE WITNESS: This is a different question.

MS. DUVIER: Answer that question.

A. Westinghouse had a specification for Aroclor 1242, yes.

MR. FONTANA: I might note for the record that

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that is a different question than the question Mr. Dicum put originally.

A. Altogether different.

Q. Did you ever see yourself any written specifications --

A. Yes.

Q. -- from Westinghouse for Aroclor 1242? You did?

A. Yes.

Q. Can you tell us when?

A. From the time they first purchased it. It's a standard specification documented at ASTM as I said.

MR. DICUM: I'm going to have marked next in order BIR 000043, which is a document entitled "Certificate of Quality." It has a cc to P. G. Benignus at the bottom and also R. H. Munch. It bears the name of Westinghouse Electric Corporation in little block on the left-hand side and it's under seemingly the letterhead of Monsanto.

MR. ROTHSCHILD: Did I hear you correctly 000043?

MR. DICUM: Right, that seems to be the number.

(Plaintiff's Exhibit 160 marked for

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identification.)

Q. Sir, what is the document I've just placed before you and marked as Exhibit 160?

A. That's the specification.

Q. Okay. Now, I see that it is under the name of Monsanto. Do you know if as a matter of custom and practice a specification would have been received from Westinghouse in order to have it put back into the certificate of quality after manufacture?

A. I don't understand that question.

Q. I see that's a specification, but it is under the name apparently of Monsanto. I was wondering if there was any previous --

MS. DUVIER: It's on a document which has a Monsanto --

Q. Monsanto at the top left-hand corner.

MS. DUVIER: What's your question?

Q. My question is do you know if in order to -- first of all, do you know if this is a document that Monsanto would have prepared or Westinghouse would have prepared?

A. They both have it. It's the ASTM documented official specifications for anyone.

MS. DUVIER: He's asking about this particular document. Do you know whether Monsanto prepared it or

Westinghouse prepared it? Do you know?

THE WITNESS: Where did it come from? Where does it say?

MS. DUVIER: Do you know?

THE WITNESS: Where was it sent?

Q. Well, okay.

A. It says Westinghouse, right?

Q. Yes.

A. Did they send it to themselves?

Q. There is a cc at the bottom and I take it then that is --

A. This is the official specification documented to the American Society for the Testing of Materials used by industry.

Q. Do you know if that specification was developed only by General Electric and Westinghouse or was it also developed by Monsanto along with those parties?

A. And many others interested.

Q. Can you tell us who else?

A. Allis Chalmers. This is a transformer fluid. Anyone else using the same fluid would be interested in it and have this information.

Q. Do you recall when during the course of your career you first heard the name of the kind of

STLCOPCB4023172

compounds called chlorinated dibenzofurans?

A. Probably in the mid 1970s, thereabouts. I was not involved with those matters. To answer your question -- you want to restate the question?

Q. Let me restate the question. Perhaps you may have misunderstood it. I was wondering if you have any recollection as to, first of all, whether you've heard while you were still working at Westinghouse the term -- strike that.

A. I have not.

Q. Let me start again. I'm getting confused. Can you tell us whether during the time you were working at Monsanto and still working at Monsanto, you had heard the term chlorinated dibenzofuran?

A. This is an estimate. Probably 1972 or '3, thereabouts.

Q. You mentioned, sir, that during the distillation process something called calcium hydroxide --

A. Oxide I think.

Q. Calcium oxide?

A. I believe.

Q. Was used?

A. I was not in that.

Q. Have you heard of something called sodium

STLCOPCB4023173

hydroxide?

A. Yes.

Q. Was sodium hydroxide ever used in the manufacturing process, do you know?

A. To my knowledge, no.

Q. Or the distillation process, same answer?

A. Same answer.

Q. Can you tell us in the period, let's say, of the 1960s to about the time you retired, who would have been the people most knowledgeable at Monsanto concerning the manufacturing process?

MS. DUVIER: You might want to break that down a little bit into maybe five-year periods.

Q. Let's take first the period 1960 to 1965, okay? Can you tell us who in that period if you recall were the persons or person most knowledgeable about the manufacturing process?

A. People in production and in research.

Q. Okay. Can you give us some names? Let's take production first.

A. Production Desmond Hosmer.

Q. Was he still with the company when you left?

A. Yes.

Q. Was he at the particular plant?

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A. Yes.
Q. Which plant?
A. Anniston.
Q. Anyone else in production?
A. There were operators that I knew, Jack Cleghorn, C-l-e-g-h-o-r-n.
Q. Was he at Anniston?
A. Yes, he was at Anniston.
Q. When you say, "operators," are you referring to people actually operating the equipment?
A. Yes.
Q. And they would be working for Mr. Hosmer at Anniston?
A. Yes.
Q. Mr. Hosmer, was he the plant manager?
A. Plant manager.
Q. This is in the period '60 to '65 now, do you understand?
A. Yes.
Q. Anyone in research in that period that you recall?
A. Martin Ellenberg.
Q. Was he located in St. Louis?
A. At that time, yes.
Q. Did he go to some other location at a later

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time?

A. No.

Q. Is he retired do you know from --

A. Yes.

Q. Was a gentleman called Dr. Ralph Munch already working at Monsanto in the 1960s or 1965 period?

A. Yes.

Q. He was a research chemist, was he not?

A. Yes.

Q. Was he working in the PCB area already in 1960 to '65?

MS. DUVIER: Don't guess, Paul. If you know, tell him.

A. I'm not sure. '60 to '65? I'm not sure.

Q. Let's take the next period, '65 to 1970. Was Dr. Munch already working in the PCB area in that period?

A. Yes.

Q. And between '65 to '70, were there any production people in particular that you recall as opposed to research people?

A. Yes.

Q. Can you give us some names?

A. Papageorge.

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Q. Where was Papageorge?
A. At Anniston.
Q. Was he a plant manager there?
A. Yes.
Q. Anyone else?
A. No.
Q. I think that will do it. Now, in the period between 1970 to 1974 when you retired, all right, can you tell us if Dr. Munch continued working with PCB research?
A. Yes.
Q. And I take it that Mr. Papageorge was already active in PCBs in that period, is that correct, '70 to '74?
A. I don't understand your question.
Q. Okay.
MS. DUVIER: I think you meant still active.
Q. Still active, I beg your pardon.
A. Yes.
Q. During the course of your analysis of PCBs, did you at any time find a substance called chlorinated dibenzofurans?
A. No.
Q. Do you know if anyone else ever did at Monsanto?

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A. Not to my knowledge. I wasn't in that.

Q. Sir, do you remember when you were at Monsanto drafting or helping to draft certain manuals about Askarels?

A. Yes.

Q. And I'm going to show you some documents that have been provided us by Monsanto and ask you if you recognize these documents. They are in production folder 5B. There's another copy on the other side and they start at this is Exhibit 5, okay?

MS. DUVIER: Is there going to be a question on a certain document?

Q. First of all, let me ask him --

MR. ROTHSCHILD: This is Exhibit 5?

MR. DICUM: Yes.

Q. Sir, you've had placed in front of you a document that is entitled "The Proper Handling of Aroclors and Their Mixtures in the Electrical Industry." Do you see that?

A. Yes.

Q. And there appears to be your name at the bottom, P. G. Benignus, May 1, 1956?

A. Yes.

Q. Did you prepare at different times more than one edition of this document?

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MR. FONTANA: Has this document been marked for identification?

MR. DICUM: It's Exhibit 5. We had it a long time ago. It was done on the first day.

A. It was reprinted at times because they ran out.

Q. Now, I see in BIR 002325, another edition which is dated January 1960 --

A. Yes.

Q. -- do you see that?

A. Yes.

Q. Did you also prepare that edition or was that simply someone else preparing a new edition for you?

A. This was reprinted because they ran out.

Q. Okay. So it's actually identical?

MS. DUVIER: Do you know if there are any changes in these two documents?

THE WITNESS: You want me to spend all day reading everything?

MS. DUVIER: No, I just asked you is there any changes.

A. Offhand, no, it's simply a reissue of the same thing.

Q. Sir, I direct your attention to a notation

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underneath your name on the second page which does seem to say, "Revised."

A. Yes.

Q. Would that be an indication that there was some kind of -- if I looked through it carefully, I would find some revisions as opposed to just a reprinting?

A. I cannot recall.

Q. Sir, do you recall that in the course of preparing these various volumes, you had a chapter and the first one, for instance, that we looked at, Chapter 9, do you see the title of that document?

A. Chapter 9?

Q. Yes, it's entitled "Dermatology and Toxicology," is that not the case?

A. Yes.

Q. Can you tell us from what source you got the information that went into that chapter?

A. The medical department or industrial hygiene.

Q. Did you ever get any information from Westinghouse in connection with toxicity?

A. No.

Q. We'll come back to that. Sir, would you look at BIR 002299 which is in the booklet that Mr.

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Benignus prepared?

MS. DUVIER: 2399?

MR. DICUM: 002299. It's Page 58.

MR. ROTHSCHILD: Is this the same document, Page 58?

MR. DICUM: Right.

Q. Do you see there a heading called "Detail Property" of all of these products are given as follows?

A. Yes.

Q. Then it has Aroclor 1242?

A. Yes.

Q. Is that again an ASTM standard that you would have taken that from?

A. Yes.

Q. Sir, would you look at the item that is marked inorganic chlorides? In that item --

MS. DUVIER: Which document are we talking about?

MR. DICUM: The first document.

A. Yes.

MS. DUVIER: This is the 1974 certificate of quality?

MR. DICUM: That's correct.

Q. Would you tell us what the quantity is of

STLCOPCB4023181

inorganic chlorides that is in that quality certificate?

A. 0.01 inorganic chlorides.

Q. Now, can you look back at the older version of the specs?

A. This?

MS. DUVIER: Which heading?

MR. DICUM: Under inorganic chlorides.

A. Yes.

Q. Can you tell us what the figure is there?

A. 0.0 maximum.

Q. .0?

MR. KEARNS: State that again.

A. 0.10 maximum.

Q. Okay. Would that indicate to you that at sometime between 1956 and the certificate of quality in 1974 that there was some kind of change in the composition of Aroclor 1242?

A. Not at all.

Q. It does not?

A. Not at all.

Q. Why is that?

A. Am I supposed to explain this?

Q. You've got to treat me as a very basic layman in these matters and what may be obvious to you

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is not obvious to me. There may be some very simple explanation.

A. Very simple.

Q. Okay. Go ahead.

A. This refers to inorganic chlorides.

Q. Okay.

MR. KEARNS: When he says, "this," he means this certificate of quality.

Q. The 1974 document, Exhibit 160.

A. They are referring to the same thing. Now, you're asking whether there's any difference between the .01 versus the or -- there is no difference. I can't account for this. It is a very small amount and I did not prepare this thing here in 1974. I would say that the value here .10 max, that is the official specification. Now, someone in retyping this probably got it a little bit wrong. It's supposed to be one-tenth of a part per million maximum. Here it does not say what this number is. It says .01. It doesn't say whether that's parts per million, whether that's a maximum or what. It is a very minor discrepancy.

Q. Okay. Do you know of any changes in the chemical composition of Aroclor 1242 between around 1956 when you seemingly prepared this manual and 1974 when you retired?

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A. Absolutely none.

Q. Do you recall, sir, of at some point a product called 1242B that was developed?

A. I've heard that number.

Q. Have you heard of a product called MCS 1016 that was developed?

A. Yes.

Q. Is that the same product?

MS. DUVIER: Do you know or are you guessing?

A. I'm not absolutely certain.

Q. Let's move on to another document.

MR. DICUM: I'm going to have marked a document dated January 13, 1969. It has a BIR Number 002177 and it runs through BIR 002180. It bears the name of Paul Benignus at the last page and I have a spare copy of this one for distribution.

(Plaintiff's Exhibit 161 marked for identification.)

MR. ROTHSCHILD: Do you have a date?

MR. DICUM: Yes, it is dated January 13, 1969, and it is entitled "Westinghouse Electric Transformer Division, Subject" and it seems to refer to some kind of January 10, 1969, meeting.

MR. ROTHSCHILD: Thank you.

Q. Mr. Benignus, please take your time to

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review these pages.

MS. DUVIER: Do you want him to have a question in mind while he's reading?

MR. DICUM: Yes. In fact, I would direct his attention to the very first paragraph which I think he's already read on Page 1.

A. Yes.

Q. I want you to think about that subject matter while you're going through this document.

MS. DUVIER: He's going to ask you about this paragraph.

MR. DICUM: And there may be materials in later pages that may have a bearing on that. I don't want to rush him in any way or in any way preclude him from reading the rest.

A. Yes.

Q. Okay. First of all, did you prepare this document?

A. Yes.

Q. That's your signature at the back page?

A. (Nodding head.)

Q. I'm going to direct your attention to the very first paragraph where it says, "Recently, Westinghouse Canada observed some explosiveness of arc-formed gas from Aroclor 1242 and blends with

chlorobenzene. Gas analysis showed unexpected amounts of hydrogen and acetylene. These observations were relayed to their associates in Sharon, Pennsylvania, and South Boston, Virginia. We were notified and requested to probe this in our laboratory." Do you see that?

A. Yes.

Q. First of all, can you tell us whether there was one person in particular at Westinghouse whom you recall telling you that?

A. Earl Sillette.

Q. Earl Sillette?

A. Yes.

Q. Where was he located?

A. Canada.

Q. Can you spell Sillette for us?

A. S-i-l-l-e-t-t-e I think. It's French I believe.

Q. Do you recall if Mr. Sillette communicated with you by letter or by telephone to tell you this?

A. I think by verbal.

Q. Did you actually meet him face to face?

A. Probably met him at an ASTM meeting.

MS. DUVIER: Don't guess. Do you remember

STLCOPCB4023186

meeting him face to face and discussing this, do you recall?

Q. If you don't know, Mr. Benignus, that's the answer.

A. It's not important.

Q. Well, I was wondering whether at any time you went up to Canada.

A. No. To pursue this, no.

Q. Now, first of all, let's take the sentence apart sentence by sentence, okay? It says that there was some explosiveness of arc formed gas. Do you recall if Mr. Sillette told you that there had been arcing observed during service and explosiveness of a transformer?

A. No, sir.

Q. Do you recall if there's anything more that you remember that he told you?

A. This is merely a laboratory observation.

Q. Now, was it your understanding that Westinghouse Canada had some kind of laboratory where they did tests of Aroclor 1242 to check out its qualities?

A. Yes.

Q. And did Mr. Sillette ever send you subsequently any kind of report, lab report maybe,

about the tests that Westinghouse Canada had done?

A. Not to me.

Q. Did he send it, do you know, to anyone else?

A. I don't know.

Q. Have you ever seen any kind of lab report from either Westinghouse Canada or any other Westinghouse unit about the explosiveness of arc-formed gas from Aroclor 1242?

A. No.

Q. And would you look at the last four sentences -- last four words of that sentence "and blends with chlorobenzene." Do you see that?

A. Yes.

Q. Do you recall if in 1969 at the time that this memorandum was prepared, was there a time when Aroclor 1242 was being blended for certain purposes with chlorobenzenes?

A. No.

Q. Can you tell us what the significance is of these last four words?

A. In Canada, it is cold. They sought to lower the pour point.

Q. So they were the ones who mixed it with chlorobenzene because it was cold up in Canada?

STLCOPCB4023188

A. Yes. They did this in the laboratory. I don't know that they did it commercially.

Q. Do you recall if at any time down in the United States Westinghouse and let's talk about the South Boston plant ever mixed chlorobenzenes with Aroclor 1242s?

A. No.

Q. You don't know or you don't believe that's the case?

A. I don't believe it's the case.

Q. Over the years when you were at Westinghouse -- I beg your pardon, Monsanto, the two blend together sometimes. Over the years when you were at Monsanto and specifically thinking about this period between 1969 and '74 when you retired, can you tell us if there were particular persons at Westinghouse South Boston that you were dealing with?

A. I didn't deal with anyone there.

Q. I see some names under the attendance list at the top under "Westinghouse."

A. Yes.

Q. Would you look down the list and tell me if there are any particular names from South Boston Westinghouse that you recall?

A. Wilburn.

STLCOPCB4023189

Q. Okay.

A. I recall the name Butler.

Q. H. L. Butler or H. S. Butler?

A. Yes, H. S. Butler.

Q. Anyone else?

A. I probably heard the name Hvizdos -- how do you pronounce it?

Q. Hvizdos?

A. Hvizdos.

Q. Did you meet any of these people at any time?

A. I had met Wilburn and Butler in the office one time --

Q. Okay.

A. -- at South Boston.

Q. I may have asked you this before in which case I hope you'll excuse me, but do you recall if they ever took you around their operating facilities, manufacturing facilities in South Boston?

A. Not that I recall, no.

Q. Now, there are some names also from Sharon. Do you see that?

A. Yes.

Q. Was Sharon making transformers at this time in 1969?

STLCOPCB4023190

A. I'm not sure.
Q. Do you see a name there T. K. Sloat?
A. Yes.
Q. You've met him, haven't you?
A. Yes.
Q. That was in the context later on of a committee called ANSI, American National Standards Institute, Committee C-107, correct?
A. Yes.
Q. And Mr. Sloat was a representative from Westinghouse who participated in ANSI C-107?
A. It's Dr. Sloat.
Q. Dr. Sloat?
A. Okay.
Q. Do you know of what he was a doctor? Was he a chemical engineer?
A. Chemistry.
Q. Chemistry?
A. Chemistry.
Q. Do you ever recall talking to Dr. Sloat about the arcing properties of Aroclor 1242?
A. Yes.
Q. Do you recall when?
A. Not specifically.
Q. Was this at the ANSI meetings?

A. ASTM, American Society for Testing of Materials, ASTM.

Q. This was in addition to the ANSI meetings?

A. Yes, different and also IEE, Institute of Electrical Engineers.

Q. Were you a member of that society?

A. Of ASTM.

Q. And Dr. Sloat was also a member, correct?

A. Yes.

Q. And you met him at meetings?

A. Yes.

Q. Were you a member of any other professional organizations during your career?

A. Yes.

Q. Which ones?

A. IEC.

Q. What do those initials stand for?

A. International Electro-Technical Commission.

Q. Is that a foreign based organization?

A. Worldwide.

Q. Worldwide. Do you know where it's based?

A. I think Europe.

Q. Do you ever attend meetings in Europe of that organization?

STLCOPCB4023192

A. Yes.
Q. Ever meet Dr. Sloat at those meetings?
A. Not at those meetings.
Q. Any other organizations that you were a member of while you were practicing at Monsanto?
A. No.
Q. When did you become a member of ASTM?
A. An estimate circa 1953.
Q. '53. Do you recall if Dr. Sloat was already working at Westinghouse in 1953?
A. Yes.
Q. Do you recall if he was -- strike that. Do you recall if your conversations with Dr. Sloat about the arcing properties of Aroclor 1242 occurred as early as the 1950s?
A. No.
Q. When did they occur?
A. Probably around this time.
Q. You mean the late sixties?
A. The very late 1960s. This subject hadn't come up before to us.
Q. You mean Westinghouse had never told you about any problems?
A. They never told us anything about it, no.
Q. Now, at some point in the late 1960s, they

STLCOPCB4023193

did start telling you about the subject, is that correct?

A. As I told you, Earl Sillette.

Q. And then it says in the next sentence, "Gas analysis showed unexpected amounts of hydrogen and acetyline." Do you see that, second sentence of the first paragraph?

A. Yes.

Q. Is that an analysis of some kind that Westinghouse Canada did?

A. Yes.

Q. That's still part of what Mr. Sillette told you?

A. Yes.

Q. Next sentence, "These observations were relayed to their associates at Sharon, Pennsylvania, and South Boston, Virginia." Again Mr. Sillette told you that?

A. Yes.

Q. "We were notified and requested to probe this in our laboratory." By "we," you mean you?

A. Monsanto.

Q. But is that a specific reference to yourself or to someone else?

A. To Monsanto. I was not in the laboratory.

STLCOPCB4023194

Q. Okay. I'm talking, first of all, about the first part of that sentence, "We were notified." Are you referring to the conversation that you had with Mr. Sillette or was there some other notice that was received?

A. Yes.

Q. Is "our laboratory" a reference to the laboratory you were working in?

A. No, I wasn't in a laboratory. I was not in the laboratory.

Q. You were working in an office?

A. Yes.

Q. And directing work in the lab, is that correct?

A. No.

Q. Perhaps I may be confused. Do you recall saying at some point that you had done various kinds of analyses, organic analyses while at Monsanto?

A. I don't get your question.

Q. I had the impression earlier on that at Monsanto you had done -- had worked at some point in a laboratory to do chemical analyses?

A. Early on, many years before this.

Q. At some point, you got into an office and became an administrator, is that correct?

STLCOPCB4023195

A. In an office.
Q. Can you tell us at what point that occurred?
A. 1947.
Q. And after that date, you did not yourself go into a lab to do analysis, is that correct?
A. That's correct.
Q. But sometimes you told other people to do it?
A. About things.
Q. Okay, or about things?
A. Yes.
Q. Did you during this period after 1947 continue to at least keep in touch with developments in your field by reading of journals and periodicals?
A. Yes.
Q. Attending meetings, society meetings?
A. Yes.
Q. Do you know which laboratory is referred to in that sentence there where it says, "our laboratory"?
A. Excuse me, what sentence?
Q. The last sentence, last two words.
A. "In our laboratory," I would assume Dr. Munch's laboratory.
Q. Where was that located?

STLCOPCB4023196

A. St. Louis.

Q. I expect, sir, we'll be talking to Dr. Munch a little bit later, perhaps next month, so I'm going to skip over the materials where Dr. Munch is said to have explained certain things, all right?

A. Okay.

Q. Now, on the second page, is this all a description of what Dr. Munch reported or is there anything that you as opposed to Dr. Munch are describing?

MR. KEARNS: Would you read that question for me?

(Whereupon the following question was read back by the Court Reporter: "Q. Now, on the second page, is this all a description of what Dr. Munch reported or is there anything that you as opposed to Dr. Munch are describing?")

MR. DICUM: I was just wondering if there was anything I need to ask him as opposed to Dr. Munch at this time.

A. No.

Q. Would you look at the last paragraph on that page?

A. Uh-huh.

Q. "In 1949 the underwriters on behalf of

General Electric investigated the fire and explosion hazards of Aroclors 1242 and 1248. Arcing studies were not made, but the explosive ranges in air of vapor generated from these materials at high temperature (400 C.) were established." Again was that something that Dr. Munch told you or is this something that you're reporting?

A. It's published in the insurance underwriters laboratory report.

Q. Okay. Would you look at the third page, third paragraph from the end? Do you see that?

A. Uh-huh.

Q. It says, "It seems that most of the Westinghouse people concur with the foregoing judgment. On the other hand, they seem concerned with the situation of a 'mild and sustaining arc.' This is a subtle thing which no one can judge from the laboratory data at hand."

A. Right.

Q. Sir, this document here, it's a report of some kind of meeting, is it not, that occurred at Sharon, Pennsylvania? Would you look at the first page?

A. Yes.

Q. And a meeting at which a number of people

STLCOPCB4023198

were present from Monsanto and then a number of people from Westinghouse?

A. Yes.

Q. You were present and then there was -- Dr. Munch was present?

A. Yes. It says so.

MS. DUVIER: Does it say that Munch was present?

THE WITNESS: Yes, Munch was there.

Q. Look back at Page 3, would you, at this point?

A. Page 3?

Q. Yes. Back at the same Paragraph 3 from the bottom. Do you see the second sentence there, "On the other hand, they seem concerned with the situation of a 'mild and sustaining arc.'" Can you tell us what that referred to?

A. I don't -- wait a minute. The next sentence says, "This is a subtle thing" and refers to the laboratory data at hand. Now, Monsanto did not have facilities to make a prototype transformer and explore --

Q. That's the next paragraph I'm going to get to. Go ahead. I was just wondering if in that particular sentence, "On the other hand, they seem concerned with the situation of a 'mild and sustaining

STLCOPCB4023199

arc,'" what is your understanding of those four words "mild and sustaining arc" in the quote?

A. Mild and sustaining, mild arcing occurs in transformers under normal operating conditions. I am not a transformer engineer. At Monsanto, we had nothing to say or direct or suggest about the operation of transformers. We dealt at Monsanto with only the fluid and to this point, I say with the fluid, we cannot make judgment on this. This is a matter being stated by Westinghouse.

Q. So these were --

A. We have no -- we have nothing to do with this.

Q. These are therefore some kind of quote of some words that Westinghouse told you, is that correct?

A. Oh, of course.

Q. The next sentence, "This is a subtle thing which no one can judge from the laboratory data at hand." Do you see that sentence?

A. Yes.

Q. Can you tell us what the significance is of that sentence, "a subtle thing which no one can judge from the laboratory data at hand"?

A. I just told you.

Q. When you say, "laboratory data," are you

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referring to Westinghouse data or Monsanto data?

A. I would refer to the initial paragraph which is a report from Westinghouse.

Q. Mr. Sillette's report?

A. So that would be Westinghouse.

Q. Next sentence, next paragraph, "To probe it, Westinghouse will make prototype transformers and conduct experiments along the lines pursued by General Electric back in 1934 with the 'older type' transformer Askarels," okay?

A. Yes.

Q. First of all, what exactly were the older type transformer Askarels?

A. Those were blends of Aroclor 1260.

Q. Okay.

A. And chlorobenzenes.

Q. Any other type of Aroclor?

A. No.

Q. Can you tell us what is meant by the term "prototype transformers"?

A. Something that simulates a transformer. It is not a finished transformer. It will be a tank containing the fluid under investigation containing whatever insulation or other materials their judgment indicates should be present and in what amount. It is

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not our business at Monsanto, but I've answered your question.

Q. Next paragraph, same page?

A. Uh-huh.

Q. "Dr. Munch and I plan to visit GE at Rome, Georgia, to present his laboratory findings on the Aroclor 1242-TTCB blends and learn more detail of their work and views." Do you see that?

A. Yes.

Q. Do you know if that meeting ever occurred?

A. I would think so.

Q. And Dr. Munch went to that meeting?

A. That's the intent.

Q. Last page, last paragraph, "This whole thing about safety presents difficult yet important judgments that must be made. Until this has been cleared with Westinghouse and General Electric, we do not want this discussed elsewhere," do you see that?

A. Yes.

Q. Do you remember if at some point the questions that were raised in this memorandum were actually resolved ever with Westinghouse?

A. We told Westinghouse, GE, and the whole industry everything and anything that we knew.

Q. I'm wondering if at some point Westinghouse

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came back to you and said that they were satisfied with the outcome of their tests.

A. They didn't come to me, no.

Q. Did they come to anyone else do you know?

A. Not that I know. I'll rephrase that. No, because they used it.

Q. Let's have a look --

MR. FONTANA: Are we going to take a break this morning?

MR. DICUM: I'm happy to stop any time.

MS. DUVIER: Take a small break?

MR. KEARNS: Sure.

(At this time a short recess was taken, after which the following proceedings were had:)

MR. DICUM: Mark this next in order.

(Plaintiff's Exhibit 162 marked for identification.)

Q. Mr. Benignus, we're back on the record and I'd ask you to look at a document, a memorandum from Jim Bryant dated January 31, 1969. It's described as "Monthly Report Dielectric Fluids, January '69" and it's just been marked as Plaintiff's 162, okay?

A. Uh-huh.

Q. Now, it bears your name on the top right-hand corner. Was that -- was there some

STLCOPCB4023203

particular reason why your name appeared on these reports?

A. No, except I was associated in that area.

Q. When you say, "associated in that area," at some time did someone instruct you to start working in the field of PCBs to review technical data on arc-formed gases from Monsanto?

A. No.

Q. Or was it in PCBs in general?

A. In general.

Q. Can you tell us what that date was that you started or were told to work in that area?

A. The electrical application here?

Q. Yes, the electrical applications.

A. I think I already told you.

Q. Around the mid fifties?

A. Yes.

Q. Now, it says here -- first of all, do you recall this memorandum?

A. Yes.

Q. And Jim Bryant, he was a salesman, was he not?

A. He was a technical salesman.

Q. Technical salesman. Did he have any kind of chemical degree?

STLCOPCB4023204

A. Yes.

Q. He did? A master's degree?

A. No.

Q. Was he located at St. Louis during the time at least that you were working for Monsanto or was this received from another office?

A. I think 1969 he was located in St. Louis.

Q. He moved, did he, to New York at some point?

A. Yes.

Q. And, sir, can you tell us who Mr. Olson is or was?

A. He was -- he was over Buchanan. Buchanan was product manager and Olson was you might say a step above that.

Q. Okay. Was he a chemist of some kind? Did you want to add to that statement?

A. Buchanan I told you was product manager. I think Buchanan may have left sometime in '69.

Q. And --

A. And Olson is in line, that's all.

Q. Okay. So he was next in line to Buchanan you think?

A. Yes, he had been over Buchanan.

Q. Do you know if Olson was a chemist of some

STLCOPCB4023205

kind?

A. I don't know.

Q. You don't know, okay. Now, it says in the first sentence, "Technical data on arc formed gases from Askarel was reviewed with Westinghouse." Do you see that?

A. Yes.

Q. Is that a reference back to the meeting that occurred earlier in the month? Is that all that is?

A. I would think that that is what this is.

Q. Okay. That's all that is?

A. I think that's all this is.

Q. Look at the next in order.

(Plaintiff's Exhibit 163 marked for identification.)

Q. 163 is another monthly report dielectric fluids, 1969 this time. And it's actually dated March 4, '69. It appears to be the report for February?

A. Yes.

Q. Again, do you remember this document?

A. Yes.

Q. And you received it in or around March of 1969, is that correct?

A. Yes.

STLCOPCB4023206

Q. Now, will you compare the immediately previous report with the one that was previously looked at which was 162 with the one that we've now just marked as 163? Can you tell me if anything happened just reading this report between January and February of 1969 as between Westinghouse and Monsanto?

A. They are the same thing.

Q. Do you see the second sentence of the first paragraph of the item marked 163?

A. Yes.

Q. "Current plans are for both Westinghouse and General Electric to continue using Aroclor 1242 in transformer applications," do you see that?

A. Yes.

Q. Do you recall if at any point during the discussions whether with Mr. Sillette or at the meeting that we looked at was any suggestion made by Westinghouse that they might want to stop using Aroclor 1242 because of the arcing properties of that liquid?

A. They were considering the significance of this, Westinghouse.

Q. And they told you at some point in that period that they would continue using it, is that correct, until the results at least came in?

A. Yes, they continued to purchase it. That

STLCOPCB4023207

was their judgment.

MR. DICUM: Mark this next in order. Next in order is a memorandum dated April 14, 1969, entitled "Disposal and Incineration of Aroclor." It doesn't have as far as I can see a BIR number. It is directed to Mr. Benignus and it appears to have the name of someone called W. R. Richard at the bottom.

(Plaintiff's Exhibit 164 marked for identification.)

MS. JORDAN: Number 164?

THE COURT REPORTER: Yes.

Q. Take your time to read this, Mr. Benignus.

A. Okay.

Q. Do you remember seeing this document before?

A. Yes.

Q. Did you receive it about April 14, 1969, sometime after it was prepared?

A. Yes.

Q. And at this time what actually was your job title if you recall?

MS. DUVIER: I'm sorry, what was the question?

MR. DICUM: I was just asking at this time what his job title was when he received this document.

A. Because I was international more than any

STLCOPCB4023208

other reason, I did have a quote title marketing manager.

Q. Okay.

A. Now, my function here was as a technologist, however.

Q. I didn't entirely understand your first part of that sentence because you were international, was that?

A. I traveled worldwide and it would not have been appropriate, "Well, here comes the technology man from Monsanto."

Q. Okay.

A. You understand?

Q. I understand, okay. Now, during the course of your travel, did you ever get a chance to go to Japan?

A. Yes.

Q. Now, do you recall an incident in Japan called the Yusho incident a few years before this date?

A. Yes.

MS. DUVIER: Mr. Benignus, wait until Mr. Dicum finishes his question before you answer.

Q. It's for the benefit of our court reporter here. She can't take both your conversation and mine at the same time.

STLCOPCB4023209

Now, did you meet anyone from a unit of Monsanto called Mitsubishi Monsanto?

A. Yes.

Q. Was that a joint venture of Mitsubishi and Monsanto?

A. Yes.

Q. Do you recall when that was set up?

A. No.

Q. Your visit to Japan to Mitsubishi Monsanto, do you remember if -- do you remember when that was?

A. Oh, circa 1964, somewhere like that, mid 1960s.

Q. Do you know if Mitsubishi Monsanto had a plant for manufacturing PCBs in Japan?

A. Yes.

Q. They did. Now, the PCBs that were involved in the Yusho incident, do you know if they came from Mitsubishi Monsanto or did they come from some other Japanese manufacturer?

A. Someone else.

Q. You heard of a company called Kanakafuchi?

A. Kanakafuchi.

Q. Did you ever visit with Kanakafuchi's plant?

A. No.

STLCOPCB4023210

Q. And at this time in Japan in about 1964, was there any concern, do you know, in Japan about PCBs?

A. No, not then.

Q. Shortly afterwards around 1966 there occurred an incident, did there not, called the Yusho incident?

MS. DUVIER: 1966?

Q. Let's take it in stages. Do you recall -- you recall I think you testified an incident called the Yusho incident?

A. Yes.

Q. Did that occur around 1966?

A. No.

Q. When did it occur?

A. I believe '68.

Q. Okay. Now, at that time was Mitsubishi Monsanto still manufacturing PCBs in Japan?

A. Yes.

Q. And at some point later it had to withdraw from the market, did it not?

A. Yes.

Q. Because the Japanese government decided that they no longer wanted to authorize the manufacture of PCBs?

STLCOPCB4023211

A. Yes.
Q. Did you ever travel back to Japan after the Yusho incident?
A. No.
Q. Did you hear about it after it happened?
A. Yes.
Q. Sometime around 1968 very soon after it happened?
A. Thereafter.
Q. What did you hear about it?
A. I heard that a heating system failed.
Q. I take it the heating system released some kind of PCBs?
A. Yes.
Q. Is that correct?
A. Yes.
Q. And contaminated some rice oil, is that correct?
A. Yes.
Q. What else did you hear?
A. That there was some illness. People ate the oil.
Q. Anything else?
A. Large amounts of it, that's all.
Q. That's it?

A. Yes.
Q. Let's go back to the Exhibit 164, can we?
A. Yes.
Q. Sir, would you look at the first sentence of this memorandum?
A. Yes.
Q. You see it says, "To defend the Aroclor position, it seems that we should provide for disposal of and incineration of off-grade fluid and work with Westinghouse and blank on the disposal of the off-grade capacitors as well," okay?
MS. DUVIER: This is Richards' memorandum?
MR. DICUM: It's addressed to Mr. Benignus.
Q. Do you remember Mr. Richards?
A. Yes.
Q. What was his job?
A. He was director of research. He was the research director.
Q. Was he a scientific man?
A. Yes.
Q. What specialty?
A. Chemistry.
Q. Is that organic?
A. Organic.
Q. And was that research center located in St.

STLCOPCB4023213

Louis?

A. Yes.

Q. Was it part of the product division?

A. Yes.

Q. Part of the organic division?

A. Yes.

Q. Can you tell us what your understanding is of the very first sentence, "To defend the Aroclor position"?

A. I don't know what he had in mind.

Q. Well, do you recall, sir, around the late 1960s certain concerns began to arise in this country about pollution, environmental problems concerning PCBs?

A. Yes.

Q. Was there a problem of disposing off-grade fluid that was sold by Monsanto? You see the rest of that sentence? "It seems that we should provide for disposal of and incineration of off-grade fluid." Do you know what "off-grade fluid" meant?

A. That would be contaminated, arced, for example, and fluid that had picked up contamination from the environment, water and so forth.

Q. Were there ever any occasions when Monsanto sold fluids to Westinghouse and Westinghouse rejected

STLCOPCB4023214

them on gounds they were contaminated during manufacture?

A. No.

Q. Do you ever recall that?

A. No, never.

Q. And do you know if Westinghouse ever did their own testing of fluids after they received them from Monsanto to see if they were in good condition before using them?

A. They had the official specification.

Q. I understand that, but do you know if they did their own testing in some kind of laboratory before they went and stuck it out in the field?

A. I would certainly assume so.

Q. Well, do you know as positive?

A. No.

Q. Ever heard anything like that?

A. They had laboratories, Dr. Sloat, Dr. Dakin, they had facilities.

Q. Do you know if those facilities that you've described were ever actually used for testing of Monsanto Aroclors before they were put into service in Westinghouse transformers?

A. Yes.

Q. They were?

STLCOPCB4023215

A. (Nodding head.)

Q. Do you know what kind of tests they performed?

A. I don't know exactly what tests Westinghouse performed.

Q. How did --

A. Whatever they felt was necessary, they would do.

Q. Can you tell us how you came to learn during the course of your work that Westinghouse was doing some kind of test on Monsanto Aroclors before they put it into service?

A. Because Westinghouse participated at ASTM in establishing the specification, the official specification and that would have been Dr. Sloat and beyond that, it was up to Westinghouse, whatever they decided to do. I didn't pursue it.

Q. Did anyone from Westinghouse ever tell you that they were conducting tests on Monsanto Aroclors after they received them but before they had put them into transformers?

A. They didn't discuss this with me.

Q. If there were such tests, do you know who they would have discussed that with?

A. With -- it depends on the purpose at the

STLCOPCB4023216

time.

Q. Well, let's take two kinds of possible tests. First of all, the arcing tests that we were looking at earlier for properties of -- the arcing properties.

A. Yes.

Q. Do you know -- I think you've testified that Dr. Sloat had conversations with you about that subject matter?

A. Yes.

Q. And that some kind of tests were performed by Westinghouse in a lab somewhere of the qualities -- arcing qualities of Aroclors?

A. Yes.

Q. Do you know if those tests included tests of samples from particular lots of commercial grade Aroclors after they were received?

A. No. This was not in the framework of the specifications whatsoever. The ASTM specifications had nothing about the arc. This was business of Westinghouse with the underwriters fire insurance people.

MS. DUVIER: Including Birmingham Fire Insurance Company? I couldn't help it, Henry.

THE WITNESS: I don't know.

STLCOPCB4023217

Q. The last comment was nonresponsive. Now, do you know if after a lot of Aroclors was received for use, I'm not talking about experimental work at other times but for use, okay, do you know if on those occasions Westinghouse routinely tested the Aroclors for arcing properties before actually using it?

A. I would have to -- you're saying arcing?

Q. Yes.

A. I would have to say no. You're saying routinely. It is not a part of the specification.

MS. DUVIER: Okay, okay.

A. I already said that.

MS. DUVIER: I know.

Q. Do you know if Westinghouse as a matter of routine on receiving a particular lot of Aroclors for use in transformers tested those -- tested that lot for possible contamination during manufacture before using it?

A. In their plant, contamination in their plant?

Q. No, I mean before it arrived, contamination during the manufacture process.

A. They were given the complete specification and it was up to them.

MS. DUVIER: Paul, the question is do you know

STLCOPCB4023218

whether that kind of testing was done. Yes or no?

THE WITNESS: I'd say no. It's up to them.

MS. DUVIER: He doesn't know.

A. I don't know.

Q. You don't know, okay. Do you know if Mr. Bryant might know?

MS. DUVIER: Objection, calls for speculation.

A. He might know.

Q. Do you know who would know if such testing occurred at Monsanto?

A. If people in the laboratory end of Westinghouse ever did any testing along those lines that they wanted a question of, they would call someone.

Q. Do you know who that someone would be?

A. I would refer it to the plant.

Q. Manager?

A. No, no, no. The chemist at the given laboratory at the plant from which they were receiving it.

Q. Do you remember --

A. That would be the one.

Q. Let me try something else. Do you remember who the plant chemist was at the Krummrich plant in Sauget between 1970 and 1974?

STLCOPCB4023219

A. There were -- there was Ron Kuster, K-u-s-t-e-r.
Q. K-u-s-t-e-r?
A. K-u-s-t-e-r.
Q. Does he still work for that company?
A. No, I think he's retired. He was the chemist that did the analytical work.
Q. At Sauget?
A. Yes.
Q. And have you met Mr. Kuster since his retirement?
A. No, I haven't.
Q. Do you know where he retired to?
A. He lived in East St. Louis.
Q. Was there only one plant chemist per plant?
A. Oh, no, there was a laboratory.
Q. He was the --
A. He was the supervisor. There was never any trouble --
MS. DUVIER: Paul --
Q. You don't have to tell me anything until I ask you a question, sir.
MS. DUVIER: Mr. Dicum didn't say there was any trouble.

Q. Sir, at some point -- will you look back at the memorandum of Plaintiff's Exhibit 164?

A. Uh-huh.

Q. At some point did Monsanto build an incinerator for Aroclors?

A. Yes.

Q. When was that?

A. After 1969.

Q. Okay. Do you remember where that incinerator was located when it was built?

A. It would have to be at Krummrich plant.

Q. Did you ever visit that incinerator before --

A. No.

Q. -- you retired?

A. (Shaking head.)

Q. What sort of Aroclors were burnt at that incinerator?

A. I wasn't connected with this incinerator at all. Ask Papageorge.

Q. Ask Papageorge?

A. Yes.

MR. DICUM: Let's look at the next in order. Here we are. Will you mark that? Next in order is BIR 002170 and it's a monthly report dated June 6, '69. It

STLCOPCB4023221

appears to be the report for the month of May '69 and it bears the name of Mr. Benignus at the bottom.

(Plaintiff's Exhibit 165 marked for identification.)

Q. Mr. Benignus, did you author this document?

A. Yes.

Q. Do you remember to whom these monthly reports were circulated?

A. To -- let me read it.

MS. DUVIER: He's asking you if you know who received this monthly report.

A. I assume it's addressed to Olson here.

Q. Pardon me?

MS. DUVIER: Tell him again.

A. It's addressed to D. A. Olson.

Q. Okay.

A. So he would have received the report.

Q. Do you know if there was a circulated list somewhere of other people in addition to Mr. Olson to whom this report would have gone as a matter of custom and practice?

A. I'd like to read it first to see what it's talking about.

Q. Okay.

MR. COMBS: Is there a BIR number on this

STLCOPCB4023222

document?

MR. DICUM: Yes, there is. It's BIR 002170.

A. This is information I merely reported at this point in time to Olson for his information. I don't know what the title "Monthly Report" refers to there.

Q. Is that because Mr. Olson was the product manager in charge of PCBs at this time?

A. Yes.

Q. Do you see a name in the top J. G. Bryant?

A. Yes.

Q. Does that indicate that Mr. Bryant also got a copy?

A. Yes.

Q. Was there some reason for that?

A. Because he was in this area.

Q. By "area," you mean in this field of work?

A. Dielectric field, yes.

Q. Well, first of all, do you remember this report?

A. Yes, I do.

Q. Looking at the second paragraph, it says, "The first series of transformer arcing studies at Westinghouse Sharon to probe the possible explosiveness

STLCOPCB4023223

of Aroclor 1242 did not result in any explosions."

A. Yes.

Q. Do you recall receiving a report from Westinghouse about the tests they did?

A. Somehow it was reported by Westinghouse.

Q. Did you have any further conversations with the gentleman in Canada whose name I believe was Earl Sillette about arcing properties of Aroclor 1242s?

A. I do not recall.

Q. Do you recall who at Westinghouse Sharon told you they had done a first series of transformer arcing studies?

A. I would think Dr. Sloat.

Q. Sir, do you remember a short while ago in answer to a question about what off-grade fluid was, you mentioned amongst other things that this could be arced, a-r-c-e-d, Askarels?

A. Yes.

Q. Were there occasions when you received back from Westinghouse arced Askarels?

A. Not at this time.

Q. Okay.

A. Not to my knowledge.

Q. I'm directing you back now to the previous exhibit, 164. Will you look back at the previous

STLCOPCB4023224

exhibit?

A. Yes.

Q. And this is the exhibit dated April 14, 1969. Do you see that?

A. Yes.

Q. Now, looking back at the second line, does this phrase "off-grade fluid," do you see that?

A. Yes.

Q. And you testified a moment ago I think that that could include arced Askarels?

A. Yes.

Q. Okay. Now, do you remember Westinghouse telling you on or around April 14, 1969, that they had arced Askarels which they wanted to dispose of?

A. They didn't tell me, no.

Q. Did you -- how did you learn about the point that there were arced Askarels available for incineration at Westinghouse?

A. People who manufactured transformers and tested them to apply overvoltage and so forth in which there is arcing at times --

Q. And sometimes --

A. -- and they can generate such in their plant.

Q. Pardon me?

STLCOPCB4023225

A. They can generate this in their testing work.

Q. Do you recall any occasions when you learned of Askarels becoming off-grade through arcing because of failures in the field of Westinghouse transformers?

A. No.

Q. Will you look back at the rest of this report, Exhibit 165? Do you see a reference to the last -- in the last paragraph to a man called Jim Ford?

A. Yes.

Q. Do you know who Jim Ford was?

A. Yes.

Q. Who was he?

A. He was the manager of manufacturing engineering at Westinghouse Sharon.

Q. At Westinghouse Sharon?

A. Yes.

Q. Okay. And it says here, "Jim Ford joined us at Maloney Electric." Do you know what Maloney Electric was?

A. Yes.

Q. Will you take your time to read that paragraph?

A. Yes, now that I read it, he was retired at

STLCOPCB4023226

this time. He was no longer manager of manufacturing. He had been manager of manufacturing engineering at Westinghouse Sharon. At this point in time he was no longer. He was retired.

Q. Let me take -- have you had time to read the paragraph, the whole paragraph? I'm going to ask you some questions about it.

A. Okay.

Q. Do you know when Jim Ford retired from Westinghouse?

A. Not exactly, no.

Q. At some point, did he join a company called Maloney Electric? I don't understand this first sentence.

A. No.

Q. It says here, "Jim Ford joined us at Maloney Electric for technical review of the Askarel transformer manufacturing facilities and methods to probe the reason for premature and an intolerably high rate of transformer failures," do you see that?

A. Yes.

Q. It goes on to say, "The fundamental problem seems to center on inadequate drying of the core in the coil," do you see that?

A. Yes.

STLCOPCB4023227

Q. First of all, can you tell us whose facilities are being talked about here as having a premature and intolerably high rate of transformer failures?

A. Maloney.

Q. Where was Maloney Electric located?

A. St. Louis.

Q. Do you know if they were some kind of subcontractor for Westinghouse?

A. I don't know.

Q. Do you know if Westinghouse ever used any subcontractors to build their transformers?

A. I do not know.

Q. Do you recall this visit to Maloney Electric?

A. I don't recall it specifically.

Q. Do you remember if at some point you received a -- strike that. Do you remember if at some point you received information before this visit about a premature and intolerably high rate of transformer failures at Maloney Electric?

A. I assume we heard about it.

Q. Do you know from whom you would have heard that?

A. No.

STLCOPCB4023228

Q. Do you know if Monsanto kept any kind of file or files in which it recorded the failure rate of transformer manufacturers it was selling transformer oil to?

A. No.

Q. You don't know?

A. No.

Q. Or it did not?

A. Not to my knowledge. It wasn't our business.

Q. And you can't remember then how exactly in this case for Maloney Electric you learned about the high failure rate?

A. I don't recall, no.

Q. Do you know if at this time in 1969 Jim Bryant was paying routine visits to South Boston to visit with Westinghouse?

A. I do not know, no.

Q. Do you know if anyone from Monsanto was paying visits, first of all, on a regular basis to South Boston?

A. The salesman.

Q. Do you know who that was at this time?

A. No, I don't recall.

Q. What's your understanding of the second

STLCOPCB4023229

sentence in this final paragraph, "The fundamental problem seems to center on inadequate drying of the core in the coil"?

A. That they were not drying the core in the coil properly.

Q. Sir, do you recall at some point later that you participated in this organization called ANSI C-107? Do you recall that?

A. Yes.

Q. Do you remember at that time collecting any kind of statistics on transformer failure rates of various transformer manufacturers?

A. I can answer the question, but it would be different than what you're asking.

MS. DUVIER: Do you understand his question?

Q. Do you understand it? Is that the problem?

A. I can't understand your question exactly as you state it.

MS. DUVIER: Can you rephrase the question?

Q. I'm having difficulty understanding what the problem is.

A. I know you're having difficulty.

MS. DUVIER: Why don't we step outside and talk?

(At this time a short recess was taken, after which the following proceedings were had:)

STLCOPCB4023230

MS. DUVIER: The problem with the question was we didn't understand whether you were asking whether ANSI compiled data pertaining to each individual transformer manufacturer or whether you're asking whether they compiled general data of all of the transformer manufacturers.

MR. DICUM: I really meant each.

A. Okay. The answer is no to that.

Q. Was there a general collection of information?

A. General terms.

Q. So as averaged out, you couldn't determine which manufacturer and which particular failure rate?

A. Yes.

Q. Look next in order to BIR 002115. This is a report dated July 2nd, 1969. It appears to be the one immediately after the one we've been looking at and this will be Exhibit 166.

(Plaintiff's Exhibit 166 marked for identification.)

Q. Have you had a chance to read that?

A. Yes.

Q. Do you remember this document?

A. Yes.

Q. Did you prepare this document?

STLCOPCB4023231

A. Yes.

Q. I direct your attention to the second paragraph. Do you see that?

A. Yes.

Q. Does that indicate that you were chairman of something called Subcommittee B, Section 9, Askarel Dielectrics at ASTM at sometime?

A. Yes.

Q. What exactly was that subcommittee?

A. That was the committee on synthetic dielectrics versus mineral oil dielectrics.

Q. What were the synthetic dielectrics?

A. Synthetics would include Askarels, sulphur hexafluoride, any dielectric, esters, anything as a dielectric other than derived from mineral oil.

Q. Did any of these include nonPCB dielectrics?

A. Yes, could.

Q. Can you tell us of any specific examples of this type?

MS. DUVIER: I think he did. The esters, were they PCB?

A. Any esters, any esters or other compounds that anyone was interested in.

Q. You got to realize, Mr. Benignus, that again

STLCOPCB4023232

I remind you I'm not a professional chemist and therefore you have to explain these things to me in a rather simple form, okay?

MS. DUVIER: Which of those what you mentioned were nonPCB dielectrics, the esters?

THE WITNESS: Esters is a class of materials that are nonPCB of which they are of academic interest, to some extent minor commercial, castor oil would be one.

Q. Could any of those be used in transformers in 1969?

A. Not what I have mentioned here, no, except -- 1969?

Q. Right.

A. None of them -- sulphur hexafluoride was used in gas transformers.

Q. I'm talking about liquid.

A. Liquid, no, they were not used in liquid transformers. It was either Askarel or mineral oil.

Q. Were all Askarels -- did all Askarels contain PCBs?

A. They actually did, yes. They don't have to, but they did.

Q. I don't understand when you say, "They don't have to."

STLCOPCB4023233

A. May I define Askarel?

MS. DUVIER: Is it the problem with the definition of Askarel?

Q. Yes, please, go ahead.

A. Askarel is a word coined from the Greek.

Q. Go ahead.

A. The Fire Insurance Underwriters Laboratories based on their requirements for nonflammability and nonexplosiveness coined this word Askarel and for any chemical to be allowed to use the term Askarel, that chemical needed to conform with the requirements of the underwriters laboratories, both as regards fire resistance and noncombustibility or explosiveness.

Now, that is a term, Askarel, a general term. It doesn't specify the chemical formula, so all of the PCBs called Askarel met these requirements. Now, another thing I think in that definition is aromatic, in other words, ring structures versus aliphatic action chain structures.

Q. You'll have to tell me what that last word means, aliphatic?

A. Aromatic means it is a ring structure, the benzene ring or the biphenyl ring. The aliphatic, it is a chain of carbon, hydrogen, carbon, hydrogen versus

STLCOPCB4023234

a ring structure so that is the definition now of an Askarel.

MS. DUVIER: Fine.

MR. FONTANA: Why do you want to stop him? We're learning something.

Q. Therefore around in 1969 -- well, the definition of Askarel did not require it to be PCBs although, in fact, they were PCBs, is that fair?

A. Yes.

Q. In 1969 --

A. Only --

MS. DUVIER: In fact, PCBs were, in fact, considered Askarels.

A. Not all PCBs. Some PCBs.

Q. I'm sorry?

A. If they had sufficient fire resistance and lacked explosiveness, they would be given accordance the use of the name Askarel. If PCBs did not have sufficient fire resistance and were not sufficiently nonexplosive, they couldn't be called Askarel and there were such PCBs.

Q. Between 1969 and 1974, do you remember if any product came out on the market which was not PCB which fit into the definition of Askarel?

A. Nothing.

STLCOPCB4023235

Q. By the way, when did you become chairman of the subcommittee that's referred to?

A. Estimated early 1960s, maybe '62, something like that.

Q. Was anyone from Westinghouse on that committee?

A. Dr. Sloat.

Q. Again, okay.

A. And Earl Sillette.

Q. Was he there when you joined that subcommittee already?

A. He attended those meetings, yes.

Q. When you became the chairman of that subcommittee, was he already a member of that?

A. Yes.

Q. Do you remember Dr. Sloat telling you at any time when he was on that committee with you or that subcommittee with you about occasions when Westinghouse transformers had failed in service?

A. No.

Q. Or occasions when arcing had occurred in Westinghouse transformers in service?

A. No.

Q. Did you ever ask him about that subject?

A. No.

STLCOPCB4023236

Q. Would you look at the paragraph in the quotes, "'Under arcing conditions the gases produced, while consisting of predominantly noncombustible hydrogen chloride, can yield varying amounts of combustible gases depending upon the Askarel type.'" Do you see that?

A. Yes.

Q. Can you tell us if this was based upon the experiments that were done at Sharon, this information here?

A. Not exclusively, no. Not at Sharon exclusively, no.

Q. Where else were experiments done that required the changing of the definition of Askarels at this time?

A. We said Westinghouse Canada looked at this.

Q. Anywhere else that you know of?

A. Specifically I don't recall, but others than Westinghouse Sharon I would think.

Q. Do you recall whether any other transformer manufacturers, General Electric or others, were also doing experiments about this time?

A. Yes.

Q. Into the arcing properties of Askarels?

A. Yes.

STLCOPCB4023237

Q. Any others?

A. I don't know to what extent. We certainly advised people of the situation here.

Q. Did ASTM itself have a laboratory?

A. No.

Q. They were simply --

A. Electrical industry. I'm sorry.

Q. They were simply an industry organization?

A. Yes.

Q. All right. Will you look at the second sentence, "'Insulation systems incorporating these Askarels and cellulosic or other organic materials may, when arced, produce gaseous mixtures which are moderately flammable." Do you see that?

A. Yes.

Q. Again is that information derived from the field or only from the laboratory experiments?

A. From the field.

Q. From the field?

A. (Nodding head.)

Q. Do you know --

A. Wait a minute.

Q. Do you understand the question I asked you?

MR. KEARNS: I think his answer is incomplete, is that it?

STLCOPCB4023238

Q. Go ahead.

A. This refers here to at this point in time some laboratory observations. You realize that at Monsanto we have only the Askarel fluid, period. In the industry, GE, Westinghouse, other transformer makers, they have in a transformer insulating system other organic materials, so their responsibility encompasses beyond what Monsanto works with. We work with only the fluid, so this is what this refers to, the fluid in combination or in the presence of other insulation materials.

MS. DUVIER: Paul, his question is do you know from looking at this document whether this information was derived exclusively from laboratory tests or whether it came from the field? Do you know?

A. This is what I'm trying to answer. At this time it's addressing to my recollection as best I can these laboratory observations that had been introduced and were going on as versus anything from the field, but I want to add that these laboratory tests were not at Monsanto.

Q. I understand that.

A. Okay.

Q. I understand what you're saying, but I was just wondering whether it was field work.

STLCOPCB4023239

A. No, laboratory work.

Q. Do you recall if Mr. Sillette from Westinghouse Canada told you that their lab work, the Westinghouse lab work had been started because of observations in the field that had raised concern?

A. No.

Q. He did not tell you that?

A. Absolutely not.

Q. Did anyone else at Westinghouse ever tell you that?

A. No.

Q. Will you look at the last sentence of that section in quotes, "'As a precaution, such gases should be removed from the Askarel by bubbling dry nitrogen through the Askael and flushing the gas space with dry nitrogen before any work is performed on the apparatus.'"

A. Yes.

Q. Sir, can you tell us whether this refers to bubbling dry nitrogen while the Askarel is in service in transformers?

A. Yes.

Q. And therefore the transformers were supposed to have a supply of nitrogen in order for this to occur?

STLCOPCB4023240

A. Not all, but in the case where -- this is a statement not from Monsanto, but from the transformer manufacturers, Westinghouse, GE, and others that is being incorporated here above and beyond what had been said prior to this time by the underwriters. Now, should I read this statement?

MS. DUVIER: No.

Q. Not aloud, but if it helps you to understand --

A. Let me read it.

MS. DUVIER: Maybe you should rephrase the question.

Q. Okay. Well, I can't even remember what the question was now.

MR. DICUM: Can you read back the question?

MR. KEARNS: It had to do with nitrogen and whether or not this process was done in the field.

MR. DICUM: Yes.

MS. DUVIER: Is that what you were getting at?

MR. DICUM: Yes, and I then asked -- go ahead.

(Whereupon the following question was read back by the Court Reporter: "Q. And therefore the transformers were supposed to have a supply of nitrogen in order for this to occur?")

MS. DUVIER: Do you know whether this process

STLCOPCB4023241

concerning nitrogen was done in the field as opposed to the lab?

THE WITNESS: Well, of course.

MS. DUVIER: Was it?

THE WITNESS: Yes.

Q. Have you heard of a kind of Westinghouse transformer called an underground or submersible transformer?

A. Yes.

Q. Now, in that kind of transformer if it had Aroclor 1242s in it, was it intended under this statement by Westinghouse that gases should be removed from the Askarel by bubbling dry nitrogen while it was in field service?

MS. DUVIER: I'm going to object. It calls for speculation.

Q. Go ahead. Do you know the answer to that?

MS. DUVIER: You can answer the question.

MR. FONTANA: I'm going to object to the question and at least ask to have it read back.

(Whereupon the following question was read back by the Court Reporter: "Q. Now, in that kind of transformer if it had Aroclor 1242s in it, was it intended under this statement by Westinghouse that gases should be removed from the Askarel by bubbling

STLCOPCB4023242

dry nitrogen while it was in field service?")

MR. FONTANA: I don't understand the question. I don't understand the reference to what statement by Westinghouse.

Q. Do you have problems with the question?

A. I have a problem with the question.

Q. Let me try that again. So you sat on this committee, did you not, a subcommittee?

A. Yes.

Q. And Dr. Sloat from Westinghouse was right there with you?

A. Yes.

Q. And at various times did this statement get drafted between you, the two of you, or were others involved?

A. By Sloat and the people who make transformers, not myself.

Q. Did you have any hand in actually drafting this?

A. Only that I was chairman and saw that it got put into the specification.

Q. During the drafting process, did you at any time disagree with what's stated here?

A. No.

Q. You relied on what Westinghouse was telling

STLCOPCB4023243

you, is that correct?

A. Yes.

Q. And by "Westinghouse," I mean Dr. Sloat?

A. Yes.

Q. Any others that you recall?

A. Sillette.

Q. Sillette. Was Sillette on the committee as well?

A. He attended.

Q. Was he actually a member, do you know?

A. Yes.

Q. Anyone else?

MS. DUVIER: Anyone else what?

Q. From Westinghouse?

MS. DUVIER: From Westinghouse on the committee? I think he said no, he doesn't remember.

A. I don't think so.

Q. Did Dr. Sloat ever explain to you what the last sentence here, "'As a precaution, such gases should be removed from the Askarel by bubbling dry nitrogen through the Askarel and flushing the gas space with dry nitrogen before any work is performed on the apparatus,'" did he ever explain to you what that meant?

A. Yes.

STLCOPCB4023244

Q. What did he say that it meant?

A. In case of a rare incident where it is felt necessary to open the top, the cover of the transformer and if that cover is welded on rather than bolted on and gasketed, then one uses a welding torch to open this cover. This then introduces a flame and if I'm holding this here and I'm opening this and there is any flammable gas in here, it can blow the flame into my face possibly. That is what is being said here as a precaution.

Q. Okay.

MS. DUVIER: Okay, that's fine.

Q. Did Dr. Sloat also explain to you what you've just described about the cellulosic or other organic materials that could when arced produce gaseous mixtures which were moderately flammable?

A. Yes.

Q. And the rest of the paragraph, that was also Dr. Sloat?

A. Not solely. It was a consensus of the electrical industry.

Q. My last question was between the Westinghouse people?

MR. FONTANA: I object. You're now attempting to mischaracterize the testimony that's been given all

STLCOPCB4023245

morning and interpret the witness at the same time. I believe the doctor has testified that this was a statement drafted by a committee for ASTM which included representatives of a wide number of companies and perhaps even including some of your own clients and to characterize that as a Westinghouse statement is a blatant misreading of the testimony.

Q. Do you recall if there was anyone outside the electrical industry who sat on that subcommittee?

A. Outside?

Q. Yes, from outside the electrical industry.

A. No.

MR. DICUM: Moving on to the next exhibit which is a document dated August 5, 1969, and it bears the name of Mr. Benignus on the second page, will you mark that, please?

(Plaintiff's Exhibit 167 marked for identification.)

MS. JORDAN: 167?

MR. DICUM: Yes.

MS. JORDAN: Does it have a BIR number?

MR. FONTANA: 2165.

MR. DICUM: Right.

MS. JORDAN: Thank you.

MS. DUVIER: Maybe if you gave him a question to

STLCOPCB4023246

frame while you're reading it, it will help him.

MR. ROTHSCHILD: Tell us what it is and the date.

MR. DICUM: Apparently a memorandum prepared by Mr. Benignus dated August 5, 1969. It's entitled "General Electric Company, Rome, Georgia, Transformer Askarel - Discussions with Mr. James Kinney, August 5, 1969," and it bears some cc's on the right-hand side of the page.

MS. DUVIER: You'd like him to bear in mind what kind of question?

Q. I'm going to direct your attention to the reference to "enrichment of the combustible gases due to hydrogen chloride solubility in the Askarel," okay? That's two-thirds down the first page. Have you had a chance to make a complete review of this document?

A. Yes.

Q. Do you remember this document?

A. Yes.

Q. Can you tell us whether this document has any bearing upon Aroclor 1242?

A. Yes.

Q. And you're referring to the third paragraph, is that correct?

A. Third paragraph?

STLCOPCB4023247

Q. Yes.

A. Yes.

Q. I have some difficulty understanding the technical language, sir, in this document and I'm going to ask you to help me out a little bit. Now, first of all, what exactly is the general subject matter of this document because I don't think it is obvious to us lay people what it says.

A. Repeat it, please.

Q. Can you tell us what the general subject matter is of this document?

A. The general subject matter here is a question about 80 percent Aroclor 1242 and 20 percent of tri-tetrachlorobenzene mixture.

Q. Was there a commercial grade of products sold by Monsanto that contained Aroclor 1242 and 20 percent TTCB?

A. No, not that I recall.

Q. Do you know why Dr. Munch is doing this experiment at Monsanto?

A. Because we were asked to -- we were asked to look into this.

Q. Okay. By General Electric?

A. Yes.

Q. Do you recall what the concern was?

STLCOPCB4023248

A. They were interested in Munch's chart on the lower voltage and 62 percent of air.

Q. Now, is the whole of this document, is it, all of it based on Dr. Munch's work?

A. Yes.

Q. Well, we'll have Dr. Munch present and go over this.

Sir, I'd like to go back to a sentence I omitted in the last exhibit, 166, okay? Will you look at the very last sentence?

A. Yes.

Q. "With the redefinition and change in scope, this serves to fulfill and document the statement required by the industry regards use of Aroclor 1242 and Aroclor 1242 rich blends." Do you know what the difference is between 1242 and 1242 rich blends?

A. Yes. One is entirely 1242. The other is rich in 1242, has something else with it.

Q. Okay. I have some difficulty with that because one is a hundred percent and then what is the other thing with it?

A. What chemical?

Q. Yes.

A. I would have to say chlorobenzene is the only one that's considered here.

STLCOPCB4023249

Q. Okay. Do you know if Monsanto in 1969 was manufacturing something called an Aroclor 1242 rich blend?

A. I do not recall that we made this.

MS. DUVIER: I think that's been his previous testimony that he didn't recall.

MR. DICUM: I think that was before I directed him to this document.

Q. I'm going to direct Mr. Papageorge's attention to the next in order --

MS. DUVIER: Mr. Benignus.

Q. Mr. Benignus's attention to the next in order. I'm sorry, I'm racing ahead. I apologize. It's BIR 001488 and it's Plaintiff's Exhibit Number 168. It's a memorandum from Mr. Benignus to R. H. Munch at Second Street. It is dated October 13, 1969.

(Plaintiff's Exhibit 168 marked for identification.)

Q. Mr. Benignus, did you prepare this document?

A. Yes.

Q. I direct your attention to the third page.

A. Okay.

Q. And the first three paragraphs there, do you see that?

STLCOPCB4023250

A. Yes. Excuse me? The third page?
Q. Yes, the first three paragraphs there.
A. Yes.
Q. And, first of all, the first paragraph simply restates the redefined ASTM definition, is that correct, the first paragraph?
A. Yes.
MS. DUVIER: The document speaks for itself. He didn't have a chance to read the entire document.
Q. Would you like a chance to read it? Take your time. I don't want to rush you and have you commenting on something you may not have read. And you should feel at liberty to read the rest of the document as well if it helps you interpret what I'm asking you about.
A. Okay.
Q. Do you see that?
A. Yes.
Q. I direct your attention to the second paragraph there, okay?
A. Yes.
Q. Sir, the first sentence says, "Notwithstanding this," and I take it that's a reference back to the new standard?
A. Yes.

STLCOPCB4023251

Q. "General Electric abandoned use of type C." Do you know what type C is?

A. Offhand, no, but it's in the literature.

Q. Was that an Aroclor produced by Monsanto?

A. It's an Askarel, yes.

Q. Let me read the whole sentence, sir. It might help to clarify that. "Notwithstanding this, General Electric abandoned use of type C and will not adopt 100 percent Aroclor 1242 due to fear of liability in event of an explosion." Do you see that?

A. Yes.

Q. Do you remember someone at General Electric telling you that they had decided to stop using 100 percent Aroclor 1242 because of fear of liability in the event of an explosion?

A. Someone had to say this.

Q. Okay. Was there any particular person that you were dealing with at General Electric at this time?

MS. DUVIER: Paul, if you don't remember, tell him.

A. I don't know the specific person at this time.

Q. Would you look back at the previous document, Number 167, Plaintiff's Exhibit 167?

A. Okay.

STLCOPCB4023252

Q. Would you look at the very first sentence which says, "The following evolved from my August 5 telephone conversation with Jim Kinney," K-i-n-n-e-y?

A. Yes.

Q. Now, does that refresh your recollection as to who told you about the abandonment by General Electric of 100 percent pure Aroclor?

A. Yes.

Q. And have you met Mr. Kinney since your retirement?

A. No.

Q. When was the last time you had dealings with Mr. Kinney?

A. Oh, this is an estimate, too. Sometime in the 1970s somewhere. I retired in '74.

Q. Do you remember if Mr. Kinney told you whether General Electric had been sued in the past for using pure Aroclor 100 percent 1242s and an explosion occurred?

A. No.

Q. Do you remember anything else about what he told you about his fears of liability?

A. No.

Q. Let's look at the next sentence, "However, General Electric remain open to an Aroclor-rich blend

STLCOPCB4023253

such as type D or possibly 80 percent Aroclor 1248 and 20 percent TTCB." Do you see that?

A. Yes.

Q. And do you remember if at some point General Electric continued to buy Monsanto Aroclors but not of 100 percent Aroclor 1242 variety?

A. I don't recall at this time. I don't recall exactly what transpired there.

Q. Well, do you remember if General Electric continued to be a customer?

A. Oh, yes.

Q. And continued to be a customer until you retired?

A. Yes.

Q. And that was for transformer fluids as well as for capacitor fluids?

A. Yes.

Q. Would you look at the next paragraph?

A. Yes.

Q. "On the other hand, Westinghouse's decision to continue use of 100 percent Aroclor 1242 now induces other large users including ITE, Allis Chalmers, and Maloney to adopt Aroclor 1242." Do you see that?

A. Yes.

Q. Do you recall someone at Westinghouse

STLCOPCB4023254

telling you that they had decided to continue using 100 percent Aroclor 1242?

A. Yes, they bought it.

Q. Okay. They bought it, therefore they must have decided to use it?

A. Yes.

Q. Can you explain to us what the rest of that sentence means, "now induces other large users including ITE, Allis Chalmers, and Maloney to adopt Aroclor 1242"?

A. Yes.

Q. What does that mean?

A. That this use of 1242 at Westinghouse 100 percent would interest these other people, ITE, Allis Chalmers, and Maloney to consider this.

Q. Was Westinghouse some kind of leader as it were --

A. Yes.

Q. -- in that group? Was there an industry group consisting of these four companies, Westinghouse, ITE, Allis Chalmers, and Maloney?

MS. DUVIER: Exclusively those four?

A. No, there were others.

Q. Now, Maloney, that was the same company with the high transformer failure rate we looked at

STLCOPCB4023255

before, is that right?

A. Yes.

Q. Do you ever recall hearing anything about transformer failure rates of any of the other companies we're looking at here, ITE?

A. No.

Q. Allis Chalmers?

A. No.

Q. What is ITE?

A. That was ITE Circuit Breaker is the whole name.

Q. Will you look at the fifth paragraph, the next paragraph rather, the fourth paragraph? "This markedly increases the demand for Aroclor, and equally markedly reduces our need for chlorobenzene." Do you see that?

A. Yes.

Q. Were there certain Aroclors at that time that Monsanto was marketing that included chlorobenzenes?

A. Yes.

Q. Okay. Now, can you tell us how the first sentence there relates to what has preceded in the last couple paragraphs?

MR. KEARNS: Wait. Doesn't the sentence speak

STLCOPCB4023256

for itself?

MR. DICUM: Not really. I don't understand it.

MS. DUVIER: Using the 100 percent instead of a blend?

MR. ROTHSCHILD: Are we going to take a lunch break or are we going to go straight through?

MR. DICUM: Why don't I finish off this document at least? It doesn't make sense to break in the middle of a document.

Q. Will you look at the next sentence? "It also appears to minimize our biological problem as based on information at hand to date." Do you know what that information was?

A. Yes.

Q. What was that?

A. That was knowledge by this point in time.

Q. You mean in 1969?

A. Yes.

Q. Okay.

A. That the lower chlorinated biphenyls PCBs biodegraded somewhat more readily than the higher chlorinated compounds.

Q. Can you tell us when you use the word biodegraded --

A. Biodegraded.

STLCOPCB4023257

Q. Biodegraded, destroyed?

A. Was consumed by organisms in the soil, bacterias.

Q. Would you look at the next paragraph, "From a commercial view this is highly attractive to us." Would you read the whole of that next paragraph?

A. Yes.

Q. Will you look at the first sentence, "From a commercial view this is highly attractive to us." Do you recall that that made sense because you didn't need to buy chlorobenzenes? Is that what that means?

A. Yes.

Q. The next sentence says, "However, from a technical view, our policy remains not to induce adoption of Aroclor 1242." Do you see that?

A. Yes.

Q. Was that because of the arcing issues that we've looked at earlier?

A. It's not Monsanto's policy to recommend what fluid is to be used by a transformer maker in any case.

Q. Okay. And that is indicated by the next sentence, "This is to say that the decision is up to the transformer maker," right?

A. Yes.

STLCOPCB4023258

Q. Then it goes on to say, "Accordingly, in each case where adoption of Aroclor 1242 appears imminent, we feel it our responsibility to show and explain results of our laboratory work indicating the limited flammability or explosive range observed with Aroclor 1242, and suggestion that the transformer maker use his own judgment about testing prototype transformers to his satisfaction." Do you see that?

A. Yes.

Q. That was because of the fact of the concerns about the 100 percent 1242s that we looked at a bit earlier with Westinghouse? Do you remember that?

MR. FONTANA: Is that a question? If it is, I object to it.

Q. You can answer.

A. I'm lost.

Q. Okay. Let me try again. What is the reason why you felt it your responsibility to show and explain results of your laboratory work indicating the limited flammability or explosive range observed with Aroclor 1242?

A. Because Munch observed this.

Q. Do you know if, in fact, that was done with Westinghouse?

A. I think we go back to didn't it start with

STLCOPCB4023259

GE in Canada?

Q. I'm sorry, GE?

A. I'm asking a question. I'm not supposed to ask questions.

Q. Would it help you to refresh your recollection to look back at an earlier document that we had marked?

A. No, I remember.

Q. Okay.

A. This is the -- I interpret this, this is the work that Munch was led to do.

MS. DUVIER: The question, Mr. Benignus, is do you know whether Westinghouse learned of Dr. Munch's laboratory tests?

THE WITNESS: Well, of course, we advised everybody.

Q. Okay. That's all I need to know.

A. That was our responsibility.

MS. DUVIER: All right.

Q. Okay. Next paragraph -- next sentence, "Thereafter, if he seeks an Aroclor-rich blend from which we have not been able to develop arc-formed gases that show even limited flammability or explosiveness, we would recommend Type D (70 percent Aroclor 1254 and 30 percent TCB), or a similar suitable blend. This

STLCOPCB4023260

latter is our present approach to General Electric Company at Rome, Georgia." Do you remember that?

A. Yes.

Q. And can you tell us if it is your understanding that if the -- well, let me strike that. Can you tell us what exactly is meant by these two sentences? I have some difficulty understanding them.

MS. DUVIER: Henry, I think that it's clear and I'd ask you to phrase a specific question. I object to you asking him a general question like that. The language is clear to a lay person.

Q. Well, first of all, what is TCB?

A. Trichlorobenzene.

Q. Okay. And can you tell us what other similar suitable blends might have been?

A. Excuse me, what is what?

Q. You see --

MR. KEARNS: He wants an example of a similar suitable blend.

Q. Other than type D.

A. Oh, if you had 60 percent of Aroclor 1260 and 40 percent of trichlorobenzene, that was a blend that was used.

Q. And all of those were mixed blends, not involving 100 percent Aroclor 1242s, is that correct?

STLCOPCB4023261

A. Didn't have 1242 in it, right.
Q. Look at the next paragraph. Do you see a reference there to infrared?
A. Yes.
Q. Do you know what that reference is to?
A. Yes.
Q. What is it?
A. The determination of mineral oil contamination.
Q. Okay. But infrared is a device for testing heat, is it not?
A. No.
Q. What is it exactly?
A. Infrared in this case will detect mineral oil.
Q. Can you tell us how it does that?
A. An infrared light. If mineral oil is in the Askarel, this will show up under the infrared light. Now --
MS. DUVIER: That's fine. There's no question pending.
Q. Do you know how technically that worked?
A. No.
Q. Was it dependent upon detection of heat?
A. No.

STLCOPCB4023262

Q. Do you know that at any time during this ongoing discussion about the arcing properties of various Aroclors in transformers, whether any transformer manufacturer ever mentioned to you the possibility of using infrared sensors to detect hot spots?

A. No.

MR. DICUM: Okay. Let's take a break. What time you want to return? Would an hour be enough?

MR. KEARNS: Yes.

MR. DICUM: 1:30?

MR. KEARNS: What time do you have now?

MR. DICUM: 12:25.

(At this time a lunch recess was taken, after which the following proceedings were had:)

MR. DICUM: The next document in order is dated the very next day, October 14, 1969, and it's from Munch to Benignus.

(Plaintiff's Exhibit 169 marked for identification.)

MR. DICUM: And I'm going to direct the witness in particular to the last paragraph.

MR. KEARNS: The last paragraph?

A. Okay.

Q. First of all, did you receive this in the

STLCOPCB4023263

ordinary course of business, do you know?

A. Yes.

Q. Do you remember seeing this document before?

A. Yes.

Q. You recognize Dr. Munch's signature at the bottom?

A. Yes.

Q. Do you know if at some point someone at Monsanto subsequent to Dr. Munch's memorandum of October 14, 1969, told Westinghouse about the flammability of gases produced by arcing Aroclor 1242 insofar as Monsanto knew about that flammability?

A. Yes.

Q. And do you know who that was?

MR. KEARNS: Who at Westinghouse?

MR. DICUM: Who at Monsanto told Westinghouse.

MR. KEARNS: Okay.

A. We had meetings when this was discussed. I don't know specifically the person. It was discussed with Monsanto people. We had a meeting on this.

MR. KEARNS: You mean Westinghouse people? You said, "Monsanto people."

THE WITNESS: It was discussed with Westinghouse. They discussed it with us.

STLCOPCB4023264

Q. And do you recall a meeting which you attended at which this subject was discussed?

A. Yes, we had that earlier.

Q. Do you remember who was present from Westinghouse at that meeting?

A. Where is that document?

Q. Are you referring to Exhibit 161?

A. Yes. That lists who was present.

Q. Do you know if after the date of Dr. Munch's memorandum of October 14, '69, after that date now, whether there were any further meetings between Westinghouse and Monsanto personnel about the subject matter of flammability of gases produced by arcing Aroclor 1242s?

A. I don't know.

Q. Sir, just before we broke for lunch, do you recall my asking you about infrared?

A. Yes.

Q. Will you look back at the first paragraph of this document that we're looking at, Exhibit 169? Do you see a reference there to something called infrared spectrophotometers and techniques for using them?

A. Yes.

Q. Do you know what that is a reference to?

STLCOPCB4023265

A. The infrared spectrophotometer is a method of analysis here that refers to the use of that analytical tool to determine and detect petroleum mineral oil hydrocarbon in Askarel which is the subject of ASTM method D-1808.

Q. Sir, do you recall if there were any utilities who were members of ASTM?

A. Oh, yes.

Q. And when you say, "Oh, yes," are you saying that all of them were members?

A. Many of them were members.

Q. Do you recall if Pacific Gas & Electric of California was a member?

A. I don't remember. I do not remember specifically their attending a meeting.

Q. I'm not talking about attendance. I'm wondering if you know whether they were members of the ASTM.

A. Oh, the ASTM information, the American Society for Testing of Materials was available to all.

MR. KEARNS: I think the question was do you know if they were a member.

Q. Right.

A. Could have been. I don't know.

Q. Do you know if -- well, strike the

STLCOPCB4023266

question. Sir, at this date in 1969, do you know if Monsanto was still selling PCB fluids directly to utilities?

A. There was a change that came about here around this point of time.

Q. Do you know if Monsanto told the utilities before that change occurred about the flammability properties of Aroclor 1242 as discussed in the various memoranda we've talked about?

A. Monsanto would have had what is required in the specifications of the material and the underwriters laboratories and the insurance people were the ones that covered the matter of flammability, et cetera. That goes beyond the scope of the ASTM specification.

Q. Okay. Well, I don't think that's quite the question I asked. Do you see that Dr. Munch talks about here in Plaintiff's Exhibit 169 in the last paragraph about telling the prospective user what we, that's Monsanto, know about the flammability of gases produced by arcing? Do you see that?

A. Yes.

Q. Do you know if as of October 14, 1969, the prospective user included utilities as well as the transformer manufacturers?

A. I think I understand the scope of your

STLCOPCB4023267

question. I'll try to answer it.

Q. Fine.

A. At this point of time now when this matter has been explored in the laboratory, Monsanto informed everyone who we could inform, specifically the transformer makers.

Q. Okay.

A. Westinghouse, GE, Allis Chalmers, and so forth.

Q. Okay.

A. We did all we could.

Q. Do you know if you also informed utilities, the ultimate users of the Aroclors?

MR. KEARNS: Have you established -- has it been established through this witness that at some point in time that public utilities were direct customers of Monsanto? I don't know if that has.

Q. Sir, was there at some point in time when utilities were buying Aroclors directly from Monsanto?

A. Yes, they could.

Q. And there came a change I think?

A. As make up.

Q. All right. As make up, you mean to add to supplies?

A. Yes.

STLCOPCB4023268

Q. Do you recall having any contact with a utility called Pacific Gas & Electric?

A. I have called there.

Q. You have called there?

A. Yes.

Q. You've been there?

A. Yes.

Q. And who did you visit at Pacific Gas & Electric?

A. I think his name was Peterson.

Q. Peterson and was this in San Francisco?

A. Yes.

Q. Was his first initial "W" by any chance?

A. I don't remember.

Q. And on how many occasions have you gone to San Francisco to visit PG&E?

A. I think once.

Q. Can you tell us when if you recall this trip took place?

A. It was before this period in time, considerably before this period in time.

Q. What was the purpose of that visit to Mr. Peterson?

A. The purpose was to give him what information we had at that point in time on the

STLCOPCB4023269

characteristics of transformer Askarel fluid.

Q. Now, at that point in time, what information would that have covered?

A. That would have covered information such as in what we saw here -- you had the proper handling booklet.

Q. Right, the one that you authored.

A. Right, that information.

MR. ROTHSCHILD: Can we establish which one this was?

MR. KEARNS: Let him finish the sentence.

MR. DICUM: I think he actually testified to the fact he couldn't really quite remember as well that was before this date, before the date of '69. Go ahead.

A. That is probably what I would have presented which is in essence the specifications documented to the American Society for Testing of Material and also instructions about how to properly handle the Askarel fluid in drums and so on and so forth.

Q. Okay. Now, did anyone else go with you on this trip to PG&E?

A. I don't recall, but the local salesman may have.

STLCOPCB4023270

Q. You mean at San Francisco?
A. Yes.
Q. There was a Monsanto salesman in San Francisco at that time?
A. Yes.
Q. Can you tell us what his name was?
A. I don't remember what the salesman's name was.
Q. Do you remember if at the time that you retired in '74 whether Monsanto had an office in San Francisco?
A. Yes.
Q. It did? And do you recall at the time that you visited PG&E whether it had an office in San Francisco?
A. Yes.
Q. Does it still today do you know, if you know?
A. I assume so.
Q. Well, we don't want you to assume. If you don't know the answers, you don't know, but we don't want you to assume.
A. I'll say no then.
Q. Do you know if at the time that you visited PG&E with this salesman or possibly without this

STLCOPCB4023271

salesman, do you recall if PG&E was actually a formal sales account of Monsanto's?

A. PG&E could purchase transformer Askarel from Monsanto.

Q. Okay. I understand that, but do you know if they actually were a regular account like Westinghouse and they had someone assigned to them, a salesman assigned to them who would look after their needs?

MR. KEARNS: Any needs, whether PCB or any others?

MR. DICUM: No, PCB.

A. It wasn't that specific or formal to my recollection at all.

Q. Let me try it again. Do you know if Monsanto was selling other products other than PCBs to PG&E at this time?

A. I don't know.

Q. Now, sir, you mentioned a sales office or an office in Monsanto called Monsanto San Francisco. Was this a sales office only?

A. Sales office.

Q. Did Monsanto have any kind of testing facilities out on the West Coast?

A. No.

STLCOPCB4023272

Q. Now, do you recall any occasions when PG&E contacted Monsanto to ask for laboratory experiments to be made on its behalf?

A. No, I don't recall.

Q. Do you recall any occasions when PG&E expressed a concern about -- any kind of concerns about Aroclor 1242s?

A. No.

Q. Do you recall meeting anyone else at PG&E other than Mr. Peterson?

A. No.

Q. Where did this meeting take place if you remember?

A. I would have called on him at his office, wherever.

Q. It was in an office rather than out in the field or somewhere else?

A. In an office in San Francisco.

Q. How long did the visit last, do you know?

A. I don't recall that. It wasn't very long.

Q. During the course of your work other than that visit to PG&E in San Francisco, did you ever write to PG&E?

A. I don't recall writing to PG&E.

Q. Did you ever write to any utilities?

STLCOPCB4023273

A. I don't recall writing to utilities.

Q. Now, you mentioned that you thought you might have given the booklets that you wrote to PG&E, is that correct?

A. Yes.

Q. Is there anything else that you gave them at that time?

A. No.

Q. Do you know if at some subsequent date, you sent materials to them that Dr. Munch had worked on showing the results of Dr. Munch's tests?

A. Not that I recall.

Q. Okay. Have you heard from anyone else that they sent something showing what Dr. Munch had done in his laboratory to PG&E?

A. I don't recall.

Q. Okay.

A. But I'd like to add something. I don't recall.

Q. Now, do you know if PG&E bought the same kind of transformer oil for its use that Westinghouse used when it first manufactured transformers?

A. Please restate that one more time.

Q. Well, we've looked at various designations of Aroclors, right?

STLCOPCB4023274

A. Yes.

Q. You've got various kinds. You've got Aroclor 1242, 1254, 1260. There's something called 1242D, and you think that might be 1016. There's some kind of enriched Aroclor 1242. Do you know if what PG&E bought from you in the late 1960s directly was the basic Aroclor 1242 or some other form of Aroclor 1242?

A. I don't know specifically what they bought. That was up to them and the transformer maker.

Q. Okay.

MS. JORDAN: I'm going to object to the question in any event. There has been no foundation that PG&E actually purchased any Aroclor from Monsanto at this point.

Q. Do you know if PG&E, in fact, bought Aroclors from Monsanto?

A. As I said, I am not sure. They could have, but I don't know that they did do so.

Q. Okay. Sir, we're going to be deposing a gentleman named Mr. Gossage next Friday. Do you know if Mr. Gossage had responsibility nationally at any point for reviewing marketing to customers in the United States?

A. Yes.

MR. DICUM: I'm going to have this marked next

in order. I'd like to see we get this back.

(Plaintiff's Exhibit 170 marked for identification.)

MR. DICUM: It's a memorandum with P. G. Benignus at the bottom and there is it appears to be addressed to Mr. Olson and it says, "PCB Toxicity Problem, Proper Disposal of Scrap Aroclor" dated December 5, 1969.

Q. Have you had a chance to look through that document?

A. Yes.

Q. Did you prepare this document?

A. Yes.

Q. And do you recognize this document now that I've shown this to you?

A. Yes.

Q. I refer you to the second sentence. Do you see that?

A. Yes.

Q. Do you know whether any particular reasons were given to counter the idea of an incinerator at the meeting last Wednesday that's referred to in the second paragraph?

A. Would you restate the question, please?

Q. Okay. You attended a meeting, did you not?

STLCOPCB4023276

A. I think so.
Q. Where you brought up the question of an incinerator?
A. I may not have, but it was brought up.
Q. Well, it does refer to "we" in the first sentence?
A. We.
Q. Is that a reference to you personally or to a group of people?
A. Not to me personally.
Q. Was there a group of people you were working with at this time --
A. Yes.
Q. -- that that could have applied to?
A. It was not myself personally.
Q. Is the group of people, the group of people noted on the right as recipients of this memo?
A. Yes, they would have been.
Q. Do you recall whether at this meeting or at any other time receiving objections from anyone concerning the possibility of building an incinerator?
A. No.
Q. And, in fact, an incinerator was ultimately built?
A. Yes.

STLCOPCB4023277

Q. Sir, I asked you about something called chlorinated dibenzofurans a little while ago this morning. Do you remember that?

A. Yes.

Q. Do you remember if there was any discussion about the necessity of eliminating chlorinated dibenzofurans as part of the incineration process?

A. No.

Q. Sir, do you know if Westinghouse had an incinerator for burning Aroclors as well at some point?

A. I'm not sure.

Q. Will you look at this memorandum --

A. They may have.

Q. -- dated December 8, 1969, which I'll have next marked in order.

(Plaintiff's Exhibit 171 marked for identification.)

MR. COMBS: BIR number?

MR. DICUM: No BIR number. It has a Hall Henry Bate stamp number 000259 in the top right-hand corner. It seems to bear the signature of someone called R. M. Kountz and it's addressed to three people in particular, N. T. Johnson, P. G. Benignus, and J. R. Fallon dated December 8th, 1969.

Q. Do you remember a gentleman called Kountz?

STLCOPCB4023278

A. Yes.
Q. Who was he?
A. He was an engineer in the engineering department.
Q. Can you tell us what kind of engineer he was?
A. I would say a mechanical engineer.
Q. Do you remember at some point receiving this memorandum?
A. Yes.
Q. Around or shortly after December 8th, '69?
A. Yes.
Q. And that was in the ordinary course of business, is that correct?
A. Yes.
Q. Now, I direct your attention to Paragraph Subsection B?
A. All right.
Q. Will you read the paragraph there?
MR. KEARNS: To himself or out loud?
MR. DICUM: To himself, that's fine.
A. I've read it, yes.
Q. Do you see a reference there to something called a Prenco incinerator installed by Westinghouse at Sharon, Pennsylvania?

STLCOPCB4023279

A. Yes.

Q. And do you see that Westinghouse is alleged to have projected that the incinerator would be used approximately 20 percent of the time in disposing of Aroclor?

A. Yes. That's why I did not say no when you asked if I ever heard of Permacol. I can't recall Permacol.

Q. Pardon me, Prenco?

A. I have faint recollection they did have and that's why I didn't tell you they did not have.

Q. Would you look at the next paragraph? Could you read that to us and perhaps read that aloud?

A. Which one is that?

Q. The next paragraph.

A. "In our last survey" --

Q. No, no, the paragraph immediately after the word "Aroclor" under B.

A. "We will be following up with their Dr. Sloat on their intended method of operation and their test work. It seems that they intend to feed lime to the incinerator for neutralizing HcL but do not intend collecting solids from the stock."

Q. Now, did you, in fact, follow-up personally

STLCOPCB4023280

with Dr. Sloat on the intended method of operation and test work of the incinerator at Sharon, Pennsylvania, operated by Westinghouse?

A. No, not I.

Q. Do you know if anyone else at Monsanto followed up on the issues there?

A. I don't know.

Q. Can you tell us if you know including what you've heard from any source about whether Westinghouse in or around December of 1969 had the technology to detect dibenzofurans in materials that were being incinerated at that Prenco incinerator?

A. I do not know.

Q. Do you know if at some subsequent date before the time you retired they acquired that capacity?

A. I do not know.

Q. Sir, I note that the memorandum is addressed to three particular people, N. T. Johnson, J. R. Fallon as well as yourself. Do you see that?

A. Yes.

Q. Can you tell us as between the three of you who would have been the most knowledgeable about the incineration process that is described here at Westinghouse?

STLCOPCB4023281

A. None of us.

Q. None of you?

A. Yes.

Q. Is there anyone else whose name you see on the memorandum including the signature space who could be considered the most knowledgeable about that Westinghouse incinerator system?

A. Kountz, the engineering people, this W. A. Kuhn who is in engineering.

Q. That's the man at the top of the cc's?

A. Yes.

Q. Anyone else there?

A. Some of these I don't even know.

Q. Okay. Well, is Mr. Kountz, do you know, still with the company?

A. I don't know.

Q. Was he still there when you left?

A. Yes.

Q. What about Mr. Kuhn, K-u-h-n?

A. I don't know.

MR. DICUM: Please have marked next in order Deposition Exhibit Number 172 and to identify it, it is a memorandum prepared by P. G. Benignus and addressed to Olson dated April 2, 1970, and it has -- it's dated April 2nd, 1970, and it is identified at the

STLCOPCB4023282

top as "Westinghouse-PCB Problem," okay? I'm going to have this marked first.

(Plaintiff's Exhibit 172 marked for identification.)

Q. Before we start, I have to get a copy so I can look at it first.

MR. FONTANA: Does it have a BIR number?

MR. DICUM: No, it doesn't have a BIR number.

Q. Do you recall that memorandum?

A. Yes.

Q. Do you recall a visit at some point with Westinghouse where Monsanto outlined for Westinghouse the Westinghouse PCB problem?

A. Yes.

Q. Did you attend that meeting?

A. I'm not sure whether I attended at this point.

Q. Can I look at that? That's my only copy. Do you know who Don McClain was at Bloomington?

A. Yes.

Q. Who was he?

A. He was a capacitor design engineer.

Q. Was he any kind of environmental engineer?

A. No.

Q. Gary C. Wilburn, he was an industrial

STLCOPCB4023283

hygienist, was he not, at South Boston?

A. Would you ask that one again?

Q. Gary Wilburn, the first name, he was the industrial hygienist, was he not, at South Boston?

A. I'd say no.

Q. He was not?

A. He was a plant engineer or plant manager -- no, wait a minute. Up in management.

Q. All right. But in management at South Boston?

A. I can't document him as an environmental what?

Q. Engineer -- I think I had said -- industrial hygienist was the word I used.

A. No, I couldn't identify him as such, no.

Q. Do you remember preparing any materials, putting any materials together for visits to Westinghouse around that time to explain the PCB problem?

A. I did not put it together, no.

Q. Do you recall if anyone else did?

A. Yes.

Q. Who?

A. I would say people in the research area.

Q. Can you give us some names?

STLCOPCB4023284

A. Laboratory area.

Q. Can you tell us if there are any names that come to mind?

A. Yes. Munch.

Q. Okay.

A. Richards, Munch would cover it.

Q. And this is on environmental aspects?

A. Now, in addition to Munch's input, yes, there was environmental aspect input, yes.

Q. Do you remember from whom that would have come?

A. Doctor -- oh, my, if I saw his name I could remember.

Q. Do you remember a gentleman called Mr. Wheeler?

A. Yes.

Q. Is he the person that you're thinking of?

A. No.

Q. Let me try some names. Dr. Kelly?

A. No.

Q. Dr. Hunt?

A. No. Those are people in the medical department. This man that had this input, he was in the laboratory. He did laboratory work and got data together.

STLCOPCB4023285

Q. Was there a particular laboratory that could be described as an environmental laboratory over at Monsanto at this time?

A. In loose terms, yes.

Q. Can you recall who was head of it at the time around 1969, '70?

A. I'm trying to.

Q. I understand.

A. I can't recall. You want to go through the alphabet?

Q. Do you remember a gentleman called Cumming Paton?

A. Yes.

Q. Was he involved?

A. No. I can't recall his name.

Q. Okay. Do you remember any kind of report being received by you of a visit to Westinghouse at which the PCB problem was explained?

A. I don't recall the specific thing you allude to. If I would see it, I'm sure I would.

Q. Perhaps Mr. Papageorge will remember. I'm going to show you a document that's been previously marked as Exhibit 23 and this is a letter from Mr. Papageorge to a gentleman called Mr. F. G. Jenkins of Sprague Electric Company, North Adams, Massachusetts

STLCOPCB4023286

dated July 8, 1970, and it bears a bcc to Mr. Benignus.

MR. ROTHSCHILD: Who was it to?

MR. DICUM: To Mr. F. G. Jenkins. It was previously marked as Exhibit Number 23.

MR. ROTHSCHILD: And who is Mr. Jenkins?

MR. DICUM: Vice president of materials of Sprague Electric Company.

MR. ROTHSCHILD: Okay.

Q. It might help, Mr. Benignus, for you to know that I'm going to direct you to something on Page 2 at a certain point, all right? First of all, do you recall this letter at all, it's by Mr. Papageorge?

A. Yes, I have a vague recollection. I was not directly involved, but I have a recollection of this, yes. I know what it's talking about.

Q. Was there some reason why you appeared as a bcc on this letter?

A. I seem to have appeared on everything.

Q. Well, I think that may be something to do with my selection, Mr. Benignus.

MR. KEARNS: That's why you're here.

Q. I do not want to show you things where your name does not appear. Now, would you look at -- first of all, do you recall if there was some

STLCOPCB4023287

significance or reason why your name and that of Mr. Olson's appears as bcc's on this letter?

A. By way of informing.

Q. Now, at this date in 1970, did you still have the title of marketing manager that you had in 1969?

A. Yes.

Q. Still the same position as in the previous year?

A. (Nodding head.)

Q. And you are reporting to Mr. Olson, is that correct, still?

A. No.

Q. At some point there had come a change?

A. 1970.

Q. Do you remember telling me earlier you were reporting at some earlier date to Mr. Olson who was the product manager for PCBs?

A. I did not report directly to him.

Q. Can you tell us if there was someone in between that you reported to?

A. Yes.

Q. Who was that?

A. I told you Buchanan was in between.

Q. And were you still reporting to Buchanan at

STLCOPCB4023288

this time?

A. No, he's no longer there.

Q. Were you reporting to anyone at this time?

A. I'm trying to think. I really don't know who was -- Olson was somewhere up the line.

Q. He was somewhere up above, but you can't remember who was in between?

A. And I was not reporting to Olson.

Q. But someone between I guess?

A. Yes.

Q. Well, let's look at Page 2, okay? And would you review the paragraph to yourself under the heading "Disposal"?

A. Yes.

Q. You see a reference in that paragraph to something called furans?

A. Yes.

Q. And do you recall if this letter of July 8th, 1970, was your first knowledge of something called furans?

A. It could well be, yes.

Q. Do you remember any previous occasion previous to this when you heard of something called furans?

A. No.

STLCOPCB4023289

Q. Now, there's a reference to something called dioxins as well?

A. Yes.

Q. Sir, do you recall if the enriched form of 1242s, the 1242 enriched form, do you remember --

A. A hundred percent?

Q. No, remember there were two forms of 1242s that we were discussing? There was an ordinary form and an enriched form?

A. I don't follow what you mean.

Q. We'll come back to that a little later.

A. All right.

Q. First of all, let's stick to furans.

A. Furans.

Q. Do you remember having any conversations with Mr. Papageorge after you received this bcc about furans?

A. None.

Q. Do you remember having any conversations with anyone else about furans?

A. No.

Q. And do you remember if the incinerator that was established by Monsanto was equipped to dispose of furans?

A. No.

STLCOPCB4023290

Q. It was not?
A. I don't know anything about the incinerator. I was not in that area.
Q. Okay. Now, do you know if the incinerator that was set up by Westinghouse, the Prenco incinerator at Sharon, was equipped to dispose of furans?
A. No.
Q. Again you do not know?
A. I do not know.
Q. Will you look back to Plaintiff's Exhibit 166 and look down to the very last line? You see a reference to Aroclor 1242 and Aroclor 1242 rich blend? You see that?
A. I misinterpreted your word rich to be enriched.
Q. Okay.
A. Sorry.
Q. I was wondering if looking at this document refreshes your recollection about a variety of Aroclor called Aroclor 1242 rich blend?
A. I understand.
Q. There was one?
A. That would be Aroclor 1242 -- let me restate this. It would be an Askarel blend composed primarily of Aroclor 1242 and I would assume a minor

STLCOPCB4023291

amount of chlorobenzene.

Q. Do you know if when Westinghouse bought Aroclor 1242s it was buying Aroclor 1242s without it being the Aroclor 1242 rich blend?

MR. FONTANA: I object to the question.

MR. KEARNS: Can you rephrase that question?

Q. Let me try that again. Do you recall whether Westinghouse between 1969 and 1974 bought Aroclor 1242s from Monsanto?

A. At what location?

Q. South Boston.

A. South Boston. I'm not absolutely sure as to the time period --

Q. Okay.

A. -- to answer your question.

Q. Okay. Do you recall if at any time South Boston bought Aroclor 1242s from Monsanto?

A. Yes.

Q. Before you retired in '74, right?

A. Yes.

Q. And do you recall if the 1242s they bought were Aroclor 1242s or Aroclor 1242s rich blends?

A. What we're addressing ourself to now, it's 1242.

Q. Okay. So what they bought was 1242?

STLCOPCB4023292

A. Excuse me?

MR. FONTANA: Mr. Dicum, might I suggest that you seem to be confusing the witness and I assume it's because you misunderstand his previous testimony.

MR. DICUM: Which was what?

MR. FONTANA: He has I think twice now tried to make it clear that the reference to Exhibit 166 to blends of Aroclor 1242 were Askarel blends which included other compounds.

MR. DICUM: Which included chlorobenzenes he specifically said.

MR. FONTANA: If your question is which of those two possibilities, then phrase it that way to maybe help the witness if he knows.

Q. Let me go back to the document and see if that helps. Look back at 166.

A. Okay.

Q. And looking back again to the bottom line, all right, very bottom line?

A. Yes.

Q. There's something called Aroclor 1242 that's typed there, right?

A. Yes.

Q. And something described as Aroclor 1242 rich blends, right? Do you see that?

STLCOPCB4023293

A. It doesn't say supplied by Monsanto. It says use.

Q. Well, do you know of any other company that sold something called Aroclor?

A. No.

Q. Do you know if the South Boston plant of Westinghouse bought from Monsanto Aroclor 1242 or Aroclor 1242 rich blends?

MR. KEARNS: Or both maybe?

Q. Or both?

A. I would say in the time frame you indicated, the answer is 1242.

Q. And on what do you base that statement?

A. Recollection.

Q. And --

A. But I can't give you the exact time of this.

Q. Okay. Was there some other time when they bought something called Aroclor 1242 rich blends that you recall?

MR. FONTANA: Object to the question.

A. I don't recall that.

Q. I may have asked you this before, but do you remember who was the salesman on the South Boston account at this time in '69 to '70, in about '69 to

STLCOPCB4023294

'74?

A. No, I don't.

MR. DICUM: I'm going to have marked next in order a letter dated August 6th, 1970, from Mr. Benignus to Donald McClain of Westinghouse Corporation and the exhibit number will be 173.

(Plaintiff's Exhibit 173 marked for identification.)

Q. Do you remember this document?

A. Yes.

Q. Did you prepare it?

A. Yes.

Q. That's your signature at the bottom?

A. Yes.

Q. Now, this is the same Donald McClain we were talking about a bit earlier?

A. Yes.

Q. At this time was Monsanto experimenting with something called MCS 1016?

A. Yes.

Q. Do you recall whether that was the same as something called 1242B?

A. I would say yes.

Q. Another name for the same thing?

A. Yes.

STLCOPCB4023295

Q. And I direct your attention to the first paragraph. Can you tell us what the purpose was of removing a significant portion of the more highly chlorinated compounds from 1242?

A. Yes.

Q. What was that?

A. The more highly chlorinated isomers were the slowest to biodegrade in the environment.

Q. Do you know if this product MCS 1016 was ever manufactured in commercial quantities and sold?

A. Yes.

Q. Did that occur before you retired?

A. Yes.

Q. And do you know if this product was then subsequently used in capacitors by Westinghouse?

A. Yes.

Q. Do you know of any reason why Westinghouse couldn't have bought 1016 instead of 1242 by 1974 from Monsanto?

MR. KEARNS: For capacitors?

Q. For capacitors.

A. They bought it.

Q. Okay. They bought it, all right. Now, do you recall if at any time they bought MCS 1016 for use in transformers?

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A. I don't know.
Q. Do you know if they --
A. I don't know.
Q. Do you know if MCS 1016 was manufactured by Monsanto so as to be capable of being used in transformers?
A. I don't know. I really don't.
Q. Do you know who might know?
A. I think Munch.
Q. That's a good answer. That's fine.
A. Or someone from marketing, Gossage. I just don't recall.
Q. Those are both good answers.
A. I don't want to give you a wrong answer.
Q. Those are both good answers. At this time were you working on a committee called ANSI C-107 around 1970?
A. Yes.
Q. And do you remember the time frame when you first joined that committee?
A. Approximately 1971 I believe.
Q. Did Mr. Papageorge join the committee at the same time as you did?
A. Yes.
Q. You weren't there before him and he didn't

STLCOPCB4023297

arrive later, is that correct?

A. No, it was simultaneous.

Q. Okay. I think we'll defer discussion of the ANSI committee until Mr. Papageorge's deposition.

MR. KEARNS: That doesn't disappoint me.

MR. DICUM: I didn't think it would, but I just want to try to avoid spending time with Mr. Benignus for longer than is necessary if somebody else is available who's probably more knowledgeable.

Q. Sir, as between you and Mr. Papageorge, who would be the more knowledgeable about activities of the ANSI Committee 107?

A. Why don't you defer it to Papageorge?

Q. I'm wondering if you have any impression as to whether he was more knowledgeable or you were more knowledgeable.

A. He carried on after I left, so he would be more thorough than I.

MR. DICUM: Now, I'm going to have marked as an exhibit a memorandum again signed by Mr. Benignus dated July 22nd, 1971.

(Plaintiff's Exhibit 174 marked for identification.)

Q. Do you remember this memorandum?

A. Mainly because I signed it.

STLCOPCB4023298

Q. Okay.

A. I do not know Hansen nor Curtis. I don't recall either one of these.

Q. Do you recall at some point amending the Askarel maintenance guide that you had previously prepared to read in the way that this memorandum states?

A. Yes.

Q. Was there any concern in your mind when you did that change concerning furans?

A. No.

Q. Or dioxins?

A. None whatsoever.

Q. I'll ask you just one question on the ANSI committee. During the various discussions of the ANSI committee, do you recall any discussions about risks from pyrolysis for generation of furans?

A. No.

Q. Do you understand the term pyrolysis, p-y-r-o-l-y-s-i-s?

A. Yes.

Q. That's a term familiar to you?

A. Yes.

Q. From your work at Monsanto?

A. Yes.

STLCOPCB4023299

Q. What's your understanding of that word?

A. My understanding of pyrolysis is heating to very high temperatures in this case beyond the temperature at which these materials are regarded as being stable and normal.

Q. You referred at an earlier point to something called an arced Askarel. Do you remember that?

A. Yes.

Q. Would another term for arced Askarel be pyrolysized Askarel?

A. I wouldn't so use it, no.

Q. You wouldn't?

A. No. Arced is very different.

Q. And that's because arced requires an electrical current?

A. Yes.

Q. Could pyrolysis occur from electrical current if you know?

A. I would apply the term arc rather than pyrolysis if the electric current is involved.

Q. Does the memorandum refresh your recollection at all about whether there was a capacity at the incinerator plant for removal of dibenzofurans?

A. None that I know of. I was not in that

STLCOPCB4023300

area.

Q. Do you remember if there was a specific plant manager running that incinerator?

A. The incinerator that we mentioned was at the Krummrich or Sauget location.

Q. Was there some particular person who was assigned to run it?

A. I don't know who was assigned. The plant manager personally did not run it.

Q. Who was that at that time, the plant manager?

A. It could have been Desmond Hosmer.

Q. Hosmer, okay.

A. I'm not sure.

Q. Okay. Have you ever heard from any source who the plant manager was of the Prenco incinerator run by Westinghouse at Sharon, Pennsylvania?

A. No.

MR. DICUM: Let's mark next in order Exhibit 175.

(Plaintiff's Exhibit 175 marked for identification.)

MR. DICUM: I have no idea what the significance of the W10A mark is. I infer it's from some earlier production. I have no idea what it's

STLCOPCB4023301

about.

MR. COMBS: Is there a BIR number?

MR. DICUM: No, but there's a Hall Henry stamp number which is 65000467.

MR. COMBS: Can you otherwise identify it?

MR. DICUM: Yes, I can. It's apparently a memorandum from Mitsubishi Monsanto Chemical Company from Tokyo dated March 22, 1972. It's addressed to Mr. Benignus.

MR. ROTHSCHILD: March what?

MR. DICUM: 22, 1972. The subject is PCB in Japan and it's addressed to Mr. Benignus.

MR. KEARNS: Where did you get these documents?

MR. DICUM: I think that's my work product, Mr. Kearns. I think I can represent they are not forgeries. I should say I don't frankly know what the W10A is. I believe it's some kind of production stamp and looking at it, it would imply it's a production by Westinghouse in some other lawsuit.

MR. FONTANA: I take it was that on the record?

MR. DICUM: I have no personal knowledge. I mean that's just my inference. I have no personal knowledge. I don't want to be held to any statements as to what the mark means.

MR. ROTHSCHILD: This is a memo to Mitsubishi or

STLCOPCB4023302

from?

MR. DICUM: It's from Mitsubishi Monsanto to Mr. Benignus.

MR. ROTHSCHILD: Thank you.

Q. Please take your time to review that.

A. Yes.

Q. First of all, do you remember this memorandum from a gentleman called J. Katayama in Japan?

A. Yes.

Q. You met him in Japan when you went on your trip?

A. Yes.

MR. ROTHSCHILD: Spell his name.

MR. DICUM: K-a-t-a-y-a-m-a.

Q. Now, do you see there's a cc to various people including a little arrow beside Papageorge's name?

A. Yes.

Q. Do you know, have you any knowledge as to why there's an arrow beside Mr. Papageorge's name?

A. Yes.

Q. Why?

A. Because he was in this area on PCBs.

Q. Okay. Did you ever have any conversations

STLCOPCB4023303

with Mr. Katayama by telephone or otherwise after this memorandum?

A. I don't recall.

Q. Did you ever meet him again?

A. I can't say for sure. This is '72. I left in '74. I'm not sure.

Q. Do you recall when in '74 you retired?

A. Yes, in October.

Q. Did Mr. Katayama ever visit from Japan to come to World Headquarters here at St. Louis?

A. Yes.

Q. And did you meet him here --

A. Yes.

Q. -- when he came on his trips? Did you ever discuss -- was this after the visit that you had over in Japan yourself?

A. Yes.

Q. And during those trips that he took between the 1960s and the time you retired, do you recall him talking about PCB matters in Japan?

A. Yes.

Q. And did he talk about the Yusho incident at all?

A. No, that was after my time in Japan. I was there before the Yusho thing.

STLCOPCB4023304

Q. I understand, but I'm talking now about the occasions when Mr. Katayama came from Japan to visit St. Louis. Let's take it in stages. Do you recall that Mr. Katayama ever came to St. Louis after the Yusho incident?

A. I think he did.

Q. Okay. Now, did he at any time in a visit after the Yusho incident talk to you?

A. I do not recall that he talked to me.

Q. Do you recall anyone telling you that Mr. Katayama had mentioned that furans were found in the PCBs in the Yusho incident?

A. No.

Q. Do you know -- I direct your attention, first of all, to the second page, okay? Do you see the fourth paragraph?

A. Number 3?

Q. It's Page 65000468. Do you see that?

A. Yes.

Q. And do you see the fourth paragraph from the top, the second from the bottom?

MR. KEARNS: The one numbered 3.

Q. I mean this one down here, the second to the last paragraph on the page.

A. I see.

STLCOPCB4023305

Q. The one that begins, "I think the latest happening sensationally moved the government to this direction - the analysis of mothers' milk in Osaka," do you see that?

MR. KEARNS: Does he remember reading it?

MR. DICUM: Does he remember reading it.

A. Yes, I read this.

Q. Do you remember if after you received this memorandum from Mr. Katayama whether you took any steps yourself to inform other people within Monsanto in St. Louis that "mothers' milk in Osaka showed PCB level of 0.7 to 0.1 ppm, as against the FDA's 0.2 maximum level for cows' milk"?

A. Not in light of the people who got this, no.

Q. Now, the first paragraph, sir, of this letter refers to a letter of March 20, 1972, from you, is that correct?

A. Yes.

Q. Do you remember writing to Mr. Katayama to inquire about the PCB situation in Japan?

A. I would say yes.

MR. DICUM: And, counsel, at this point I might make a request if that letter can be found.

MR. KEARNS: Hadn't your other source turned

STLCOPCB4023306

that up yet?

MR. DICUM: My source hadn't or sources have not so far turned that up and I may have to rely on you. This would be a letter from Mr. Benignus to Mr. Katayama.

MR. FONTANA: Off the record.

(There was a discussion held off the record.)

Q. Sir, let me take you back to a document we've previously talked about which was a certificate of quality, okay? And do you recall if along with the certificate of quality there was as a matter of custom and practice in 1974 any other documentation showing the quality of the particular lot of Aroclors that was sold at any time, at any particular time?

A. No.

Q. This was the official (indicating.)

MR. KEARNS: Are we going to take a mid afternoon break at any time?

MR. DICUM: Well, I'm actually not that far away.

MR. KEARNS: But Roy usually has some. I mean I'm thinking in terms of a break in the afternoon session.

MR. DICUM: I'm probably about fifteen minutes away.

(At this time a short recess was taken, after

STLCOPCB4023307

which the following proceedings were had:)

Q. Mr. Benignus, we're now back on the record. Do you understand that?

A. Yes.

Q. And would you look back at a document, certificate of quality marked previously as Plaintiff's Exhibit 160?

A. All right.

Q. Now, by this date, sir, 1974, you knew, did you not, that there was or could be something called chlorinated dibenzofurans in PCBs?

A. I was not active in that at all.

Q. Mr. Papageorge is a chemical engineer, is he not?

A. Yes.

Q. And would he be the person to talk to on that subject?

A. Yes, or Munch.

Q. Do you know if there was any kind of paperwork that went with each lot of Aroclor that was sold by Monsanto to Westinghouse concerning whether any tests had been done for chlorinated dibenzofurans by Monsanto?

A. I know nothing in that area, no.

Q. Do you know if including what you've heard

STLCOPCB4023308

if by 1974, the time that you retired, Monsanto had the capacity to detect chlorinated dibenzofurans in its PCBs?

A. I don't know. Ask Dr. Munch.

Q. Or Papageorge?

A. Yes, perhaps Papageorge.

MR. DICUM: That's it.

CROSS-EXAMINATION

BY MR. COMBS:

Q. Again, my name is Roy Combs and I represent Welton Beckett and Associates and Weaver Architectural Group, that's two other parties in this action. Sir, before I get started, can you hear me okay at this end?

A. Yes, but speak up, please.

Q. Okay. I think you mentioned that at some point you became the director of marketing for dielectric fluids. What year did you become the director?

A. I didn't become the director of marketing.

Q. Was it market manager, excuse me? What year was that?

A. I don't recall what year that was.

Q. Now, in that position, what were your basic responsibilities?

A. My function was that of a technologist on

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technical matters such as activity at ASTM and the International Electro-Technical Commission and so forth. I was not in the sales and direct marketing end of this business.

Q. Was there any particular function that you were to have with ASTM or with any of the other organizations or entities that you were involved with?

A. Yes.

Q. What was that function or functions?

A. At ASTM I joined as a member and later on I was chairman of Subcommittee B on the synthetic dielectric fluids.

Q. Was it a part of your function as a Monsanto employee to provide technical information to those groups, that is ASTM and --

A. Yes.

Q. And was that to include technical information that you had regarding the PCB Aroclors that were used as dielectrics?

A. Yes.

Q. Were there any other functions that you had within Monsanto that you haven't mentioned with respect to dielectric fluids?

A. No.

Q. Now, I'd like to have you look back at a

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document that was introduced as Plaintiff's 161 and I'm not going to go through the document. I would like you to just look at the --

A. Yes.

Q. -- second paragraph and see if that helps jog your memory about what was discussed at the meeting that's referred to. It's the last paragraph on that page.

A. Yes. I read it.

Q. Now, at that time was there any discussion about the combustion of PCB Aroclors and their by-products? And I should mention I'm really trying to get you to remember what was discussed at the meeting. Was this discussed, the gases here, arc forming gases?

A. It discussed the laboratory technique and its scope for the determination of the combustibility characteristics of arc formed gases from Aroclor 1242.

Q. Now, at the meeting and I'd like you to think back to that meeting if you can, other than discussions about the combustibility characteristics of arc formed gases, was there any discussion about other by-products from the combustion of PCB Aroclors?

A. No.

Q. I'd like you to next take a look at a document that has been shown to you this afternoon. It

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was marked as Plaintiff's Monsanto Exhibit 23 and that's the letter dated July 8, 1970, from Mr. Papageorge to Mr. Jenkins.

Now, you were shown that document earlier and I'd like you to look at the second page under the heading "Disposal" and I believe that you were also asked some questions about that and I'd like to ask you a few additional questions. You want to take a minute and look at that if you like.

A. Yes.

Q. Now, in 1970 at the time you received this letter and I believe you said that you thought you recalled getting it, is that correct?

A. A copy, I believe.

Q. What was your understanding of furans?

A. None.

Q. And what was your understanding of dioxins, the term as used here?

A. None.

Q. Did you later develop an understanding of what the term furans meant?

A. Yes.

Q. And approximately when was that?

A. Perhaps having read this sometime in this time frame.

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Q. You believe it would have been after receiving this letter?

A. Yes, I would never have thought of the term furans in these connections prior to this. It was new to me.

Q. And I guess would the same be true of dioxins?

A. Yes.

Q. Now, after the receipt of this letter, did you ever develop an understanding that furans could be created by the combustion of PCB Aroclors?

A. Very recently there's been things published in the literature.

Q. When you say, "recently," can you give me a time frame?

A. Within the past six months or so.

Q. Sir, at the time that you were at Monsanto, that is, between 1970 and 1974, you did not develop an understanding of furans being a by-product of the combustion of PCBs?

A. That is correct.

Q. And would it also be true that between 1970 and 1974, you did not develop an understanding that dioxins could be created from the combustion of PCBs?

A. That is correct. These were new unknowns.

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They were unknowns to me.

Q. I believe you talked earlier under Mr. Dicum's examination about the ASTM and ANSI groups and I believe you said ANSI was comprised of some representatives of the transformer manufacturing industry, is that correct?

A. Yes.

Q. Now, during the time that you worked with ANSI, do you recall any discussions about by-products from the combustion of PCB Aroclors other than the gases that were referred to in the earlier Exhibit 161?

A. No.

Q. I'm going to show you one last document and I don't believe this has been introduced. It is a letter dated October 13, 1971. It appears to be from you to a Tom Dakin, Westinghouse Electric, 007786 BIR number. I'll give you a copy of that.

MR. ROTHSCHILD: Tom who?

MR. COMBS: Dakin, D-a-k-i-n.

(Plaintiff's Exhibit 176 marked for identification.)

Q. Back on the record. Sir, can you tell me, first of all, who the individuals are? There are a couple of names on the document. First of all, can you

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tell us who Mr. Dakin is?

A. Dr. Dakin is the -- at that time was the director of research for Westinghouse Electric in their research center, Beulah Road, Pittsburgh, Pennsylvania.

Q. I believe there's a cc named there, is that correct?

A. Uh-huh.

Q. And can you tell us who that person is?

A. The one with the arrow?

Q. No, the one Mr. Tucker specifically.

MR. KEARNS: The exhibit went on top of that person's name.

A. I think --

Q. Sir, is there a Mr. Tucker listed? I believe it says Scott Tucker?

A. Yes.

Q. Can you tell us who that is?

A. Scott Tucker was in what Monsanto would call the biological end of this. I say this in quotes. We didn't run animal tests, et cetera. Tucker did work on migration and biodegradation of PCBs in contact with various soils, sludges, and so forth to probe the biodegradation of the various PCB materials.

Q. Do you know if he's still with Monsanto?

A. I don't know. He was a younger man,

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certainly younger than I was.

Q. Okay, thank you. I'd like you to look at either the last or the next to the last paragraph on that letter and I believe it talks about the removal of higher chlorinated and more refractory PCBs from fluids. Do you know why Monsanto decided to remove the higher chlorinated forms of PCBs from its dielectric fluids?

A. Yes.

Q. And why was that?

A. Because the higher chlorinated isomers or compounds are the slowest to biodegrade and the thrust by the environmentalists and the only complaint they really had was PCBs biodegrade relatively very slowly and I use the word aren't relatively refractory.

Q. Now, was there any concern -- strike that. Was the reason for removing the higher chlorinated forms from the PCBs associated in any way with the possible by-products from the combustion of the PCB Aroclors?

A. No way whatever.

Q. And the last sentence of that paragraph indicates, "We need support and testimonials from the electrical manufacturers and users." What did you mean by that statement?

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A. Well, may I explain?

MR. KEARNS: Would you read the question back?

(Whereupon the following question was read back by the Court Reporter: "Q. And the last sentence of that paragraph indicates, 'We need support and testimonials from the electrical manufacturers and users.' What did you mean by that statement?")

MR. KEARNS: Go ahead and answer that.

A. This is dated 1971, October.

Q. That's correct.

A. In 1970 Monsanto shut down distributing PCBs for nonelectrical. It was at the insistence of the electrical -- it was at the insistence of the electrical manufacturers who claimed to have no fire resistant dielectric fluid, they had no replacements as such, and they pleaded and insisted Monsanto continue to supply until their judgment indicated they would have a replacement of some sort and the government shared in this.

They realized if the electrical industry shut down capacitors and transformers, it might shut a big portion of the country down, so Monsanto could not stand alone in this climate and to continue with anything at all, we required some support; namely, first from the electrical industry, secondly from the

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EPA and the government people. This is what I alluded to. We could not continue alone.

Q. Was this sort of discussion carried on within the ANSI group? Specifically, did you discuss at ANSI getting support from the electrical industry as well as the utility industry?

A. Oh, yes. At ANSI the electrical industry is the prime representation, they and government people. Everyone was invited, Food and Drug, EPA, everybody.

Q. And do you know if there was a decision made in 1971 or 1972 by the members of ANSI to support Monsanto's position for the continued use of PCB Aroclors in closed systems?

A. Yes.

MR. COMBS: Okay. I think that's it.

MR. DICUM: What is the number of that document, 176?

MR. COMBS: 7786.

THE COURT REPORTER: Same stipulation on signature?

MR. KEARNS: Yes.

(Whereupon by agreement of all the parties, the signature of the witness is not hereby waived.)

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I, Paul G. Benignus, do hereby state that I have read the foregoing questions and answers appearing in this transcript of my deposition Page 3 through and including Page 163; that this is a true and accurate (corrected) report of said answers given in response to the questions appearing herein.

_____

Paul G. Benignus

CERTIFICATE

STATE OF MISSOURI)
) SS
COUNTY OF ST. LOUIS)

Before me personally appeared Paul G. Benignus to me known to be the person described in and who executed the foregoing instrument and acknowledge to and before me that he executed the said instrument in the capacity and for the purpose therein expressed.

WITNESS my hand and official seal this _____ day of _____, 1987.

_____

NOTARY PUBLIC

My Commission expires:

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NOTARIAL CERTIFICATE

STATE OF MISSOURI)
) SS
CITY AND COUNTY OF ST. LOUIS)

I, CAROLYN S. HOWSER, a Certified Court Reporter and Notary Public in and for the State of Missouri do certify that pursuant to the foregoing stipulation, taken at the Holiday Inn, 7730 Bonhomme Avenue, Room 407, in the County of St. Louis, State of Missouri,

PAUL G. BENIGNUS

came before me, was by me duly sworn to testify the whole truth of his knowledge of the matters in controversy aforesaid, was examined and his examination then written in stenotypy by me, and afterwards typed, and signed, as hereinbefore set out, on the day in that behalf aforesaid, and said deposition is herewith returned.

I further certify that I am not counsel, attorney, or relative of either party, or clerk or stenographer of either party, or of the attorney of either party, or otherwise interested in the event of this suit.

GIVEN under my hand and notarial seal at my office in the County of St. Louis, State of Missouri, on the _____ day of _____, 1987.

My Commission Expires: January 22, 1988.

_____
Carolyn S. Howser,
Notary Public in and for the
State of Missouri

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HOWSER COURT REPORTING

20 S. CENTRAL, SUITE 201 • CLAYTON, MISSOURI 63105 • (314) 725-4188

September 22, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Paul G. Benignus
47 Metcalf Drive
Belleville, Illinois 62223

In Re: Birmingham Fire Insurance Company, et al. vs. Pacific Gas & Electric Company, et al. No. 840161

Dear Mr. Benignus:

This letter, a copy of which is inserted as the last page of your deposition taken on August 8, 1987, is notice to you that the transcript has now been prepared and is ready for your reading and signature.

Pursuant to our conversation on the day of the deposition, I am forwarding to Ms. Susan Duvier the original signature page and deposition correction sheets along with her copy of the transcript. It is my understanding that you will contact Ms. Duvier and read her copy of the deposition and make any corrections you feel necessary on the sheets provided and then forward those back to me for filing.

As agreed among counsel at the time of the deposition, if our office has not received the executed signature page and deposition correction sheets back from you within sixty days of the date of this letter, the deposition will be used as if signed.

Your cooperation is hereby requested.

Sincerely yours,

Carolyn S. Howser