

COPY

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF FLORIDA  
MIAMI DIVISION

FLORIDA POWER & LIGHT COMPANY, )  
a Florida corporation, et al., )  
Plaintiffs, )  
vs. ) Case No.  
86-1571-CIV-ATKINS  
ALLIS-CHALMERS CORPORATION, )  
et al., )  
Defendants. )

Deposition of Witness  
WILLIAM B. PAPAGEORGE  
On Behalf of the Plaintiffs

June 12, 1990

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Reported by:  
JUNE M. FUNKHOUSER, RPR, CCR, CSR  
of

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UNITED STATES DISTRICT COURT  
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a Florida corporation, et al., )  
Plaintiffs, )  
vs. ) Case No.  
86-1571-CIV-ATKINS  
ALLIS-CHALMERS CORPORATION, )  
et al., )  
Defendants. )

DEPOSITION OF WILLIAM B.

PAPAGEORGE, produced, sworn and examined on the part  
of the Plaintiffs, pursuant to Notice and Subpoena  
and pursuant to the following stipulation, between  
the hours of eight o'clock in the forenoon and six  
o'clock in the afternoon of Tuesday, June 12, 1990,  
at offices of Clayton Reporting Company, 111 S.  
Bemiston, Suite 124, in the County of St. Louis,  
State of Missouri, before me,

JUNE M. FUNKHOUSER  
Registered Professional Reporter  
of  
CLAYTON REPORTING COMPANY, LTD.,

a Notary Public in and for the County of St. Louis,  
State of Missouri, in a certain cause now pending in  
the United States District Court, Southern District  
of Florida, Miami Division, wherein FLORIDA POWER &  
LIGHT COMPANY, a Florida corporation, et al. are the  
Plaintiffs and ALLIS-CHALMERS CORPORATION, et al.  
are the Defendants.

A p p e a r a n c e s:

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24  
25

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By: Mr. Gerard H. Davidson, Jr.

5 Also Present:

Mr. Frank Rankin  
Rankin Reporting &  
Legal Video Service

8 MR. BAKER: Would the reporter note  
9 the time and note Mr. Wilcox's absence.

10 (The time is noted as 9:06 a.m.)

11 \* \* \* \* \*

12 MR. BURKE: For the record, my name  
13 is Tom Burke. I represent GE.

14 Served upon all defendants very  
15 recently, there was an amended notice of taking this  
16 deposition served June the 6th indicating this will  
17 be a videotaped deposition. I'm unaware of any  
18 stipulation or any order of the court that permitted  
19 the videotaped deposition, and I don't know that the  
20 rule got changed like it did in state court to  
21 permit videotape as a matter of right.

22 So for the record we are objecting to a  
23 videotaped deposition.

24 MR. NETTLETON: Before we swear the  
25 witness, my name is Paul Nettleton. I represent

1 Westinghouse Electric Corporation.

2 As Judge Atkins ruled at his previous  
3 pretrial conference, I think it's stipulated that  
4 any objection made by any defendant will be valid  
5 and preserved for all defendants.

6 MR. WILCOX: I have no objection to  
7 that.

8 MR. BURKE: I think that because  
9 this is trial testimony, John, I think what we need  
10 to do is get all the objections on the tape and the  
11 transcript so they can be ruled on and they can be  
12 edited if necessary.

13 MR. WILCOX: I agree.

14 MR. BURKE: Okay. Good.

15 MR. WILCOX: I have no problem with  
16 that. I intend to be brief this morning. I hope we  
17 can finish today. Very much try to do so.

18 MR. DAVIDSON: We would very much  
19 like that.

20 MR. WILCOX: Okay. Would you go  
21 ahead and swear the witness, please?

22 WILLIAM B. PAPAGEORGE,  
23 being produced, sworn and examined on behalf of the  
24 Plaintiffs, deposeth and saith:

25

DIRECT EXAMINATION

BY MR. WILCOX:

Q. Good morning, Mr. Papageorge.

A. Good morning.

Q. I introduced myself earlier. I'm John Wilcox with the law firm of Rudnick & Wolfe. I represent Mr. Thomas Curtis, Mr. William Payne, Mr. Lowell Payne, and Miss Flora Payne and Miami Battery & Electric Company with respect to certain claims they have against the defendants who are here with us this morning.

This deposition is being taken for purposes of trial testimony and is being recorded by transcript as well as by a videotape.

Would you state your full name for the record, please.

A. William B. Papageorge.

Q. Where do you reside, Mr. Papageorge?

A. 321 Pebble Valley Drive, St. Louis, Missouri, 63141.

Q. Do you maintain any residence in the state of Florida?

A. No.

Q. Are you employed in the state of Florida?

1 A. No.

2 Q. I'm informed by your counsel that you  
3 would be unavailable to testify in the state of  
4 Florida in the trial of this matter; is that  
5 correct, sir?

6 A. Yes, sir.

7 Q. Let me begin by asking where you are  
8 presently employed.

9 A. I am self-employed.

10 Q. In what capacity?

11 A. Engineering consultant.

12 Q. How long have you been so employed?

13 A. Since beginning of 1987.

14 Q. What sort of consulting work do you do?

15 A. Well, it's chemical engineering  
16 basically I guess specializing in environmental  
17 matters and more specifically with PCBs.

18 Q. Prior to becoming self-employed, where  
19 did you work?

20 A. Monsanto Company.

21 Q. How long did you work with Monsanto?

22 A. Thirty-five years.

23 Q. What was your last position with  
24 Monsanto?

25 A. Manager of occupational health for

1 Monsanto Chemical Company, an operating unit of  
2 Monsanto Company.

3 Q. And prior to that, what was your job  
4 with Monsanto?

5 A. Director environmental operations for  
6 the Monsanto Industrial Chemicals Company, an  
7 operating unit of Monsanto Company.

8 Q. Let me offer you a document which I  
9 believe is your curriculum vitae, your -- your  
10 background, and ask if you can identify that, sir.

11 A. Yes, this is a copy of my curriculum  
12 vitae.

13 MR. WILCOX: May we have this  
14 marked, please, Miss Reporter?

15 (Said instrument was marked for  
16 identification as Plaintiffs' Exhibit No. 1,  
17 6-12-90, JMF.)

18 Q. (BY MR. WILCOX) You obtained your  
19 education at Washington University; is that correct?

20 A. That is correct.

21 Q. Is that in Missouri?

22 A. In St. Louis, Missouri, yes.

23 Q. And you obtained a -- looks like a  
24 bachelor of science in chemical engineering,  
25 correct?

1 A. Yes.

2 Q. And when was that?

3 A. 1943.

4 Q. And then thereafter a master of science  
5 in chemical engineering?

6 A. Yes, sir.

7 Q. Also from Washington?

8 A. Yes.

9 Q. In what year?

10 A. 1947.

11 Q. From 1947 to 1951 you were employed by  
12 Phillips Petroleum, correct?

13 A. That is correct.

14 Q. And thereafter joined Monsanto?

15 A. Yes.

16 Q. Did you serve continuously with Monsanto  
17 then until you left them in 1986?

18 A. Yes.

19 Q. Did you retire in 1986?

20 A. Yes.

21 Q. In your job as director of environmental  
22 operations, what sort of work did you do?

23 A. I was responsible for the emissions from  
24 plant operations of those plants assigned to a given  
25 operating unit of Monsanto. Those emissions include

1 their wastewaters, air emissions, as well as  
2 disposal of solid wastes. I was also responsible  
3 for the workplace health, exposure of the employees  
4 to the chemicals and -- and the physical hazards  
5 that might exist at the plants.

6 I was also responsible for the proper  
7 communications of information relating to our  
8 products safety, the labeling, the proper mode of  
9 transportation, the containers used, and the related  
10 bulletins and brochures that are associated with the  
11 product.

12 Q. And did that job involve a chemical  
13 known as PCB?

14 A. I can't answer that quickly because I  
15 was director of environmental operations for several  
16 years during which I was assigned to different  
17 operating units and it's only during one of the  
18 periods that PCBs was part of my responsibility, not  
19 throughout the entire period.

20 Q. What period was it that you were  
21 involved with that chemical?

22 A. As best I recall, it was about 1983 as a  
23 director of environmental operations.

24 Q. Looking at your curriculum vitae, from  
25 1970 to 1973 it shows you were manager of

1 environmental control; is that correct?

2 A. That is correct.

3 Q. Were you involved with PCBs during that  
4 period of time?

5 A. Yes.

6 Q. What was the scope of your  
7 responsibilities regarding PCBs during that period?

8 A. During the 1970-1973 period?

9 Q. Yes, sir.

10 A. I was the coordinator of all information  
11 relating to PCBs and the environment, the  
12 relationship between the two, within Monsanto and,  
13 as appropriate, outside of Monsanto with customers,  
14 regulatory agencies, private laboratories,  
15 universities, legislative bodies, the media, news  
16 media.

17 Q. And PCBs is a -- is a name -- is an  
18 abbreviation for a chemical, correct?

19 A. It's -- I would suggest the use of the  
20 word acronym.

21 Q. Okay. Aptly said. And what does that  
22 acronym stand for?

23 A. Polychlorinated biphenyls.

24 Q. Was that a chemical or -- or a product  
25 manufactured by Monsanto?

1           A.    They were manufactured by Monsanto,  
2   yes.

3           Q.    Were there any other U.S. manufacturers  
4   of PCBs?

5           A.    Not to my knowledge.

6           Q.    In terms of the electrical industry,  
7   what were the applications of PCBs to the production  
8   of electrical equipment?

9           A.    They were used in -- in some  
10   transformers, in some capacitors, and some switching  
11   equipment.

12          Q.    Okay. The issue we are discussing here  
13   this morning will be transformers. I'm not  
14   inquiring about capacitors or switching gears.

15                So focusing on -- on transformers, can  
16   you describe for the jury what function the PCBs had  
17   in the transformer.

18          A.    The PCBs were one of several ingredients  
19   in a fluid mixture which was present in the  
20   transformer. Its function was to serve as a cooling  
21   medium to dissipate the heat generated while the  
22   transformer is in service.

23          Q.    In simplistic terms, what does a  
24   transformer do?

25          A.    It can take voltage of a high level and

1 reduce it to a lower level or it can do the reverse.

2 Q. From a low level to a high level?

3 A. Low level to a high level.

4 Q. And in the course of doing that it  
5 generates heat; is that correct?

6 A. Yes, sir.

7 Q. In what sort of application of a  
8 transformer would you normally expect to find PCBs  
9 used as a cooling medium?

10 A. Normally it's in units that are located  
11 in areas which are heavily populated or in areas  
12 where high-cost facilities are located where a -- a  
13 fire would be extremely costly.

14 Q. Does the PCB serve as a fire retardant  
15 in that circumstance?

16 A. It serves as a fire retardant in the  
17 liquid in which it's blended, yes.

18 Q. Now mineral oil is also used as a heat  
19 dissipating fluid in some transformers, correct?

20 A. That is correct.

21 Q. Why is there a difference in the  
22 applications of the cooling medium, transformer --  
23 the -- in the transformers; that is, between say  
24 PCBs and mineral oil?

25 A. Well, there are two differences that

1 come to mind. One is an economic difference. And  
2 the other is that the mineral oil is flammable and  
3 subject to secondary fires if the unit let's say  
4 explodes whereas the PCB-containing liquid, being  
5 fire resistant, is not a fluid that will support a  
6 secondary fire. It will snuff itself out.

7 Q. On applications where fire retardant was  
8 not as great a concern one might expect to find a  
9 mineral oil transformer then, correct?

10 A. Yes.

11 Q. And in terms of economics, I take it  
12 that one -- that either PCBs or mineral oil is less  
13 expensive than the other?

14 A. That is correct.

15 Q. And which is that?

16 A. Mineral oil is less expensive, or was  
17 less expensive.

18 Q. In terms of -- of the numbers of units  
19 in service in the utilities during this time frame  
20 say in the early '70s, which would be the more  
21 prevalent transformer in service, the PCB or mineral  
22 oil?

23 MR. BAKER: Objection; lack of  
24 foundation.

25 A. Mineral oil.

1 Q. (BY MR. WILCOX) Are you familiar with  
2 the term askarel?

3 A. Yes, sir.

4 Q. And what -- what does that term mean  
5 generally?

6 A. It's the generic term used by the  
7 industry to describe fluids used in electrical  
8 equipment that are fire resistant.

9 Q. How about the term Pyranol, what -- what  
10 does that mean?

11 A. Pyranol is a trademark which belongs to  
12 the General Electric Company to identify fluids used  
13 in electrical equipment that are fire retardant.

14 Q. What is -- Or correction, does Pyranol  
15 contain PCBs?

16 A. Yes.

17 Q. What does the term Inerteen refer to?

18 A. Inerteen is a Westinghouse trademark to  
19 identify fire-resistant fluids used in electrical  
20 equipment.

21 Q. Does Inerteen contain PCBs as well?

22 A. Yes.

23 Q. Are there risks -- Well, strike that.

24 In 1970 when you assumed your job, were  
25 any risks in the use of PCBs identified?

1 MR. DAVIDSON: What kind of risk  
2 are you -- are you referring to?

3 Q. (BY MR. WILCOX) Well, let's break it  
4 down.

5 MR. DAVIDSON: Risks in use?

6 Q. (BY MR. WILCOX) Risks in use to  
7 personnel safety or to the environment.

8 A. In 1970 the risks to humans were  
9 identified as overexposure to the fumes and also  
10 overexposure to skin contact, to people, the  
11 workers. In 1970 there was an evolving situation  
12 that related PCBs to presence in the environment.

13 Q. Did you ever have occasion to observe  
14 any situations where a worker who came in contact  
15 with PCBs on his skin encountered any difficulty?

16 MR. BAKER: Objection; relevance,  
17 materiality.

18 A. Yes.

19 Q. (BY MR. WILCOX) What -- What sort of  
20 circumstance was that, Mr. Papageorge?

21 MR. BAKER: Objection; relevance,  
22 materiality.

23 A. As plant manager at Monsanto's plant in  
24 Alabama, I saw the hands of one of my -- of the  
25 chief operator and they were red and they appeared

1 to be very -- had the -- the chapped hands  
2 appearance. The medical doctor had informed me that  
3 this individual had --

4 MR. NETTLETON: Objection;  
5 hearsay.

6 A. -- had informed me, that's his duty as  
7 plant doctor to tell me, that the employee had  
8 suffered exposure to his hands from PCBs because he  
9 did not use his protective gloves. I personally saw  
10 the individual's hands and within the week that  
11 condition had disappeared.

12 Q. (BY MR. WILCOX) Did Monsanto specify  
13 protective equipment and clothing for its personnel?

14 MR. BAKER: Objection; materiality,  
15 relevance.

16 A. Yes.

17 Q. (BY MR. WILCOX) Such things as gloves?

18 A. Yes.

19 MR. BAKER: Objection; relevance,  
20 materiality.

21 Q. (BY MR. WILCOX) I'm sorry, what was  
22 your answer, sir?

23 A. Yes.

24 Q. This particular individual wasn't  
25 wearing his gloves at the time he came in contact

1 with the PCBs?

2 A. That is correct.

3 MR. BAKER: Objection; relevance,  
4 materiality.

5 Q. (BY MR. WILCOX) Did Monsanto suggest to  
6 its customers that their employees who might come in  
7 contact with PCBs wear protective equipment and  
8 clothing?

9 MR. BAKER: Objection; relevance,  
10 materiality.

11 A. Yes.

12 Q. (BY MR. WILCOX) Now what were the  
13 environmental risks that had been identified in 1970 --

14 MR. BAKER: Objection.

15 Q. (BY MR. WILCOX) -- or thereabouts?

16 MR. BAKER: Mischaracterizes the  
17 testimony of the witness.

18 A. Can you help me with what -- what part  
19 of 1970 because this was a fast-evolving --

20 Q. (BY MR. WILCOX) Yes, sir. I believe  
21 you --

22 A. -- situation.

23 Q. -- testified that in 1970 there was an  
24 evolving, I'm not sure what word you used, but  
25 awareness of some environmental problems which were

1 developing or perceived to be developing from the  
2 PCB's placement in the environment.

3 MR. BURKE: Excuse me. Let me  
4 object to the form of the question. The witness's  
5 testimony that either was an evolving situation of  
6 the presence of PCB in the environment. The  
7 question mischaracterizes and misrepresents his  
8 prior testimony.

9 Answer if you can, sir.

10 Q. (BY MR. WILCOX) Can you describe for me  
11 the evolving situation, Mr. Papageorge?

12 A. Yes. In -- By 1970, early 1970, it was  
13 fairly well established that PCBs were being found  
14 in the environment.

15 Q. And what do you mean when you describe  
16 the term environment?

17 A. Such things as the Great Lakes, pine  
18 needles in Sweden, eagle feathers from a preserve --  
19 eagle in a museum in Sweden, the presence in some  
20 fish tissue again from this Swedish laboratory.  
21 Those are the examples I can think of at the  
22 moment.

23 Q. Is this a situation where the scientists  
24 examined those particular kinds of -- of matter and  
25 found PCBs in them?

1 A. Yes.

2 Q. And what was the significance of the  
3 finding of the PCBs in those sorts of substances?

4 A. The significance to Monsanto is that the  
5 presence in those samples was unexpected based on  
6 Monsanto's thirty or forty years' experience with  
7 these chemicals, particularly considering how  
8 insoluble they were in water. And the uses that  
9 Monsanto knew of just would not lead one to believe  
10 that PCBs could be found in pine needles, as an  
11 example.

12 Q. Are you familiar with the -- an event  
13 known as the Yushow event?

14 A. Yes.

15 Q. And what was that?

16 MR. BAKER: Objection; materiality,  
17 relevance.

18 A. The Yushow incident describes a  
19 situation that occurred in Japan in which PCBs were  
20 used to transfer heat to assist in the distillation  
21 of oil extracted from rice bran. The system  
22 developed an internal leak where the PCBs got into  
23 the rice bran oil and that oil was later sold in the  
24 marketplace and consumed by a community. The  
25 individuals who consumed that oil were observed to

1 have varying symptoms. In other words, they -- they  
2 were not healthy because of this exposure.

3 Q. (BY MR. WILCOX) Did the Yushow incident  
4 cause any greater or lesser attention to PCBs in the  
5 environment?

6 MR. BAKER: Objection; relevance,  
7 materiality.

8 A. Well, it certainly caused more  
9 attention, yes, it did. Uh-huh.

10 Q. (BY MR. WILCOX) Approximately when was  
11 the Yushow incident?

12 A. 1968.

13 Q. At that point in time you were employed  
14 by Monsanto in a plant in Alabama, I believe,  
15 correct?

16 A. Yes, sir.

17 Q. And thereafter you were moved to your  
18 position in St. Louis as manager of environmental  
19 control in about what, 1970 was it?

20 A. Yes.

21 Q. And what was the purpose, as you  
22 understood it, of your move into this job as manager  
23 of environmental control?

24 A. Well, the -- the frequency at which  
25 information regarding PCBs and presence in the

1 environment was increasing to the point where the  
2 managers in Monsanto decided that it was a  
3 significant enough of a situation that it required  
4 the full-time attention of some person, and it was  
5 decided to appoint this new position to help really  
6 within Monsanto to let the two business groups that  
7 sold PCBs coordinate their efforts better so the  
8 left hand knew what the right was doing; at the same  
9 time to respond to questions, comments, from sources  
10 outside of Monsanto, the university laboratories,  
11 the government agencies, the media, and the  
12 customers.

13 Q. Was it your job to be the -- the  
14 resource for gathering of information about PCBs for  
15 Monsanto?

16 A. Yes.

17 Q. Did you have any function with regard to  
18 transmittal of that information to people outside of  
19 Monsanto?

20 A. Yes.

21 Q. And how did you go about the gathering  
22 of the information regarding PCBs?

23 A. Several ways. One is to -- As an  
24 example, I asked our medical director through his  
25 staff that when they peruse the various medical

1 documents, journals and the like, when articles  
2 relating to PCBs would appear I would -- he would  
3 make certain that his librarian sent me copies of  
4 those articles and his staff would many times make  
5 marginal notes or prepare a brief summary so that a  
6 layman like me would understand what the document  
7 was referring to.

8 Another source would be out of our  
9 research department, its library. Its librarian was  
10 asked to peruse these documents, she was given a  
11 list of where the articles might likely appear, and  
12 at the same time I subscribed to several documents  
13 that I would peruse personally.

14 I also had subscribed for a time to a --  
15 a press clipping service, and each day they would  
16 send me an envelope full of press clippings from  
17 newspapers, magazines, journals throughout the --  
18 throughout the world really.

19 And, of course, I would get some inputs  
20 from the different people involved with studying  
21 PCBs, the researchers and the universities and the  
22 government laboratories and the regulatory  
23 agencies.

24 Q. They would send you information?

25 A. Yes.

1 Q. Did Monsanto conduct any studies of its  
2 own regarding PCBs in the environment?

3 A. Yes. I don't know that we have the same  
4 definition of regarding PCBs in the environment.

5 Q. Well, what sort of studies did Monsanto  
6 conduct? Again, we're focused on this early '70s  
7 time frame.

8 A. Yes. Well, of course it conducted a  
9 very extensive program for developing analytical  
10 methodology that was reliable at very, very low  
11 levels of concen -- concentrations.

12 Q. Now we're talking about testing for  
13 PCBs, the presence?

14 A. Testing for them.

15 Q. The presence of PCBs?

16 A. That is right.

17 Q. Okay.

18 A. They established also another program  
19 for determining the health effects on test animals,  
20 rats, dogs, chickens. They sponsored these  
21 studies. They also sponsored one fish study to see  
22 how -- what effect PCBs had on freshwater fish.  
23 They also conducted within Monsanto a study to  
24 determine how PCBs degrade when exposed to  
25 bacteria.

1 Q. Did they study methods of disposal of  
2 PCBs other than the -- the degradation by bacteria?

3 A. They studied what it took in the way of  
4 temperatures to conduct foolproof incineration so  
5 there was definitely incinerated rather than  
6 vaporized.

7 Q. And did you obtain that information  
8 about, you know, which resulted from the studies as  
9 well as the other documents you referred to?

10 A. Oh, yes.

11 Q. And did you disseminate the information  
12 outside the company?

13 A. Certainly.

14 Q. And how did you go about doing that?

15 A. There was various ways. One is by my  
16 personally appearing before individuals or groups  
17 along with appropriate coworkers, for example, a  
18 medical department person, an analytical chemistry  
19 person, and we would share with that audience the  
20 latest information.

21 Another would be as -- as requested,  
22 either by mail or over the telephone, we would -- if  
23 we could, we would just repeat over the telephone  
24 what we knew and understood. There are other times  
25 when we would send summaries in the mail along with

1 copies of these articles that I was getting from  
2 these various libraries that we felt were  
3 appropriate to the person's request.

4 Q. And who were the people that you were  
5 disseminating this to, to the people, the entities,  
6 the groups?

7 A. Oh, they varied from the garden clubs of  
8 Michigan to the attorney general -- state's attorney  
9 in New York City to the EPA in Washington to the  
10 laboratory in the EPA or the Federal Water Quality  
11 Administration at that time up in Duluth, Minnesota;  
12 Corvallis, Oregon; Athens, Georgia; a laboratory in  
13 Gulf Breeze, Florida; there was a laboratory in  
14 Columbia, Missouri; the Department of Interior for  
15 pesticide, fish pesticide laboratory; universities,  
16 the University of Berkeley, Dr. Risebrough, at  
17 Cornell Dr. Peakall; the Audubon Society. It was a  
18 varied audience that received these.

19 Q. Did it -- Did that audience include  
20 customers of Monsanto?

21 A. I should have mentioned customers, yes,  
22 definitely.

23 Q. And do those customers include  
24 manufacturers of transformers?

25 A. Yes.

1 Q. And -- And what was the purpose of the  
2 dissemination of that -- of the information  
3 regarding PCBs which you were obtaining?

4 A. Since the issue was becoming more and  
5 more popular with the regulatory agencies and the  
6 press and the investigators, we felt it only -- the  
7 only responsible thing to do was share with our  
8 customers, for example, everything we knew and share  
9 with other interested people everything we knew.  
10 There was no reason to -- not to disclose any.

11 Q. In trying to disseminate everything that  
12 Monsanto knew about PCBs?

13 A. That is correct.

14 Q. During this time frame were there any  
15 laws or regulations enacted which governed the  
16 disposal of PCBs?

17 A. Can you give me --

18 Q. Again, we're talking about  
19 early '70s now.

20 A. Early '70s?

21 Q. Yeah.

22 A. Regarding the disposal of PCBs. In  
23 early 1970 the only regulations that existed were  
24 the various wastewater regulations developed by each  
25 state regarding the disposal of industrial chemicals

1 in public streams. The only other regulations I  
2 know that might apply would be the various  
3 ordinances and local laws that apply to how local  
4 landfills were operated, located, and what materials  
5 they should expect to dispose there.

6 Q. Were there any such states that had  
7 disposal regulations or statutes regarding the  
8 disposal of industrial chemicals during this  
9 early '70s time frame?

10 A. I'm trying to recall a specific. There  
11 were some states that made a distinction between  
12 chemical landfills and sanitary landfills. I do not  
13 recall just which they were.

14 Q. All right. Did any states have laws or  
15 did they enact laws during this time frame governing  
16 the disposal of PCBs into the waterways?

17 A. Not at that time, no.

18 Q. Subsequently did any states adopt laws  
19 or regulations governing the disposal of PCBs in the  
20 waterways?

21 A. No.

22 Q. How about the federal government, did it  
23 enact rules or regulations, EPA or -- or any of the  
24 other agencies?

25 A. Yes.

1 MR. BURKE: Can we get a time frame  
2 as to when that might be at this point, please?

3 Q. (BY MR. WILCOX) Again, focusing on the  
4 early '70s, were there any regulation -- federal  
5 regulations that governed PCBs in the environment --

6 A. -- Not --

7 Q. -- water or -- or any other substance,  
8 food substance or any other kind of material?

9 MR. BURKE: Excuse me. Let me  
10 object to that question. That's a compound  
11 question. You started talking about disposal and  
12 now we're talking about food chain. I mean, it's  
13 apples and oranges and I think it's confusing to the  
14 witness and they're totally different, and so I  
15 would object to the form of the question.

16 Do you understand it, Mr. Papageorge?

17 THE WITNESS: I think I do.

18 MR. BURKE: Answer it if you can,  
19 sir.

20 THE WITNESS: I'll try.

21 A. But my previous response and you said  
22 subsequent to that early 1970s was -- were there any  
23 laws, and my answer was yes. This is approaching  
24 the '80s now; that's a decade later.

25 Going back to 1970, there were no

1 regulations relating to PCBs in air or water or  
2 soil. The only regulatory action that was in place  
3 were a set of guidelines established by the Food and  
4 Drug Administration, guidelines as distinguished  
5 from regulations. There -- There seems to be a  
6 difference in the use of the word guideline.

7 Other than that, there was nothing that  
8 I'm aware of in place in the early '70s.

9 Q. (BY MR. WILCOX) Okay. With the  
10 evolving knowledge through the '70s about PCBs, did  
11 there come a time when additional regulations or  
12 guidelines were enacted?

13 A. Yes, there did come a time.

14 Q. Was there a time when the federal  
15 government adopted a rule which in effect banned the  
16 use of PCBs?

17 A. Yes.

18 Q. And do you recall approximately when  
19 that was?

20 A. 1976 the Toxic Substances Control Act  
21 was passed.

22 MR. DAVIDSON: I'd like to ask for  
23 clarification. You indicated banned the use of  
24 PCBs, I believe that was your question?

25 MR. WILCOX: Yes, it was.

1 MR. DAVIDSON: I think that the --  
2 there were several stages and different things that  
3 were subject to the ban, and perhaps that might need  
4 to be clarified.

5 MR. BURKE: I further object to the  
6 question in that installed, intact electrical  
7 equipment containing PCBs are still in use and  
8 they're still authorized for use and still  
9 encouraged to be used.

10 Q. (BY MR. WILCOX) The -- Strike that.

11 One of the things that you said Monsanto  
12 was looking into in the early '70s was methodology  
13 for the detection of PCBs, correct, sir?

14 A. Yes, sir.

15 Q. How are PCBs detected or what's the  
16 analysis, the methodology that's generally used?

17 A. Well, I don't pose to be an expert  
18 analytical chemist, but I do know that there are  
19 sophisticated instruments that are able to respond  
20 to the chemical that's introduced into the  
21 instrument in a way that the instrument is able to  
22 draw a -- a chart. These instruments are the GLCs  
23 they're called, gas-liquid chromatograms.

24 The peaks and valleys formed by the  
25 reaction to the presence of chemicals are then

1 further confirmed with another instrument called a  
2 mass spectro -- spectrophotometer. It's the  
3 combination of those instruments permits the  
4 analytical chemist to detect such chemicals as  
5 PCBs.

6 Q. And during this time frame, what was the --  
7 the relative order of magnitude of the level of PCBs  
8 which could be detected?

9 MR. BURKE: Which time frame is  
10 that now?

11 Q. (BY MR. WILCOX) Early '70s.

12 A. Early '70s? It -- Again, it started at --  
13 in the parts per million range, and as the  
14 analytical chemists fine-tuned their methods they  
15 were able to get eventually down to parts per  
16 billion for sure and in some situations parts per  
17 trillion.

18 Q. What was the sort of level that Monsanto  
19 could achieve with its testing methodology and  
20 equipment?

21 A. Monsanto --

22 MR. McINTOSH: When?

23 Q. (BY MR. WILCOX) In the early '70s.  
24 Everything is focused on the early '70s.

25 A. Early '70s.

1 MR. BAKER: Objection; materiality  
2 and relevance.

3 A. Monsanto could -- I hesitate because  
4 this depends again on the laboratory. The  
5 laboratory in St. Louis, which was in my viewpoint  
6 the pioneer group, they became so sophisticated they  
7 could detect parts per trillion. The laboratories  
8 at the producing plant, which do this on a -- a more  
9 routine manner, were able to detect in the parts per  
10 billion in a routine manner. It takes --

11 Q. (BY MR. WILCOX) Monsanto --

12 A. -- It takes a special effort to get down  
13 to part per trillion. That is not warranted at the  
14 plant site as distinguished from the research  
15 laboratory.

16 Q. Were you familiar with any laboratories  
17 in any manufacturing plants of -- of Monsanto's  
18 customers that were able to detect PCBs in their  
19 laboratory methodology?

20 A. When you ask me am I familiar with  
21 laboratory in the plants I --

22 Q. The manufacturing plants of the  
23 customers.

24 A. I'm not -- I'm not personally  
25 knowledgeable regarding which laboratories at the

1 customers had the capabilities. All I know -- All I  
2 know is that some of the larger companies with the  
3 resources had the capability. I do not know where  
4 that capability was located.

5 Q. And are you familiar with the relative  
6 order of magnitude of the levels which could be  
7 detected in their laboratories?

8 MR. BAKER: Objection; vague.

9 A. Parts per billion.

10 MR. NETTLETON: Object and move to  
11 strike; lack of foundation.

12 Q. (BY MR. WILCOX) Let me offer you a -- a  
13 document, appears to be a letter dated March 3rd,  
14 1969, on Monsanto letterhead and see if you can  
15 identify this, please, sir.

16 A. This is a copy of a letter to customers  
17 signed by Mr. Elmer Wheeler of Monsanto's medical  
18 department.

19 Q. Are you familiar with that letter, sir?

20 A. Yes, sir.

21 Q. What was the purpose of that letter?

22 MR. BURKE: Excuse me. May we  
23 examine the document --

24 MR. WILCOX: Sure.

25 MR. BURKE: -- before the witness is

1 examined about it?

2 MR. WILCOX: For the record, that  
3 letter was an exhibit to Mr. Papageorge's previous  
4 deposition in the related case of U.S. versus  
5 Pepper's Steel which deposition was taken February  
6 21st, 1990.

7 MR. BAKER: Object to the reference  
8 to that deposition and to that case as being  
9 related.

10 MR. McINTOSH: I move to strike  
11 counsel's testimony as to what the letter is and  
12 where it purports to have appeared otherwise.

13 MR. BURKE: Furthermore, none of  
14 the defendants in this case were parties to any  
15 deposition in any case taken in February 1990 and  
16 were not in attendance.

17 Thank you.

18 MR. McINTOSH: May I see it?

19 I would object as to the relevancy and  
20 that it's hearsay and there's no predicate for it.

21 MR. BAKER: I also object to this  
22 copy of the exhibit since it's been previously  
23 marked at a deposition which is not in this case.

24 MR. McINTOSH: I would also object  
25 on authenticity and best evidence.

1 Q. (BY MR. WILCOX) Mr. Papageorge, for the  
2 record, there is a notation at the upper left-hand  
3 corner, some writing which I can't even make out,  
4 that I represent to you is not part of the letter as  
5 I received it originally. In addition, at the  
6 right-hand corner there are some numbers which were  
7 not on this document when I originally received it.

8 Can you recognize either of those  
9 numbers at the right-hand corner or the notation at  
10 the upper left-hand corner?

11 A. I cannot.

12 Q. Okay. I represent to you that those  
13 were added after they were received from production  
14 by Monsanto.

15 MR. NETTLETON: Objection; move to  
16 strike --

17 MR. McINTOSH: Move to strike.

18 MR. NETTLETON: -- the statement of  
19 counsel.

20 Q. (BY MR. WILCOX) The -- Let me go back  
21 to the letter so I can ask you again if you -- I  
22 believe you said you're familiar with the letter,  
23 correct?

24 A. That is correct.

25 Q. Was that a document that you saw in the

1 course of your employment with Monsanto?

2 A. Yes, sir.

3 Q. And what was the purpose of that letter  
4 as you understood it?

5 MR. BAKER: Objection; foundation.

6 MR. McINTOSH: Objection;  
7 speculation.

8 A. This was Monsanto's way of communicating  
9 to its customers on record, customers of PCBs, of  
10 the information known at that point in time, early '69,  
11 regarding the detection of PCBs in the environment  
12 by several laboratories and to inform the customers  
13 that some of the products that they were purchasing  
14 from Monsanto did contain the material PCBs.

15 Q. (BY MR. WILCOX) Was this one of the  
16 notice letters that you described in your earlier  
17 testimony disseminating information to the  
18 customers?

19 MR. BURKE: Excuse me. Let me  
20 object to the form of the question and his prior  
21 testimony has nothing to do with this deposition  
22 today, and the word notice has legal significance  
23 that is irrelevant and immaterial to this case.

24 Answer if you can, sir.

25 Q. (BY MR. WILCOX) Let me just make sure I --

1 you understand. Don't -- Prior testimony to today,  
2 I have no reference to any other testimony any other  
3 time. When I asked you earlier about how  
4 information was disseminated you described a process  
5 by which Monsanto distributed information to a wide  
6 audience including its customers. My question is is  
7 this letter one of those vehicles for transmitting  
8 information about PCBs to Monsanto's customers?

9 A. Yes.

10 MR. WILCOX: Let me ask the  
11 reporter to mark that as Plaintiffs' 2.

12 (Said instrument was marked for  
13 identification as Plaintiffs' Exhibit No. 2,  
14 6-12-90, JMF.)

15 Q. (BY MR. WILCOX) Let me hand you another  
16 document which appears to be on Monsanto letterhead --  
17 letterhead dated February 18th, 1970, and ask if you  
18 can recognize that letter.

19 A. This is a copy of a letter mailed to  
20 customers on record with Monsanto of PCB products  
21 signed by Donald Olson, who at that time was  
22 director of sales for PCB products.

23 Q. Are you familiar with that letter?

24 A. Yes, sir.

25 Q. Is that --

1 MR. McINTOSH: May we see it before  
2 you question the witness further about it?

3 MR. BAKER: I have the same exhibit --  
4 objections to this exhibit as to the one that was  
5 marked as Exhibit 2.

6 MR. BURKE: After it's marked, I'm  
7 assuming it's going to be No. 3, I would object to  
8 the exhibit 'cause it does not have any relevancy to  
9 this case and, further, the attachment which was  
10 included with the letter is missing. Therefore, the  
11 document is incomplete and therefore misleading.

12 MR. BAKER: Also object on the  
13 grounds that foundation is vague and misleading  
14 since it makes no specific reference to any parties  
15 in this case.

16 MR. McINTOSH: I would also object  
17 as it is hearsay and hearsay within hearsay, the  
18 authenticity, and the best evidence. It appears to  
19 be a copy of something or other.

20 MS. MONTES: I also object because  
21 there is no list of customers so -- listed there, so  
22 we cannot tell who received the letter actually or  
23 to whom it was sent.

24 Q. (BY MR. WILCOX) Are you familiar with  
25 that letter, Mr. Papageorge?

1 A. Yes, sir.

2 Q. And what was the purpose of that letter?

3 MR. BAKER: Same objections.

4 A. The purpose of this particular version  
5 of this letter was to inform the purchasers of  
6 products from Monsanto containing PCBs that are used  
7 in electrical equipment of the current status,  
8 current at that -- as of -- as of the date of the  
9 letter, of the information known to Monsanto  
10 regarding PCBs and, again, presence in the  
11 environment.

12 Q. (BY MR. WILCOX) And who were some of  
13 those customers that you're referring to, which  
14 companies?

15 A. Well, it was General Electric,  
16 Westinghouse, Sprague Electric, Allis-Chalmers,  
17 Cornell Dubalier, Federal Pacific, Electric  
18 Utilities. I'm sure there were several more, I just  
19 can't remember them all.

20 Q. Was the letter intended to go to all of  
21 Monsanto's customers who were users of PCBs in the  
22 electrical equipment business?

23 MR. BAKER: Objection; foundation,  
24 best evidence.

25 A. They were intended to go to customers on

1 Monsanto's records which covered a three-year period  
2 back in time.

3 Q. (BY MR. WILCOX) Would Monsanto looked  
4 at its records to determine who its customers had  
5 been during that three-year period; is that right?

6 A. That is correct.

7 Q. And was the address list then derived  
8 from that list of customers?

9 A. Yes, sir.

10 Q. And was the letter then, as far as you  
11 know, sent to that list?

12 A. Yes.

13 MR. BAKER: Objection; speculation,  
14 foundation.

15 MR. WILCOX: Let me have that  
16 marked as Plaintiffs' 3, please.

17 (Said instrument was marked for  
18 identification as Plaintiffs' Exhibit No. 3,  
19 6-12-90, JMF.)

20 Q. (BY MR. WILCOX) Let me offer you  
21 another document, this one again appearing to be on  
22 Monsanto letterhead dated September 15th, 1970, and  
23 I would ask you if you recognize that document.

24 A. I do recognize it.

25 Q. And what is that document?

1 A. This is --

2 MR. MCINTOSH: May we see it before  
3 the witness is questioned about it?

4 MR. DAVIDSON: Go off the record.

5 (Discussion was held off the record.)

6 (Said instruments were marked for  
7 identification as Plaintiffs' Exhibits No. 4 through  
8 and including No. 16, 6-12-90, JMF.)

9 (Deposition stood in temporary recess.)

10 Q. (BY MR. WILCOX) Mr. Papageorge, are you  
11 familiar with the document that's been marked  
12 Plaintiffs' Exhibit 4?

13 A. Yes. This is a document I previously  
14 reviewed and told you I was familiar with it.

15 Q. And what was the purpose of that letter?

16 MR. BAKER: Objection; materiality,  
17 relevance.

18 A. This is to inform our -- Monsanto's  
19 customers of fluids, products that contain PCBs, of  
20 the latest information Monsanto had regarding FDA  
21 and a guideline on PCBs.

22 Q. (BY MR. WILCOX) Again, was that sent to  
23 customers such as the transformer manufacturers?

24 MR. BAKER: Objection; vague,  
25 foundation, best evidence.

1 MR. McINTOSH: Leading.

2 A. Yes.

3 MR. McINTOSH: I would object to  
4 Exhibit 4 for the following reasons: It's hearsay,  
5 object to the authenticity, it's not the best  
6 evidence, it's only a copy, and it doesn't carry  
7 indication as to which customers it was sent.

8 MR. BAKER: I'm going to pose at  
9 this time an objection to all the exhibits that have  
10 been marked because they show markings from  
11 depositions unrelated to this case and other  
12 markings that are obviously not original to the  
13 documents.

14 Well, it covers all the ones that have  
15 been marked, which as I understand it is 1 through  
16 16.

17 Q. (BY MR. WILCOX) Mr. Papageorge, let me ask --  
18 correction, let me hand you a document that's been  
19 marked Plaintiffs' Exhibit 6 for identification and  
20 ask you if you recognize that document.

21 A. I do.

22 Q. And what is that document, sir?

23 MR. BAKER: Objection; relevance,  
24 materiality.

25 A. This is a copy of a proposed bulletin to

1 be issued by Monsanto's marketing department, and  
2 the document describes some recommendations  
3 regarding the control of PCBs such that they do not  
4 enter the environment.

5 Q. (BY MR. WILCOX) Was that bulletin  
6 adopted by Man -- Monsanto?

7 A. Yes.

8 Q. And was it distributed?

9 A. Yes.

10 Q. To which entities or -- entity or  
11 entities was it distributed?

12 A. This was distributed, again, to  
13 customers of the PCBs on record with Monsanto as of  
14 the date of this bulletin and three years prior.

15 Q. And what was the purpose of the  
16 bulletin?

17 MR. BAKER: Objection; relevance,  
18 materiality, foundation.

19 A. The intent of the bulletin was to share  
20 with customers some ideas that Monsanto's  
21 representatives had regarding methods that might be  
22 useful and applicable to -- at the customer sites  
23 for the control of PCBs to prevent loss to the  
24 environment.

25 Q. (BY MR. WILCOX) All right, sir. And

1 for the record, what is the date of this bulletin?

2 A. It's --

3 MR. BAKER: Objection to the  
4 characterization of the exhibit as a bulletin. The  
5 witness testified that it was a proposed bulletin.

6 A. July 1971 is the date of this copy.

7 Q. (BY MR. WILCOX) Okay. Do you know when  
8 it was adopted and distributed?

9 A. Within a month.

10 Q. Of July 1971?

11 A. Yes. August '71.

12 Q. Let me hand you a document that's been  
13 marked for identification as Plaintiffs' Exhibit 7  
14 and ask if you can identify that particular one.

15 A. This is a copy of a bulletin prepared  
16 and distributed by Monsanto Company relating to  
17 Transformer Askarel Inspection and Maintenance  
18 Guide.

19 Q. Was that bulletin adopted by Monsanto  
20 and distributed to its customers?

21 A. Yes, sir.

22 Q. Which customers was it distributed to?

23 A. This was distributed to customers of  
24 fluids sold by Monsanto that contained PCBs and were  
25 designed for use in transformers.

1 Q. Was the customer list or the  
2 distribution list the same three-year type of  
3 arrangement that you described earlier?

4 A. Yes, sir.

5 Q. And what was the purpose of that  
6 document?

7 MR. BAKER: Objection; relevance,  
8 materiality, foundation, compound question.

9 MR. NETTLETON: Also object to the  
10 relevancy on the basis of lack of time frame.

11 Q. (BY MR. WILCOX) What's the date of that  
12 document, Mr. Papageorge?

13 A. This document is 1974 as best I recall.

14 Q. Okay. And what was the purpose of it?

15 A. The purpose was to update previous  
16 documents that referred to inspection and  
17 maintenance guides of fluids used in transformers,  
18 and it included references to practices and  
19 guidelines developed by the American National  
20 Standards Institute regarding the proper use and  
21 control of PCB liquids.

22 Q. Okay. And what's the American National  
23 Standards Institute?

24 A. That's an industry organization that  
25 addresses the development of standards developed by

1 industry.

2 Q. All right. And did there come a time in  
3 your employ with Monsanto that you worked with the  
4 American National Standards Institute?

5 A. Yes, sir.

6 Q. And what was the circumstances under  
7 which you worked with the Institute?

8 A. I was chairman of a committee which  
9 prepared a guideline for the use, control, and  
10 eventual disposal of PCBs used in electrical  
11 equipment.

12 Q. And what was your role, if any, in the  
13 formation of such committee?

14 A. I don't -- I didn't play any role in the  
15 formation of the committee.

16 Q. You did serve as its chairman you said?

17 A. Yes, sir.

18 Q. Were you the first chairman?

19 A. Yes, sir.

20 Q. How long did you serve as chairman?

21 A. From 1971 till early 1976.

22 Q. Was the committee in existence before  
23 you took the position of chairman?

24 A. No.

25 Q. Did it continue in existence after you

1 relinquished your position as chairman?

2 A. Yes, sir.

3 Q. Can you tell me, as best you recall, the  
4 membership composition of that committee?

5 MR. BAKER: Objection; no time  
6 frame, best evidence.

7 A. I certainly don't recall all the  
8 individuals by name, but it consisted of  
9 representatives of various industrial groups that  
10 represented electrical equipment manufacturers, it  
11 consisted of representatives from transformer  
12 service company, it consisted of representatives of  
13 the utilities and also included representatives of  
14 government entities, both the using agencies and  
15 departments as well as the regulatory agencies and  
16 departments.

17 Q. (BY MR. WILCOX) Did it include the  
18 representatives from GE?

19 A. Yes.

20 Q. Westinghouse?

21 A. Yes.

22 Q. Allis-Chalmers?

23 A. Yes.

24 Q. Kuhlman?

25 A. I don't recall a representative from

1 Kuhlman.

2 Q. Moloney or Central Moloney as it may  
3 have been known at the time?

4 MR. BAKER: Objection; lack of time  
5 frame.

6 A. Yes.

7 Q. (BY MR. WILCOX) RTE?

8 A. I don't recall an RTE representative.

9 Q. McGraw?

10 A. I'm not clear on McGraw. It seems to me  
11 they were represented. I do not remember the  
12 individual.

13 Q. Bear with me just a minute; I'll get my  
14 exhibits back in order.

15 Let me offer you next a document that's  
16 been marked for identification as Plaintiffs'  
17 Exhibit 9 and ask if you can recognize that  
18 document.

19 A. I do recognize it.

20 Q. What is that document, sir?

21 A. This is a copy of a letter I wrote dated  
22 September 1st, 1970, addressed to Mr. W. C.  
23 Reinhardt of the Moloney Electric Company.

24 Q. And what was the purpose of that letter?

25 A. This was in response to a suggestion

1 that I prepare a brief statement describing the  
2 current status of PCBs and the environment for use  
3 by the National Electrical Manufacturers Association  
4 in their dealings with the American National  
5 Standards Institute.

6 Q. And what was the basic relationship  
7 between the National Electrical Manufacturers  
8 Association and the American National Standards  
9 Institute?

10 A. The relationship was one of the NEMA  
11 representatives requesting ANSI to sponsor a  
12 committee to establish guidelines for the proper  
13 handling and use and disposal of PCBs.

14 Q. And was that committee you referred to  
15 earlier of which you assumed the chairmanship?

16 A. That is the committee that was  
17 eventually formed, yes.

18 Q. Now, there is a second page to the  
19 letter. Is that the statement which you composed  
20 regarding the current situation with PCBs?

21 A. It is.

22 Q. Now let me offer you a document that's  
23 been marked as Plaintiffs' Exhibit 10 for  
24 identification and ask if you can identify that  
25 document.

1 MR. NETTLETON: For the record, I  
2 would object to this exhibit on the grounds of  
3 multiple hearsay involvements.

4 MR. WILCOX: Is your objection to  
5 No. 10?

6 MR. NETTLETON: No. 10.

7 A. I recognize this document.

8 Q. (BY MR. WILCOX) And what is that  
9 document, Mr. Papageorge?

10 A. This is a copy of a prepared text that I  
11 presented at the first meeting, the meeting at which  
12 the ANSI committee C107 was formed.

13 Q. You say text. Was this a speech which  
14 you gave?

15 A. Yes.

16 Q. Did you actually deliver those remarks  
17 to the committee membership?

18 A. Well, to the audience that was present.  
19 Some of them became committee members, some were  
20 observers.

21 Q. Okay. And what was the purpose of that --  
22 that call it a speech or talk or remarks or whatever  
23 you prefer to describe it?

24 MR. BAKER: Objection; relevance,  
25 materiality.

1 Q. (BY MR. WILCOX) How would I best  
2 describe it, as remarks?

3 A. Status report.

4 Q. Okay. What was the purpose of that  
5 report?

6 MR. BAKER: Same objection.

7 A. To -- To share with the audience the  
8 latest information I had regarding PCBs and the  
9 environment.

10 Q. (BY MR. WILCOX) And do your remarks  
11 summarize your thoughts on that subject?

12 A. Yes.

13 Q. Let me next offer you a document that's  
14 been marked as Plaintiffs' Exhibit 12, and I  
15 recognize that I skipped 11 here, and ask if you can  
16 identify this document, sir.

17 MR. McINTOSH: John, to speed  
18 things up may the defendants have continuing  
19 objections on the grounds of relevancy,  
20 authenticity, hearsay, lack of a predicate,  
21 foundation?

22 MR. WILCOX: Certainly.

23 MR. McINTOSH: And that way we can  
24 just say the usual objections instead of cataloging  
25 them.

1 MR. WILCOX: I have no problem with  
2 that, David.

3 MR. McINTOSH: I have the usual  
4 objections to hearsay and everything which has  
5 preceded to it.

6 MR. WILCOX: And I assume yours was  
7 to be taken as a standard objection, the one you  
8 made earlier with regard to all the exhibits?

9 MR. NETTLETON: That was David.

10 MR. BAKER: Well, the one I  
11 specifically announced objection to all of them,  
12 that is correct.

13 I also, Mr. Wilcox, believe you're  
14 required to state your basis in opposition to the  
15 objection now and not come up with some argument  
16 later, so I think you're precluded from making any  
17 arguments in opposition to the objections.

18 MR. McINTOSH: Additionally, if  
19 none of the objections have appeared on your  
20 pretrial catalog I would move that they be stricken  
21 for that reason or not admitted.

22 MR. NETTLETON: You mean the  
23 documents?

24 MR. McINTOSH: The documents, I'm  
25 sorry.

1           A.    You asked me to describe this document  
2 and say --

3           Q.    (BY MR. WILCOX) Well, I asked if you  
4 recognize it first of all.

5           A.    I recognized several parts of it.

6           Q.    And what is it, sir?

7           A.    I'm sorry?

8           Q.    What is it?

9           A.    What is it? This is a collection of  
10 minutes of meetings of the ANSI group, there's a  
11 copy of the proposed Massachusetts bill to be voted  
12 on by the legislature, there is a speech by a  
13 representative of the French PCB manufacturers. I'm  
14 sure I didn't catch them all. There's some -- There  
15 are letters here on NEMA letterhead relating to the  
16 formation of a committee to establish guidelines for  
17 the proper use of PCBs, so it's -- it's a mixture in  
18 this particular exhibit.

19           Q.    Were minutes kept of the meetings of the  
20 committee?

21           A.    Which committee?

22           Q.    The committee of which you were  
23 chairman.

24           A.    Yes.

25           Q.    Okay. And are these such minutes, these

1 documents?

2 MR. NETTLETON: Object. He's  
3 already testified that it's a mixture of different  
4 documents.

5 A. I see here only one example of minutes  
6 of that particular committee.

7 Q. (BY MR. WILCOX) Would the other items  
8 that are attached to that have been distributed with  
9 the minutes? When I received those, when they were  
10 produced, they were affixed together and they are --  
11 they bear Bates numbers, sequential numbers at the  
12 bottom that show they were attached.

13 MR. NETTLETON: Move to strike  
14 counsel's statements about production of documents.

15 MR. BAKER: Object to the reference  
16 to the Bates numbers.

17 A. I would like to correct something. The  
18 minutes I referred to referred to a NEMA committee  
19 that existed in early '71 as distinguished from the  
20 subsequent committee under ANSI sponsorship which  
21 was formally organized in September of '71.

22 Q. (BY MR. WILCOX) Okay.

23 A. The information in this packet appears  
24 to be related to the NEMA committee and its  
25 inception and its first meeting.

1 Q. Okay. May I have that one?

2 A. Sure.

3 Q. Now would this -- the events that are  
4 described in Exhibit 12, the minutes apparently,  
5 have been of a committee that existed prior to your  
6 becoming chairman of the later committee you  
7 discussed?

8 A. That is correct.

9 Q. All right. Can we describe the  
10 committee that you chaired as -- as the ANSI  
11 committee? Can we agree on that so we distinguish  
12 between the two?

13 A. That's the -- the common expression used  
14 to describe it, yes.

15 Q. And I'm sorry, when was that committee  
16 formed? You said September?

17 A. September '71.

18 Q. Okay. Let me offer you a document  
19 that's marked for identification as Plaintiffs'  
20 Exhibit 13 and ask if you can identify that,  
21 recognizing the first page is -- is somewhat  
22 obliterated by the copy process.

23 A. This is a copy of the minutes of an ANSI  
24 committee meeting held in February 1972. Attached  
25 to it are copies of letters that I had mailed to the

1 chairmen of the two subcommittees in response to  
2 their request for information.

3 Q. Do the attached letters belong in the  
4 ordinary course of -- of things with the minutes  
5 themselves? Are they attachments to the minutes or  
6 are they just accidentally stapled together here  
7 today?

8 MR. BURKE: Object to the form of  
9 the question. There's no showing this witness has  
10 any experience with how these documents were  
11 prepared and put together or not prepared and put  
12 together.

13 Answer if you can, Mr. Papageorge.

14 A. I do not recall that my letters were a  
15 part of -- of the minutes when initially issued.

16 Q. (BY MR. WILCOX) Okay. Let me separate  
17 those and let me see if we can get these properly  
18 done.

19 MR. BAKER: I'm going to object to  
20 the modification of the exhibit after it's been  
21 testified to by the witness. It's going to show on  
22 the record differently than what he testified to.

23 MR. WILCOX: I think we'll correct  
24 that here just momentarily with a little patience,  
25 Mr. Baker.

1                   Let me ask the reporter if you would --

2                   MR. BAKER: I think the record  
3 should reflect the exhibit, a copy of the exhibit,  
4 as the way he testified to it. If you want to have  
5 something else that he can identify, you should have  
6 something else.

7                   MR. WILCOX: Well, I don't have any  
8 problem with that. We can copy what he's testified  
9 to as Exhibit 13 but then I want to break it up and  
10 get it in its proper order and examine him on those  
11 separate documents. Now we either need to stop and  
12 make that copy or we just agree that these papers  
13 that I have here are what was 13 until I removed the  
14 staple.

15                  MR. BAKER: I object to proceeding  
16 in this way.

17                  MR. WILCOX: For what reason?

18                  MR. BAKER: I don't think it's the  
19 way to make a proper record for a trial deposition.

20                  MR. McINTOSH: Also you've altered  
21 that document -- that exhibit after it had been  
22 marked by the court reporter.

23                  MR. WILCOX: All I've done is  
24 remove the staple, Mr. McIntosh.

25                  MR. McINTOSH: Well, that's an

1 alteration.

2 MR. WILCOX: Okay. I will ask then  
3 that we suspend momentarily and have the reporter  
4 copy what is Exhibit 13 as Mr. Papageorge just  
5 testified and ask if I may have another copy so that  
6 I can use the separate documents themselves. Can  
7 you do that for us, please?

8 MR. BAKER: I object to suspending  
9 the deposition. We started late because of your  
10 late arrival. I'd like to proceed.

11 MR. NETTLETON: Mr. Wilcox, could I  
12 suggest that you just keep the exhibit together and  
13 ask him to identify the separate pages. He's  
14 already identified them as separate documents and  
15 you can count the number of pages back. It might  
16 alleviate everyone's concern.

17 MR. WILCOX: Well, that might be a  
18 convenient arrangement. I don't have any problem  
19 with that. Do you want to paper clip that?

20 Q. (BY MR. WILCOX) All right. Let's try  
21 and do that, Mr. Papageorge, in order to keep things  
22 moving.

23 The lower right-hand corner of each of  
24 these documents bear a number which is sequential  
25 from 148064 through 148072, and let me ask, if you

1 would, to refer to those numbers and if you could  
2 identify for me that portion which is the minutes of  
3 the ANSI committee.

4 A. The minutes are identified in the lower  
5 right-hand corner by the numbers 148065 through  
6 148068.

7 Q. Okay. Now let me ask you to refer to  
8 the first page, and there seems to be a list of  
9 people who were present at -- at that meeting,  
10 correct?

11 A. That is correct.

12 Q. Now, is that a list of the membership of  
13 the committee?

14 A. No, this is a list of the members that  
15 were present. There were -- It's possible there are  
16 members who could not make this meeting. For  
17 example, I'm one. I -- I didn't make this meeting.

18 Q. Okay.

19 A. And it's also possible for observers or  
20 guests to be present. It's an open meeting.

21 Q. Now those minutes then were -- were  
22 prepared by Mr. Salazar, correct?

23 A. Yes.

24 Q. But you didn't personally participate in  
25 that meeting itself?

1 A. That is correct.

2 Q. Okay. What is the -- Then the next  
3 document following 148068?

4 A. The next document is a copy of a letter  
5 I sent to Mr. Raab and Dr. Posefsky, the two  
6 chairmen of the subcommittees, and this is dated  
7 January 19, 1972.

8 Q. And that is a single-page document?

9 A. The number of this document is 148069,  
10 single page.

11 Q. All right. And what was the purpose of  
12 that letter?

13 A. This was to convey to the two chairmen  
14 the sensitivities regarding the analytical methods  
15 used by Monsanto, FDA, and USDA in determining the  
16 presence of PCBs in sample material.

17 Q. And did the letter accurately describe  
18 those sensitivities?

19 A. Yes, sir.

20 Q. And what were those sensitivities?

21 A. Well, the Monsanto sensitivity was two  
22 parts per billion. The FDA method was .5 parts per  
23 million. The USDA was 1.0 parts per million.

24 Q. Okay. And you described the two  
25 recipients, Mr. Raab and Mr. -- I'm sorry, what was

1 it?

2 A. (Indicating).

3 Q. Posefsky?

4 A. Yes, sir.

5 Q. All right. As chairmen. What were they  
6 chairmen of?

7 A. Mr. Raab was chairman of the  
8 subcommittee that addressed use of PCBs in  
9 transformers. Dr. Posefsky was chairman of the  
10 subcommittee that addressed use of PCBs in  
11 capacitors.

12 Q. And do you know by whom or which company  
13 Mr. Raab was employed?

14 A. Yes, I do.

15 Q. And what company was that?

16 A. General Electric Company.

17 Q. Did you ever visit with Mr. Raab?

18 A. Yes.

19 Q. At his place of employment?

20 A. Yes.

21 Q. And where was that?

22 A. Pittsfield, Massachusetts.

23 Q. And what sort of facility was -- was  
24 there at Pittsfield?

25 A. I don't know how to answer your question

1 other than it was a site at which transformers which  
2 contained PCB-type fluids were manufactured.

3 Q. A manufacturing plant?

4 A. Yes.

5 Q. Okay. Did you ever discuss with Mr.  
6 Raab the subject of -- at any time with Mr. Raab the  
7 subject of PCBs mixing in mineral oil?

8 A. Yes.

9 Q. And can you generally describe the  
10 subject that was discussed?

11 MR. BAKER: Objection; hearsay.

12 MR. BURKE: Let me object to the  
13 form of the question, and could I ask, Mr.  
14 Papageorge, if you can that you attach a time frame  
15 to your answer so we'll know rather than having to  
16 guess?

17 A. I discussed with Mr. Raab individually  
18 and I was also present when Mr. Raab as chairman of  
19 this transformer subcommittee describing the  
20 possibilities for inadvertently mixing mineral oil  
21 fluids and PCB-type fluids. The discussion really  
22 centered about an incident that happened decades  
23 before and from that experience the manufacturing  
24 processes were modified to avoid a reoccurrence, and  
25 the understanding I had was that Mr. Raab was very

1 comfortable with the current situation in 1970,  
2 early 1970s, that the potential for such a mishap  
3 happening at the manufacturing plant was very  
4 remote.

5 Q. (BY MR. WILCOX) When did you first  
6 become aware of the potential or the possibility for  
7 the mixing of mineral oil and PCBs?

8 A. Early 1970.

9 Q. Did you ever discuss that subject with  
10 any representative from Westinghouse?

11 A. I don't recall a specific incident in  
12 which a discussion of -- on that subject was held  
13 with a Westinghouse person. I -- I don't recall any  
14 such discussion.

15 Q. Were there discussions where you were  
16 present in the ANSI committee regarding the  
17 potential or possibility of the mixing of mineral  
18 oil and PCBs?

19 A. Yes.

20 Q. And can you describe for me about what  
21 time frame we're talking about?

22 A. We're talking very early in the -- in  
23 the existence of that committee as -- as an ANSI  
24 committee and I'm the chairman, if not the first  
25 meeting the second. Very early in its working

1 period.

2 Mr. Raab as chairman of that committee  
3 was summarizing the past history of transformers,  
4 their uses, the introduction of the PCB type of  
5 transformers, and he did mention as a sort of a  
6 reminder to the group that mixtures did occur and  
7 there was con -- the group struck me as agreeing  
8 that, yeah, they occurred, but the manufacturing  
9 processes were all modified to make certain that  
10 this did not happen again and the group decided that  
11 the issue of mixing was under good control and to  
12 move on then to PCBs in the environment.

13 MR. BAKER: Objection; move to  
14 strike as lacking foundation, calling for hearsay  
15 and speculation, and lacking materiality and  
16 relevance.

17 Q. (BY MR. WILCOX) What was the -- as you  
18 understood it would be the result of the mixing of  
19 mineral oil into an askarel transformer, one that  
20 was not intended to have mineral oil as its cooling  
21 fluid?

22 A. The concern there was the --

23 MR. NETTLETON: Object to  
24 foundation.

25 A. The concern there was the presence of

1 mineral oil affecting the fire resistance of the  
2 PCB-type fluid.

3 Q. (BY MR. WILCOX) In other words, if  
4 mineral oil were introduced into what was otherwise  
5 a fire-retardant chemical, it might reduce its  
6 fire-retardant capabilities?

7 A. That was the concern, yes.

8 Q. Did the committee discuss or did you  
9 come to learn of -- of the existence of a  
10 possibility or potential of a problem where the  
11 mineral oil was in the -- introduced into askarel,  
12 into the PCBs, as opposed to the other way around?

13 MR. McINTOSH: Object; asked and  
14 answered.

15 A. I'm sorry, I -- would you repeat that?

16 Q. (BY MR. WILCOX) I asked generally  
17 before about the potential for mixing of PCBs in  
18 oil, and what I was trying to do was to look at  
19 the -- the different kinds of transformers. You  
20 described earlier one that was a -- a PCB or askarel  
21 transformer that was intended for the use where fire  
22 retardant was a primary concern, and I'm asking now  
23 if there were occasions where you came to learn or  
24 you heard discussions about the mixing of oil in  
25 that kind of transformer, the askarel transformer.

1           A.     Well, that's what I thought we talked  
2 about.

3           Q.     Okay.

4           A.     The introduction of oil in a PCB-type  
5 fluid affects its ability to resist fire.

6           Q.     Okay. Now how about the other way  
7 around? Did you learn of circumstances under which  
8 there was a potential or possibility or actual  
9 occurrence of a mixing of PCBs into a mineral oil  
10 transformer?

11                   MR. McINTOSH: Objection. That is  
12 a compound question and then some, and it would --  
13 you're inviting hearsay and speculation.

14           A.     The discussion held by that committee  
15 centered on now that PCBs are perceived as an  
16 environmental issue or situation, we wanted to avoid  
17 the introduction of PCBs into situations where it  
18 wasn't intended to be, and one of them was the  
19 presence of PCBs in mineral oil used in transformers  
20 that were designed for mineral oil.

21                   The consensus was definitely one of if  
22 this occurred it's probably during servicing where  
23 the individuals servicing the units don't understand  
24 the situation or are a little bit careless or  
25 unknowingly introduced the PCB into the mineral

1 oil. And it was a -- it was something that had to  
2 be stopped and controlled.

3 Q. (BY MR. WILCOX) Were there discussions  
4 or did you come to learn of the potential or  
5 possibility or the actual occurrence of the mixing  
6 of mineral -- of PCBs into mineral oil in mineral  
7 oil transformers in the manufacturing process?

8 MR. BAKER: Object; compound,  
9 multiple, lack of foundation, calls for speculation  
10 and hearsay.

11 A. It's my definite understanding that in  
12 the manufacturing process those individuals that  
13 represented the manufacturers were confident that  
14 their processes were such that that -- the  
15 eventuality of that happening was so remote that it  
16 was really not of great concern at the time. It was  
17 under control in their opinion.

18 Q. (BY MR. WILCOX) Again, was the matter  
19 discussed in the committee; that is, the mixing of  
20 the PCBs in mineral oil?

21 A. I misunderstood. I thought you were  
22 talking about oil in PCBs.

23 Q. I'm sorry, PCBs in the mineral oil.

24 A. PCBs in mineral oil were discussed as it  
25 related to possible introduction during maintenance

1 activities, servicing activities, not as  
2 manufacturing.

3 Q. Was it discussed though that that --  
4 there was a possibility or potential of introduction  
5 of the PCBs into the mineral oil in the  
6 manufacturing process?

7 MR. BURKE: Let me object to the  
8 question. He's already answered on at least three  
9 different occasions that it was discussed, it was  
10 addressed, it was the consensus of the group that  
11 that was not a major problem as opposed to  
12 servicing.

13 Now you can ask the same question I  
14 guess as many times as you want to, but I don't know  
15 that the answer is going to be any different.

16 You may answer, sir.

17 A. The discussion relating to mixing of the  
18 two types of fluids did take place, as I mentioned.  
19 The emphasis was on preserving fire retardancy in  
20 those days, that was the important. The intermixing  
21 or the potential for intermixing was addressed at  
22 each site according to its particular manufacturing  
23 process and -- and the layout of the equipment and  
24 so on.

25 So the mixing of mineral oil into

1 PCB-type fluids and vice versa because of the  
2 changes made was considered to be remote. They were  
3 comfortable that they had isolated their tanks, they  
4 had the -- the pipelines were different, the -- in  
5 some cases where they had the wherewithal they had a  
6 separate railroad siting for delivering the tank car  
7 to it so that it would not be confused by the  
8 operators.

9 That's just an example of what did take  
10 place.

11 Q. (BY MR. WILCOX) The guidelines which  
12 were ultimately -- Well, let me strike that.

13 I believe you testified that there was a  
14 set of guidelines which were developed as a result  
15 of your committee's work, correct?

16 A. You're talking now of the ANSI  
17 committee?

18 Q. Yes, sir.

19 A. Yes. Yes.

20 Q. Let me offer you a -- what I believe is  
21 a photocopy of those guidelines which have been  
22 marked for identification as Plaintiffs' Exhibit 15  
23 and ask if you can recognize those.

24 A. This appears to be a copy of the  
25 guidelines issued by the ANSI committee.

1 Q. Does it appear to be an accurate  
2 photocopy of those guidelines?

3 A. It appears to be a full and accurate  
4 copy, uh-huh.

5 Q. Do those guidelines govern the disposal,  
6 the hand -- excuse me, the handling and disposal of  
7 mineral oil which contains PCBs?

8 MR. BAKER: Object to the use of  
9 the word govern and the relevance and materiality.

10 Q. (BY MR. WILCOX) Let me clarify that.  
11 Govern in the sense of pertain to.

12 A. Yes. No different than rags and gloves  
13 and solvents, diesel fuel. Whatever has PCBs in it,  
14 this covered it. Whatever has PCBs and associated  
15 with transformers and capacitors.

16 Q. Was there a -- Or let me strike that.  
17 Do the guidelines attempt to establish  
18 any sort of threshold level at which mineral oil or  
19 rags or what have you that contain PCBs are  
20 considered as contaminated?

21 MR. BAKER: Objection; relevance,  
22 materiality.

23 A. At the time the guidelines were  
24 prepared, there was no threshold level established  
25 by any authority. Lacking that level, it was

1 determined that if PCBs were detectable that the  
2 prudent thing to do was treat it as a PCB-containing  
3 material and handle it as described in the  
4 guidelines.

5 Q. (BY MR. WILCOX) Do the guidelines  
6 pertain to the disposal of transformers that reach  
7 the end of their useful life?

8 A. I'll have to read the tests to refresh  
9 my memory. I -- I honestly don't recall.

10 Q. Let me see if I can find that. I have  
11 affixed a -- a yellow marker as a -- on Page 17  
12 which I think is the section which talks about  
13 transformer disposal. Let me ask you to see if that  
14 section right on that page refreshes your  
15 recollection.

16 A. I do.

17 Q. You see that section?

18 A. Yes.

19 Q. Do the guidelines pertain to disposal of  
20 transformers which have reached the end of their  
21 useful life?

22 A. They -- They do address that, yes.

23 Q. Okay. And in what manner do the  
24 guidelines suggest that such transformers be  
25 handled?

1 MR. BURKE: Excuse me. I have to  
2 object to the question. The section referenced to  
3 the witness does not describe the type of  
4 transformer about which you contend. It describes  
5 an askarel transformer which is defined over on Page  
6 7 of the same standard as a broad class of  
7 nonflammable synthetic chlorinated hydrocarbon  
8 insulating liquids widely used in capacitors,  
9 transformers, reactors, et cetera. It is not  
10 intended to describe the fate and the disposal of  
11 mineral oil transformers that may contain some trace  
12 amount of PCB.

13 The question is misleading. It is an  
14 attempt to trap the witness and I object.

15 You may answer, Bill -- excuse me, Mr.  
16 Papageorge.

17 MR. WILCOX: I object to move to  
18 strike counsel's testimony, and we will explore the  
19 matter further with the witness.

20 Q. (BY MR. WILCOX) Well, first of all, is  
21 that the section of the guidelines, these ANSI  
22 guidelines, which pertains to the disposal of can I  
23 call them scrap transformers? Is that an apt term?

24 MR. BURKE: Excuse me. Let me  
25 object to the form of that question. The document

1 speaks for itself. It addresses the question of an  
2 as -- of the disposal of an askarel-filled  
3 transformer, not a transformer. It is a different  
4 entity. I object. You are mis -- You are trying to  
5 mislead the witness.

6 MR. WILCOX: I think the question  
7 is very straightforward.

8 Q. (BY MR. WILCOX) You can answer, Mr.  
9 Papageorge.

10 A. The section we are discussing refers to  
11 transformers that were filled with a liquid  
12 containing PCBs.

13 Q. Okay. Are there sections in the  
14 document which pertain to the disposal of mineral  
15 oil transformers which may contain some level of  
16 PCBs?

17 A. I don't recall it.

18 Q. Do the guidelines provide any assistance  
19 or guidance in the handling of mineral oil  
20 transformers which were -- were found to contain any  
21 level of PCBs?

22 A. Again, I don't recall the specific  
23 wording, but there are sections here that would  
24 apply to the various parts of that transformer in  
25 terms of do they or do they not contain PCBs and

1 what's the proper way to dispose of those parts,  
2 whether it be the liquid, the shell, the internals,  
3 or the rinsings of any -- by any solvent that might  
4 take place.

5 Q. Okay. I put another yellow flag just  
6 for assistance on Page 15. I ask if you look at  
7 that and see if that is the section that you're  
8 referring to in terms of the handling of the  
9 components. You just went past it. There you go.

10 MR. NETTLETON: Object to the form  
11 of the question as there appears to be a number of  
12 sections on Page 15, if you can be a little more  
13 specific.

14 Q. (BY MR. WILCOX) I think it's the  
15 left-hand column.

16 A. There is a section entitled Disposal  
17 Procedures and Services, and under that -- in that  
18 section there is reference to liquids containing  
19 PCBs, solids containing PCBs, in fact further down  
20 there is a specific reference to mineral oil  
21 contaminated with PCBs, the burnable solid waste and  
22 the nonburnables.

23 So any -- the presence of any PCBs in  
24 these kinds of materials is -- is covered as it  
25 relates to proper disposal.

1           Q.    So as one who was attempting to dispose  
2 of or handle a transformer -- mineral oil  
3 transformer that was found to determine --  
4 correction, was found to contain PCBs, I would have  
5 to look at the individual item that I was attempting  
6 to handle or dispose of for guidance here?

7           A.    Yes.

8                   MR. BAKER:  Objection; move to  
9 strike, leading, relevancy, materiality.

10                  MR. NETTLETON:  I object to the  
11 compound nature of the question including both  
12 handling and disposal.

13           Q.    (BY MR. WILCOX)  Let me see if I can  
14 clarify.  It was a complicated question; I  
15 apologize.

16                   If I'm a user and I'm -- I'm trying to  
17 comport myself with these guidelines and I determine  
18 that the mineral oil in a transformer contains some  
19 PCBs, would I find guidance in the ANSI guidelines  
20 as to the handling of the mineral oil?

21                   MR. BAKER:  Objection; relevance,  
22 materiality.

23                  MR. BURKE:  I object to the  
24 question to the extent that it misleads and  
25 misrepresents.  Counsel is representing the party

1 who is not a user but who was last in line, if you  
2 will, in a chain of misuse.

3 Answer if you can, Mr. Papageorge.

4 THE WITNESS: I'll try.

5 A. When you refer to the proper handling of  
6 this mineral oil that contains PCBs, as long as it's  
7 in the unit or in the storage tank or in a drum and  
8 under control and is still useful as a dielectric  
9 fluid, the precautions of don't let it get into the  
10 environment apply; in other words, don't have a  
11 spill or a leak.

12 If that fluid is no longer suitable as a  
13 dielectric fluid, it's now a waste, then it must be  
14 addressed as a liquid waste containing PCBs and then  
15 you address the columns we talked about earlier as  
16 to the proper disposal of that waste.

17 Q. (BY MR. WILCOX) Okay. On Page 15 of  
18 the guidelines?

19 A. On Page 15, yes.

20 MR. BURKE: Bill, can you specify  
21 the section so no one has to end up guessing when  
22 it's over?

23 A. It's Section 4.1.6 and the subsections  
24 underneath that.

25 Q. (BY MR. WILCOX) Do you know whether

1 there would be any deficit in the electrical  
2 function of a mineral oil transformer which  
3 contained PCBs?

4 MR. BAKER: Objection; materiality,  
5 relevance, foundation, calls for expert testimony of  
6 an undesignated expert.

7 A. I'm not -- I'm not qualified to really  
8 answer that. I'm under an impression/understanding  
9 that a very small amount will not affect  
10 performance.

11 Q. (BY MR. WILCOX) Unlike perhaps the  
12 askarel transformer contaminated with mineral oil;  
13 that is, is there a contrast between the -- the  
14 functional effect of having the -- the other  
15 material in the transformer? Do you understand my  
16 question?

17 MR. McINTOSH: Objection; that's  
18 very vague. I think you're going to have to  
19 quantify whether you're talking about 5 percent, 15  
20 percent.

21 Q. (BY MR. WILCOX) Let me try to rephrase  
22 it. I got tangled up in my own question, Mr.  
23 Papageorge.

24 When I talk about functional deficit,  
25 I'm talking about things like a moment ago you --

1 you testified that if mineral oil is introduced in a  
2 sufficient quantity in an askarel transformer it can  
3 deteriorate its fire-retardant capabilities. That's  
4 what I mean in terms of function. I flip the  
5 situation over and postulate the introduction or  
6 mixing of PCBs into mineral oil. Will that affect  
7 the functioning of the transformer in its ordinary  
8 use?

9 MR. BAKER: Same objection.

10 A. It's my understanding it will not.

11 Q. (BY MR. WILCOX) Did you ever learn  
12 about potential sources of contamination of the  
13 mineral oil by PCBs other than I believe you said  
14 servicing as a potential source of contamination?  
15 What other sources would there be, if you know?

16 MR. BAKER: Objection; spec --  
17 calls for speculation, calls for hearsay, it's  
18 vague, has no reference to any transformer that has  
19 any relevancy to this case.

20 A. I have not heard of other potential  
21 sources of PCBs.

22 Q. (BY MR. WILCOX) I believe you said you  
23 did observe some devices which had been installed in  
24 manufacturing plants to isolate the systems,  
25 correct?

1 MR. BAKER: Objection; that wasn't  
2 his testimony.

3 Q. (BY MR. WILCOX) I'm sorry, you heard  
4 that discussed?

5 A. I heard it discussed.

6 Q. Did you actually observe any devices  
7 that were installed?

8 A. I recall a plant, I'm trying to recall  
9 just which one it was, where the engineer pointed to  
10 the piping systems and pointed that the arrange --  
11 the pipe sizes and the connections were different  
12 sizes deliberately chosen to avoid a misconnection,  
13 but I cannot remember which plant it was but that  
14 left me with a good impression, a vivid impression  
15 of what they had done.

16 Q. Isolate the systems?

17 A. Yes.

18 Q. Did you ever hear from any  
19 representative of either GE or Westinghouse about  
20 any PCBs mixing in mineral oil that had been  
21 detected in their plants prior to 1974?

22 MR. BAKER: Objection; hearsay.

23 A. Mixing of PCBs in mineral oils --

24 Q. (BY MR. WILCOX) Yes, sir.

25 A. -- prior to 1974?

1 Q. Yes, sir.

2 A. Well, as I said earlier, this Mr. Raab I  
3 vividly recall recalled an incident that appeared to  
4 have occurred before World War II where there was a  
5 mixing situation, but from the '40s into the '70s no  
6 such incident had occurred as I understood his  
7 remarks.

8 Q. Monsanto began manufacturing PCBs in  
9 the '30s, correct, sir, 1930s?

10 A. Yes. Yes.

11 Q. And when did it -- Did it discontinue  
12 manufacturing PCBs at some time?

13 A. Yes.

14 Q. And when was that approximately?

15 A. 1977.

16 Q. Did there come a time when Monsanto  
17 limited the sales of PCBs to certain customers?

18 MR. NETTLETON: Objection to  
19 relevancy.

20 MR. BAKER: Objection.

21 A. Yes.

22 Q. (BY MR. WILCOX) And what were the  
23 circumstances under which -- Well, let me strike  
24 that.

25 Did -- Which customers did Monsanto

1 limit its sales to?

2 MR. BAKER: Objection; relevancy,  
3 materiality.

4 A. Can you help me with the point in time?

5 Q. (BY MR. WILCOX) Between 1970 and 1975,  
6 let's say that five-year period.

7 A. Well, it was an evolving reduction.  
8 Initially the uses of PCBs in such things as  
9 sealants, caulking materials, printing inks, paints  
10 and varnishes, carbonless copy paper, those were  
11 terminated early -- early fall -- August 1970. The  
12 use in industrial hydraulic fluids were phased out  
13 such that it was completed by the end of the first  
14 quarter in 1971. Later the use in heat transfer  
15 systems was discontinued so that by late 1971 the  
16 only sales that Monsanto would make was to  
17 electrical equipment manufacturers.

18 Q. Did there come a time when -- Well,  
19 strike that.

20 I'm missing a document. Are some of  
21 them still out here on the table?

22 MR. BURKE: Which one is it?

23 MR. WILCOX: I'm not sure of the  
24 number.

25 MR. RANKIN: Excuse me. This is

1 the end of tape number one of the William Papageorge  
2 deposition. Off the record.

3 (Discussion was held off the record.)

4 MR. RANKIN: Tape number two of the  
5 William Papageorge deposition. Proceed.

6 Q. (BY MR. WILCOX) Let me hand you a  
7 document that's been marked for identification as  
8 Plaintiffs' Exhibit 8 and see if you can recognize  
9 that document.

10 A. I recognize this document.

11 Q. And what is that document?

12 MR. BAKER: Objection; materiality,  
13 relevance.

14 A. It's a copy of a letter dated  
15 February 4, 1972, signed by Mr. Howard Bergen, the  
16 director of the specialty products group in  
17 Monsanto, with an attachment entitled Special  
18 Undertaking by Purchasers of Polychlorinated  
19 Biphenyls.

20 Q. (BY MR. WILCOX) Are you familiar with  
21 the -- with the substance of the letter?

22 A. Yes, sir.

23 Q. And -- And what does the substance  
24 concern?

25 MR. BAKER: Same objection.

1           A.     The principal thrust of this letter is  
2 to inform the customer who in 1972 was an electrical  
3 equipment manufacturer that in order for Monsanto to  
4 continue selling PCBs to that customer, the customer  
5 must agree to signing this special undertaking  
6 document.

7           Q.     (BY MR. WILCOX) What was the purpose of  
8 that -- of obtaining that agreement, not the legal  
9 purpose but the -- but the purpose in trying to get  
10 such an agreement from the customer?

11                   MR. BAKER: Same objection.

12           A.     Well, the intent was to --

13                   MR. NETTLETON: Object to  
14 foundation.

15           A.     -- was to get the proper level of  
16 authority within each customer's company signing a  
17 document in which he agrees to certain conditions  
18 before he can receive the product, and the intent by  
19 so doing was to assure Monsanto that the proper  
20 authority within each customer's company was aware  
21 of the situation to the point where he would make  
22 certain that the proper practices were in place so  
23 that environmental contamination did not take place  
24 and that the proper resources needed to make sure  
25 this happens were available, money, people,

1 research, whatever it takes.

2           That was the basic purpose of this  
3 letter is to make certain that when the customer  
4 says we need PCBs because they are important that,  
5 in truth, they were willing to -- to understand what  
6 it takes to keep using PCBs under the right  
7 conditions.

8           Q.     (BY MR. WILCOX) And what is the date of  
9 that letter, sir?

10          A.     February 4, 1972.

11          Q.     Do you know whether Monsanto actually  
12 obtained any such agreements from its customers  
13 after that date?

14          A.     Yes.

15                   MR. BAKER: Same objection.

16          A.     I'm sorry. Yes.

17          Q.     (BY MR. WILCOX) Do you have any  
18 specific knowledge about any of the particular  
19 companies by name that executed such an agreement?

20                   MR. NETTLETON: Objection; best  
21 evidence rule, hearsay.

22                   MR. BURKE: Relevancy.

23          A.     I have seen lists of the companies that  
24 agreed to this arrangement. I don't propose to  
25 remember all of the companies on that list.

1 Q. (BY MR. WILCOX) Do you recall whether  
2 the list included GE?

3 MR. BURKE: Leading.

4 A. I do recall General Electric Company on  
5 the list.

6 Q. (BY MR. WILCOX) How about Westinghouse?

7 MR. NETTLETON: Objection; best  
8 evidence, leading.

9 MR. BAKER: All the same  
10 objections.

11 A. Westinghouse was on the list.

12 Q. (BY MR. WILCOX) Allis-Chalmers?

13 MR. BAKER: All the same  
14 objections.

15 A. I don't believe Allis-Chalmers was on  
16 the list.

17 Q. (BY MR. WILCOX) How about Moloney or  
18 Central Moloney as it may have been known?

19 MR. BAKER: Same objection.

20 A. They were not on the list.

21 Q. (BY MR. WILCOX) Or McGraw or  
22 McGraw-Edison?

23 A. They were not on the list.

24 Q. Kuhlman?

25 A. They were not on the list.

1 Q. RTE?

2 A. That one I don't remember. I don't  
3 know. I don't recall.

4 MR. WILCOX: May I suggest we break  
5 at this point for lunch and reconvene at 1:30.

6 MR. RANKIN: Off the record at  
7 11:56.

8 (Deposition stood in luncheon recess at  
9 approximately 12:00 p.m. and resumed at  
10 approximately 1:30 p.m.)

11 AFTERNOON SESSION

12 All parties present, by and through  
13 counsel, and the witness, WILLIAM B. PAPAGEORGE,  
14 having been previously sworn, testifies further,  
15 to-wit:

16 MR. WILCOX: We're back on the  
17 record.

18 MR. RANKIN: Back on the record.

19 CONTINUED DIRECT EXAMINATION

20 BY MR. WILCOX:

21 Q. Mr. Papageorge, I wanted to revisit the  
22 ANSI guidelines for just a moment. In the section  
23 we were discussing, 4.1.6.2, the Classification for  
24 Disposal of Materials, there was a list of -- of  
25 materials which included mineral oil contaminated

1 with PCBs. Following that in 4.1.6.2.3, discussion  
2 regarding nonburnable solid waste materials, may I  
3 ask you to take a look at that on Page 15 in the  
4 left-hand column at the bottom?

5 A. I see it.

6 Q. Would such materials include the core  
7 and coil of a transformer?

8 A. Yes.

9 Q. And for the record, what is a core and  
10 coil of a transformer generally?

11 A. I am not a transformer engineer, but I  
12 understand that there's a steel center called a core  
13 and then there's a coil made of copper that is  
14 entwined around this steel core.

15 Q. And the core and coil fit where in the  
16 transformer?

17 A. They're, of course, inside the steel  
18 body of the transformer and surrounded by the oil or  
19 askarel.

20 Q. Would the disposal practices that are  
21 set forth there pertain to a core and coil of a  
22 mineral oil transformer which had been found to  
23 include PCBs?

24 A. Yes.

25 Q. There's also a discussion adjacent to

1 that on the same page in the same column regarding  
2 some burnable materials. What sort of burnable  
3 materials does that section pertain to?

4 A. Well, it does list a few. Do you want  
5 me to read those?

6 Q. Well, can you just describe generally  
7 what they would be? We have a steel container for  
8 the transformer, we have the core and coil, and do  
9 you also have some nonburnable materials -- or  
10 correction, some burnable material?

11 A. I understand there are some supports  
12 internally. Sometimes wood is used, sometimes a  
13 plastic material that is considered burnable.  
14 Insofar as the makeup of a transformer, that is all  
15 I can think of that would be described as burnable  
16 contaminated material.

17 Q. Do the transformers, particularly  
18 mineral oil transformers, have seals and gaskets and  
19 that sort of thing in them?

20 A. Yes, they do. Yes, they do.

21 Q. Would they be burnable?

22 A. Yes. If -- Unless they're metallic, and  
23 I don't know of any.

24 Q. Let me also, if I may, return to a  
25 document that we had talked about and I skipped over

1 part of it. Exhibit 13, which is the one that we  
2 had started to break apart and then paper clipped  
3 back together, there are three pages there in that  
4 document which appears to be a letter which you  
5 authored dated February 2nd, 1972. Let me ask you  
6 to take a look at that and see if you can identify  
7 that letter.

8 A. Well, it's a letter that I prepared and  
9 mailed to the two subcommittee chairmen, Dr.  
10 Posefsky and Mr. Raab. It's dated February 2, 1972,  
11 and attached to it is a -- two sheets consisting of  
12 questions and answers relating to PCBs and askarels.

13 Q. Did you prepare the questions and  
14 answers as well?

15 A. I prepared some of the questions. Some  
16 of them came as a result of the ANSI committee  
17 meeting where the questions were raised and I jotted  
18 them down and took them back to the office and added  
19 some more questions and then prepared the answers.

20 Q. Do the two pages that follow the letter  
21 there in sequence go with the letter itself? In  
22 other words, were they an attachment to that letter?

23 A. Yes.

24 Q. For the record, would you identify those  
25 three pages by the number at the bottom right-hand

1 corner?

2 A. I will. The number of the letter itself  
3 is 148070. And the two numbers of the attached  
4 pages are 148071 and 148072.

5 Q. And do those three pages appear to be  
6 fair and accurate photocopies of the original that  
7 you prepared?

8 A. They do.

9 Q. What was the purpose of the question and  
10 answer document?

11 MR. BAKER: Objection; relevance,  
12 materiality.

13 A. The purpose was to come up with a set of  
14 answers to questions which are frequently asked by --  
15 primarily by individuals who are not familiar with  
16 PCBs and askarels and the like. And the intent here  
17 was to provide these answers and pass them on to  
18 members of ANSI and subsequently to their respective  
19 companies or organizations, and the intent there is  
20 that in the event a local newspaperman calls and  
21 starts asking questions they can look up the answer  
22 unless they already know it. And that's not only  
23 newspaper people, neighbors, their customers, and  
24 any other person that might want to ask these --  
25 this type of question.

1 Q. (BY MR. WILCOX) Do you know whether  
2 those questions and answers were distributed to  
3 members of the committee?

4 A. Yes, they were.

5 Q. Okay. Thank you. In conjunction with  
6 your work with the ANSI committee, did you come to  
7 know a Mr. Sheppard, Harry Sheppard?

8 A. Yes.

9 Q. Are you familiar with which company he  
10 worked for?

11 A. Yes. I didn't want to mislead you. I  
12 knew Mr. Sheppard before ANSI committee was formed,  
13 and he is with Westinghouse Company.

14 Q. How about a Dr. Sloat, do you know Dr.  
15 Sloat?

16 A. Yes, I do.

17 Q. And which company was he -- did he --

18 A. -- Westinghouse.

19 Q. And did you confer with either of those  
20 gentlemen in conjunction with the ANSI committee?

21 A. Yes.

22 Q. If I recall correctly, this morning you  
23 said you relinquished your responsibilities as  
24 chairman of the ANSI committee in 1970 -- was it  
25 1976?

1 A. That is correct.

2 Q. And thereafter did you have any further  
3 active involvement with PCBs?

4 A. There was one meeting that I attended  
5 relating to PCBs called by NIOSH, N-I-O-S-H, the  
6 National Institute of Occupational Safety and  
7 Health, to comment on a proposed document that NIOSH  
8 had drafted relating to PCBs and employee exposure.

9 Other than that committee, I was not  
10 active personally with PCBs until about 1983. The  
11 individual in Monsanto who was responsible for PCB  
12 matters was assigned and reported to me in my  
13 department.

14 Q. Were there any discussions in the  
15 committee about degreasing the transformers prior to  
16 scrap and salvage?

17 MR. BURKE: I'm going to object to  
18 the form of the question because it is vague and it  
19 is non-specific and it does not address the content  
20 of this document. Again, you're mixing askarel  
21 transformers and transformers in general, and that's  
22 misleading and I object.

23 Answer if you can.

24 Q. (BY MR. WILCOX) I don't mean to mislead  
25 you, Mr. Papageorge. I'm trying to -- to determine

1 the scope of discussions, if any existed, regarding  
2 degreasing, and I'm not referring to any document at  
3 all. I'm really talking about the ANSI committee.

4 So with that clarification, can you --  
5 can you answer?

6 MR. BAKER: Object to the relevancy  
7 and materiality, lack of foundation. It's vague and  
8 compound.

9 MR. BURKE: I would further object  
10 because the committee was formed to address the  
11 questions of how to deal with askarel fluids, not  
12 how to deal with transformers.

13 Once again, sir, answer if you can.

14 A. The subject of degreasing transformers  
15 was raised as it related to transformers that had  
16 contained PCB-type fluids.

17 Q. (BY MR. WILCOX) The askarel-type  
18 fluids?

19 A. Yes.

20 Q. Was there any consideration to  
21 degreasing of a mineral oil transformer that had  
22 been found to contain PCBs?

23 MR. BAKER: Same objection.

24 A. I don't recall any lengthy discussion  
25 regarding the decontamination of mineral oil units

1 contaminated with PCBs other than the precautionary  
2 statement if such a condition exists treat it like a  
3 PCB unit, and that was the gist of the discussion.

4 Q. (BY MR. WILCOX) Was there any  
5 discussion that you recall during the course of  
6 the -- the workings of the committee regarding the  
7 use by anyone, the manufacturers, utilities,  
8 whomever, the use of scrap or salvage dealers, junk  
9 dealers if you will, for scrap and salvage of  
10 transformers which had reached the end of their  
11 useful life?

12 MR. BAKER: Same objection.

13 A. Yes, there was discussion, and it was  
14 one of cautioning those individuals that use this  
15 kind of service to be aware of what -- or how this  
16 scrap dealer or salvage operation handled the  
17 material.

18 Q. (BY MR. WILCOX) In my questions this  
19 morning I asked you about specific -- some specific  
20 manufacturers who might have been included on the  
21 address list for the notices or the letters that  
22 were sent out in the late '60s, early '70s?

23 A. Uh-huh.

24 Q. And I neglected to ask you if Wagner was  
25 one of those customers who received -- or who may

1 have received those letters?

2 A. Yes, in the early '70s.

3 Q. Do you recall whether Wagner was a  
4 member or participant in the ANSI committee?

5 A. I -- I don't remember a representative  
6 of Wagner there.

7 Q. Let me ask you to look at a document  
8 marked Plaintiffs' Exhibit 14, and there's a list of  
9 members present at a meeting referenced there and  
10 see if that refreshes your recollection at all about  
11 the membership of the committee.

12 MR. NETTLETON: Object to the  
13 question. It implies that he needs his memory  
14 refreshed.

15 A. This -- This committee has to do with  
16 mineral oil.

17 Q. (BY MR. WILCOX) Yes, sir, I  
18 understand. It is the only reference that I have to  
19 the membership.

20 A. This is not the membership of ANSI.

21 Q. All right, sir. That's fine. That's --  
22 That answers the question.

23 A. Okay.

24 MR. BURKE: May I see that,  
25 please?

1 MR. WILCOX: Yeah.

2 Q. (BY MR. WILCOX) Now, I may have  
3 neglected to ask a couple of technical questions  
4 this morning. I want to revisit those very briefly  
5 and ask you to reexamine a couple of documents and  
6 see if they appear to be true and correct copies of  
7 the original as you recall it.

8 Specifically, I would ask you to look at  
9 Plaintiffs' Exhibit 2 and see if it is a true and  
10 correct copy to the best of your knowledge of the  
11 original document.

12 MR. BAKER: Object to the form of  
13 the question since it's already been testified to  
14 that this is not a true and correct copy of the  
15 original.

16 A. From what I see it appears to be a true  
17 copy.

18 Q. (BY MR. WILCOX) The same question  
19 regarding paragraph -- correction, Plaintiffs'  
20 Exhibit 3.

21 MR. BAKER: Same objection.

22 A. This appears to be a true copy.

23 Q. (BY MR. WILCOX) And Plaintiffs' Exhibit  
24 4 same question.

25 MR. BAKER: Same objection.

1 A. This also appears to be a true copy.

2 Q. (BY MR. WILCOX) And Plaintiffs' Exhibit  
3 6 same question, sir.

4 MR. BAKER: Same objection.

5 A. This also appears to be a true copy.

6 Q. (BY MR. WILCOX) And Exhibit 7 same  
7 question.

8 MR. BAKER: Same objection.

9 A. This appears to be a true copy also.

10 Q. (BY MR. WILCOX) And Plaintiffs' Exhibit  
11 8 same question.

12 MR. BAKER: Same objection.

13 A. Exhibit 8 is also a true copy.

14 Q. (BY MR. WILCOX) Plaintiffs' Exhibit 9  
15 same question.

16 MR. BAKER: Same objection.

17 A. This particular copy for some reason is  
18 missing the Monsanto logo on the letterhead. Other  
19 than that, it's a -- it's a true copy of the text.

20 Q. (BY MR. WILCOX) Okay. You previously  
21 discussed the extraneous remarks -- or correction,  
22 the extraneous markings at the top and the bottom  
23 with respect to the numbers. This particular  
24 document also has some handwritten notes here on the  
25 upper right-hand portion adjacent to the addressee.

1 Do you know what those particular markings are?

2 A. I believe I do. This particular copy  
3 was sent to Mr. Howard Bergen, and Mr. Bergen had  
4 his own terminology that he would mark his copies  
5 for filing by his secretary. So what this says,  
6 that he had a file that he referred to as Aroclor  
7 toxicity and this reference here is to his  
8 secretary, Myra Stanley.

9 Q. Okay. Thank you, sir. And finally,  
10 Plaintiffs' Exhibit 10 same question.

11 MR. BAKER: Same objection.

12 A. This appears to be a true copy.

13 Q. (BY MR. WILCOX) I asked you about  
14 Plaintiffs' Exhibits 15 and all of 13 with the  
15 exception of the January 19th, 1972, letter,  
16 document number 148069 which we discussed earlier.  
17 Is the letter a -- correction, does the letter  
18 appear to be a true and correct copy of the  
19 original?

20 A. It does.

21 Q. All right, sir. Bear with me just one  
22 moment. I want to double-check my notes, but I  
23 think that's all I have.

24 I did miss one point. Are you familiar  
25 with an organization which I believe has the

1 initials C-I-G-R-E?

2 MR. BAKER: Objection; relevance  
3 and materiality.

4 A. I have heard of it.

5 Q. (BY MR. WILCOX) Do you know what that  
6 organization is?

7 A. I understand that it's the European  
8 equivalent of the NEMA organization in the United  
9 States.

10 Q. And NEMA being the National Electrical  
11 Manufacturers Association?

12 A. Correct.

13 Q. Do you know whether the CIGRE  
14 organization or any other committees were looking  
15 into the PCB in the environment issue around the  
16 early '70s?

17 MR. BAKER: Objection; foundation,  
18 relevancy, materiality, hearsay.

19 A. I was aware that CIGRE was addressing  
20 PCBs and the environment as it relates to the  
21 European area. I do not know of any other similar  
22 organization that was so involved.

23 Q. (BY MR. WILCOX) Did the American  
24 National Standards Institute adopt the guidelines  
25 we've been discussing here today as Exhibit 15?

1 MR. BAKER: Objection; relevancy,  
2 materiality.

3 A. Yes.

4 Q. (BY MR. WILCOX) Did they?

5 A. Yes.

6 Q. Okay. And do you know about when they  
7 adopted those standards?

8 A. January 1974.

9 MR. WILCOX: Thank you, Mr.  
10 Papageorge. Your witness.

11 THE WITNESS: Thank you.

12 CROSS-EXAMINATION

13 BY MR. BURKE:

14 Q. Mr. Papageorge, my name is Tom Burke. I  
15 represent General Electric Company in this case. I  
16 will try to be brief and I'll try not to repeat, but  
17 every time you hear a lawyer say I only have a few  
18 questions watch out.

19 Monsanto manufactured PCB liquids and  
20 fluids beginning sometime in the late '20s through  
21 1977; is that correct?

22 A. Not quite. Monsanto acquired a company  
23 that was manufacturing PCBs in the late '20s and  
24 Monsanto became involved as a company with the  
25 manufacture in 1934.

1 Q. That was the Swan Chemical Company?

2 A. Yes.

3 Q. And from 1934 then until 1977 Monsanto  
4 was the man -- the sole domestic manufacturer of  
5 PCBs?

6 A. As far as I know, yes.

7 Q. Okay. And in that time is it accurate  
8 that a number of applications for those fluids were  
9 derived?

10 A. Yes.

11 Q. And one of those applications was in  
12 electrical equipment?

13 A. Yes.

14 Q. Transformers and capacitors?

15 A. Yes.

16 Q. In the later years, did that come to be  
17 called a closed-end use?

18 A. Yes.

19 Q. And all of the other uses were either  
20 open-ended uses, like the carbon paper and the  
21 paints and the plasticizers, and the semi-closed  
22 uses, the heat transfer fluids; is that accurate?

23 A. I would include industrial hydraulic  
24 systems.

25 Q. As the semi-closed?

1 A. As a semi-closed, yes.

2 Q. And the reason that PCB fluids were used  
3 in hydraulic applications, in heat transfer, and  
4 electrical equipment was because they offered a  
5 great degree of fire safety to the facilities and to  
6 the people that worked around that equipment,  
7 correct?

8 A. Yes.

9 Q. Is it accurate to say that over the  
10 course of their use that PCB fluids were considered  
11 a useful product for many applications where fire  
12 safety was important?

13 A. Yes.

14 Q. Beginning in 1970 when Monsanto became  
15 concerned about the presence of PCB in the  
16 environment, and you told us about Monsanto's  
17 efforts to disseminate information about this  
18 environmental presence, did you find in your work  
19 that the electrical equipment manufacturers shared  
20 the concern that Monsanto had?

21 A. Yes, definitely.

22 Q. Did the equipment manufacturers  
23 participate with Monsanto in discussing and studying  
24 and attempting to reach a consensus about the  
25 appropriate use of PCBs?

1 A. Yes.

2 Q. Did any electrical equipment  
3 manufacturer at any time indicate to you or did you  
4 learn from anybody else at Monsanto that any  
5 electrical equipment manufacturer did not want to  
6 participate in a discussion and a sharing of  
7 information about PCBs?

8 A. Never.

9 Q. Did any electrical equipment  
10 manufacturer say to you that they did not want  
11 government participation, for example, in the  
12 discussions?

13 A. Not to me, no.

14 Q. Did you find for the most part the  
15 manufacturers to be cooperative?

16 A. Yes.

17 Q. Interested in learning more?

18 A. Yes.

19 Q. Did they share your goal and your  
20 efforts in attempting to disseminate information to  
21 their customers?

22 A. Definitely, yes.

23 Q. Did you at any time review materials  
24 that electrical equipment manufacturers wanted to  
25 pass on to their customers to see if they had

1 accurately described some of the information about  
2 PCBs?

3 A. Yes.

4 Q. And as far as you know, was that  
5 information passed on to their customers?

6 A. Yes.

7 Q. The discussions that took place, you  
8 talked earlier about open meetings. What do you  
9 mean by that?

10 A. I meant that the -- no one who wanted to  
11 attend the meeting was excluded, and we tried to  
12 publicize the fact that we were meeting as much as  
13 we could to those that appeared to us to have been  
14 interested.

15 Q. And were there government agencies that  
16 became interested and participated?

17 A. Yes.

18 Q. Particularly in the ANSI meetings?

19 A. Yes.

20 Q. Looking at Exhibit 12 for just a minute,  
21 one of the attachments to Exhibit 12, Mr.  
22 Papageorge, is some recommendations for the  
23 inclusion of various groups who might be interested  
24 in participating in a discussion that ANSI was going  
25 to set up that later became the committee. Let me

1 try and focus your attention on that if I can.

2 Mr. Papageorge, I'm going to show you  
3 what's been marked as Plaintiffs' Exhibit 12 with  
4 particular reference to a -- to the first cover  
5 portion of the document or one of the first letters  
6 in this compilation of documents dated February  
7 23rd, 1971, and looking at Page 8 of that document,  
8 can you take a look at that for me for just a second  
9 and then we'll --

10 A. -- I've reviewed it.

11 Q. All right, sir. Without reading all of  
12 the individual entities, can you describe for us the  
13 groups that are included in that suggested group of  
14 folks to participate in a conference about PCBs and  
15 the environment?

16 A. Well, there were groups representing the  
17 major industrial trade organizations; for example,  
18 the American Society for Testing and Materials, the  
19 Certified Ballast Manufacturers Association, or the  
20 Edison Electric Institute. Those are examples of --

21 Q. Is the Edison Electric Institute, is  
22 that a utility group?

23 A. I believe it is, yes. Uh-huh.

24 And then another principal group was the  
25 government group as represented by Environmental

1 Protection Agency or the Department of Defense, the  
2 Atomic Energy Commission, TVA, Tennessee Valley  
3 Authority. And then we have such groups as the -- a  
4 representative of the transformer equipment  
5 servicing company, Doble Engineering Company. Then  
6 there's a representative, for example, of an  
7 incineration operation, Rollins Pearl. Underwriters  
8 Laboratories. And then the Water Pollution Control  
9 Federation.

10 Q. Okay. All right. In that same Exhibit  
11 12 I've dog-eared a page. Can you flip over to that  
12 one, and starting down here at the bottom on this  
13 recommendation going over to the next page, is that  
14 another listing of groups that is recommended to be  
15 included in the discussion of PCBs in the  
16 environment or have I got the wrong page?

17 A. That is the correct page.

18 Q. Okay.

19 A. And the list does include other groups  
20 that are recommended for inclusion on this  
21 committee.

22 Q. And is this a -- basically did you folks  
23 end up with a -- with a wide-ranging group of folks  
24 from a number of disciplines that were invited to  
25 participate in the discussion of PCB and the

1 environment?

2 A. Yes.

3 Q. Now, when the EPA folks and the TVA  
4 folks and the Food and Drug Administration people  
5 show up, the FDA, did they have representatives?

6 A. They were there, but they were not  
7 listed as formal members of the committee.

8 Q. Did the EPA folks, were they satisfied  
9 with the progress that the group was making in  
10 discussing the means and methods for the proper  
11 handling and disposal of askarel?

12 A. Yes.

13 Q. Did they encourage the group to continue  
14 meeting and to prepare the guidelines?

15 A. Yes.

16 Q. Did they ever express any  
17 dissatisfaction with the degree of progress or by  
18 the reticence of any of the electrical equipment  
19 manufacturers, for example, to cooperate?

20 A. No.

21 Q. Did you see any noncooperation by any of  
22 the electrical equipment manufacturers during the  
23 committee process?

24 A. I did not.

25 Q. Were people candid and open about their

1 experiences and their problems and issues in  
2 handling of PCBs?

3 A. Yeah.

4 Q. Over -- there's another -- is this --  
5 Looking again at Exhibit 12, is that another list of  
6 potential participants in the ANSI group?

7 A. This? Yes, this list is another listing  
8 and it differs from the previous in that it includes  
9 the names of individuals associated with the trade  
10 organizations or governmental entities or service  
11 companies.

12 Q. Okay. So those persons could be  
13 contacted ind -- on an individual basis and asked to  
14 participate?

15 A. That is correct.

16 Q. Okay. All right, sir. And lastly, the  
17 last page that I have marked in that exhibit, is  
18 that yet another list of additional groups that  
19 could be potential participants in the ANSI  
20 committees?

21 A. Yes.

22 Q. And is -- does that include labor also?

23 A. Yes.

24 Q. Okay. That would be the unions,  
25 organized labor, correct?

1 A. That is correct.

2 Q. And that would be because organized  
3 labor works in factories and they would have an  
4 interest in this issue?

5 A. Certainly.

6 Q. What other kinds of groups that we've  
7 not mentioned are included in that last list, sir,  
8 can you give us an idea?

9 A. Let me -- I don't recall all of the --  
10 the previous listing but I see here, for example,  
11 the American Insurance Association, American Medical  
12 Association. I believe those are different from the  
13 previous listings. I also see a reference to the  
14 Department of Interior by agency, the Booneville  
15 Power Agency, the Bureau of Reclamation, and the  
16 Water Resources Scientific Information Center. Get  
17 a little more specific there.

18 Q. Okay. Now, in terms of the groups that  
19 did participate in the ANSI committee, were they  
20 encouraged to discuss this issue with others in  
21 order to obtain additional input and information  
22 that the committee could use?

23 A. Certainly. This was expected of each  
24 representative, uh-huh.

25 Q. Did any member of the committee attempt

1 to sensor or control or limit the information that  
2 the committee was either obtaining or disseminating?

3 A. No.

4 Q. In fact, wasn't it the opposite way  
5 around, that people were looking for information and  
6 input on this question?

7 A. Certainly, and assignments were given  
8 from meeting to meeting to pursue certain points.

9 Q. And the way the meetings were conducted  
10 was periodically the working groups would get  
11 together, have a discussion, prepare minutes,  
12 arrange for the next meeting, take their  
13 assignments, and go on to the next meeting, correct?

14 A. Close to it. There was I'm going to  
15 call it a plenary session where everyone was in the  
16 same room where I attempted to bring everybody up to  
17 date and sort of set the tone for the -- the  
18 subsequent day, the rest of the day, and sometimes  
19 it would spend a second day working.

20 Then the two groups would break into  
21 working groups, capacitors in one part and  
22 transformers in another room, and they in turn at  
23 times would break down into even smaller groups to  
24 address very specific areas. And there was a lot of  
25 give and take and discussion and assignments, and

1 finally a consensus was reached and the appointed  
2 person who served as secretary of the subcommittee  
3 would prepare a draft.

4 The draft would then be circulated among  
5 the members of that subcommittee for their review  
6 and comment, and this continued until total  
7 consensus was reached and the proposed document was  
8 prepared.

9 Q. And in the ordinary course of the way  
10 that groups like this conduct their business, this  
11 is typical, was this committee's work typical of the  
12 way that such a committee operates?

13 A. Yes, sir.

14 Q. And the purpose of it again was to  
15 obtain and disseminate information about the  
16 question of PCB in the environment?

17 A. Correct.

18 Q. And how to control and appropriately use  
19 the material?

20 A. Correct.

21 Q. When you delivered your comments -- may  
22 I have the exhibits, please? -- to the first  
23 committee -- or the first meeting I should say,  
24 excuse me, on September 14th, 1971, which is Exhibit  
25 No. 10, you identified that earlier as your

1 presentation and your ob -- your observation and  
2 comments about the status as of that time, correct,  
3 sir?

4 A. That is correct.

5 Q. And in looking through that document, of  
6 all of the issues and questions discussed concerning  
7 PCBs, it was not in the forefront at that time the  
8 question of the presence of PCB in mineral oil  
9 transformers in the past, was it?

10 A. No.

11 Q. Your focus in this document Exhibit 10  
12 was on the current status of the work that had been  
13 done to find and confirm the presence of PCB in the  
14 environment, correct?

15 A. That's part of it, yes.

16 Q. Some other work by others studying its  
17 potential toxicity on environmental samples,  
18 correct?

19 A. That is correct.

20 Q. And again, other issues concerning the  
21 use of PCBs?

22 A. Correct.

23 Q. In terms of how PCB got into the  
24 environment, is it accurate that the opportunity to  
25 enter the environment came more from the open-ended

1 and semi-closed uses than from the -- what were  
2 considered the closed-end uses?

3 A. Yes.

4 Q. A person throws away a piece of  
5 carbonless copy paper, it ends up in a -- in a  
6 garbage can somewhere and in a landfill somewhere  
7 and that has an opportunity to enter the soil and  
8 water there, correct?

9 A. Yes.

10 Q. And it is a much more likely source than  
11 a transformer that may sit on a pole for thirty to  
12 forty years, for example?

13 A. I believe so, yes.

14 Q. Okay. The Exhibit No. 3 we talked about  
15 earlier and you identified it a few months -- a few  
16 minutes ago as being a true and correct copy of a  
17 document that you remember seeing while you were  
18 employed at Monsanto?

19 A. I did.

20 Q. Correct? Now, missing from that Exhibit  
21 No. 3 though is the attachment that Monsanto had  
22 originally included which was the piece from the  
23 magazine Chemical Week, correct?

24 A. That is correct.

25 Q. Chemical Week is what's called the trade

1 publication for folks in the chemical business?

2 A. That's one of the trade publications.

3 Q. And do you recall or have any recall of  
4 the contents of that particular attachment from  
5 Chemical Week that was included with that letter?

6 A. I do.

7 Q. Can you tell us what that was, sir?

8 A. This was a compilation state by state of  
9 the legislation and regulations that existed in each  
10 state in -- at the end of 1969 by state as to what  
11 was permitted to enter the public waterways.

12 Q. And do you recall whether PCBs were  
13 listed in any state as a substance specifically?

14 A. Nowhere was it listed.

15 Q. Just not mentioned at all?

16 A. That is correct.

17 Q. Now, you told us earlier about your  
18 understanding of the Yushow incident in which a  
19 number of -- of persons consumed rice oil that had  
20 had PCBs introduced during the heat transfer process  
21 when it was manufactured?

22 A. Yes, sir.

23 Q. PCB fluids have never been recommended  
24 or have never been used or sold or designed to be  
25 used as a food product?

1 A. That is correct.

2 Q. This was a failure in the heat transfer  
3 process?

4 A. Yes.

5 Q. That made some people sick when they ate  
6 it?

7 A. Well, the incident created a situation  
8 where people got sick. I don't personally know of  
9 any evidence that said the PCBs in themselves caused  
10 the illnesses.

11 Q. One would expect a group of persons who  
12 eat an industrial chemical not intended to be a food  
13 to become ill; that's a logical conclusion, isn't  
14 it?

15 A. Yes, sir.

16 Q. It's just that this incident involved or  
17 was said to involve PCBs, correct?

18 A. That is correct.

19 Q. There have been before and since other  
20 incidents involving industrial chemicals that have  
21 somehow gotten into the food chain and made people  
22 ill?

23 A. I believe so. I don't personally recall  
24 any specific instance, but it's possible.

25 Q. It's certainly possible, yes, sir.

1                   One of the attachments to one of the  
2 exhibits had to do with a letter from you in which  
3 you described the sensitivity of various hardware  
4 owned by government agencies that could be used to  
5 measure PCBs, correct?

6                   MR. WILCOX: 13.

7                   A. I don't know that it was specific to  
8 hardware.

9                   MR. WILCOX: It's one with the  
10 paper clip at the top, 13.

11                  MR. BURKE: Here. Here. It's  
12 right here. Thank you, John.

13                  Q. (BY MR. BURKE) Well, I've obviously  
14 misunderstood it then. In that document, which is  
15 148089, you are writing to Mr. Raab and Mr.  
16 Posefsky, correct?

17                  A. That is correct.

18                  Q. Are you describing there the sensitivity  
19 of the machinery or the gas chromatograms to measure  
20 PCBs in a sample?

21                  A. I am prescribing the sensitivity that  
22 was achieved by Monsanto's laboratory using  
23 Monsanto's analytical method, FDA's method, and  
24 USDA's method in Monsanto equipment.

25                  Q. I see. I see. So that's not a

1 description, for example, of how good the FDA was at  
2 measuring PCB levels in environmental samples?

3 A. Well, it's indicative of their  
4 capability using their method that they had adopted  
5 and circulated widely with the instruments used by  
6 good laboratories at that time.

7 Q. Is it accurate -- Excuse me.

8 A. This is a degree of sensitivity that  
9 could be achieved with reliability.

10 Q. Yeah. Is it accurate to say that those  
11 levels of sensitivity and accuracy were not always  
12 achieved?

13 A. Oh, that's very likely, yes.

14 Q. Is it -- Is it not true, sir, that in  
15 the -- in the early days, especially the early  
16 1970s, that even many good labs with a good method  
17 and good equipment have difficulty in reliably  
18 reproducing results in environmental samples for PCB  
19 levels?

20 A. That experience was very common.

21 Q. Is it not true that it occurs today even  
22 with the -- all the experience that has been  
23 gathered in the last twenty years?

24 A. In my considered opinion, yes.

25 Q. It has never been easy to accurately and

1 consistently measure PCB levels in environmental --  
2 in environmental samples; is that accurate, sir?

3 A. True.

4 Q. And it remains a complicated and  
5 difficult thing to do today even for competent  
6 people?

7 A. Yes.

8 Q. Now, in your discussions with the ANSI  
9 committee and with the other work that you did with  
10 Monsanto, in order to know whether any mineral oil  
11 transformer, for example, has PCBs in it you would  
12 have to take a sample and analyze it, correct?

13 A. That is correct.

14 Q. And the committee never recommended that  
15 mineral oil samples -- or that mineral oil  
16 transformers be sampled before they're disposed of,  
17 did they?

18 A. No, unless there's good reason to  
19 suspect contamination and you wish to confirm it.

20 Q. In fact, the regulations that came along  
21 in the late '70s prescribed a protocol and a  
22 procedure for a utility, for example, who owned a  
23 large number of transformers if they wanted to  
24 determine if they had PCBs in their mineral oil  
25 transformers, a procedure and a protocol for that,

1 correct?

2 A. Yes.

3 Q. That was nonexistent in the early 1970s,  
4 wasn't it?

5 A. That is true.

6 Q. We talked earlier about there never  
7 really being a level prescribed by government  
8 because of the absence of a regulation or a statute  
9 in the early '70s for a PCB level that would require  
10 some kind of action, correct?

11 A. That is correct.

12 Q. Are you familiar at all with the  
13 regulations that were finally adopted in 1979?

14 A. Somewhat.

15 Q. Do you recall the portion that permitted  
16 the owner of a transformer to dispose of mineral oil  
17 with fifty parts per million or less of PCB as if it  
18 was unregulated?

19 A. Yes, I do.

20 Q. Now as far as that goes that addressed  
21 the question of PCB, correct?

22 A. Correct.

23 Q. But it never authorized or sanctioned or  
24 implied any permission that mineral oil could simply  
25 be dumped out on the ground, did it?

1 A. That is true.

2 Q. Mineral oil itself can make people sick,  
3 sir, can't it?

4 A. Well, if it's misused or ingested.

5 Q. Going back to Exhibit 3, which was the  
6 Chemical Week excerpt that's not attached to Exhibit  
7 3, do you recall whether oils, petroleum products,  
8 were excluded from drinking waters in that -- in the  
9 listing of the fifty states?

10 A. I'm confused by your reference to  
11 excluded from drinking water. There was reference  
12 to the fact that petroleum oil should not be  
13 discharged into public waterways.

14 Q. Okay. And mineral oils are a petroleum  
15 product?

16 A. Yes.

17 Q. So is it accurate that most of the  
18 states regulated mineral oils back in 1969?

19 A. Yes.

20 Q. Do you recall, Mr. Papageorge, whether  
21 lead was included in the Chemical Week?

22 A. Yes, I remember lead, uh-huh.

23 Q. Lead, in fact, has a substantial  
24 toxicity attached to it as far as you know?

25 A. Yes, sir.

1 Q. And that was included in the Chemical  
2 Week excerpt that's not attached to Exhibit 3 but is  
3 mentioned in it?

4 A. Yes.

5 Q. Okay. We talked earlier you told us  
6 about your dissemination of information to customers  
7 of record. The Florida Power & Light Company was a  
8 customer of record of yours, correct?

9 A. Yes.

10 Q. One of the exhibits we've marked here  
11 today, Exhibit No. 7, is -- I think you told us was  
12 in approximately 1974?

13 A. That is correct.

14 Q. That guide, does it not, addresses  
15 askarel transformers which are those transformers  
16 using PCB fluids, correct?

17 A. That is correct.

18 Q. That document does not address the  
19 question of, for want of a better term, the care and  
20 feeding of mineral oil transformers, does it?

21 A. That was not intended to do that.

22 Q. The -- The discussion within the ANSI  
23 committee concerning the disposal of askarel and  
24 askarel-soaked materials, the committee did not  
25 include in its guideline or recommend at any time

1 the -- that scrap dealers not be used by individuals  
2 seeking to dispose of transformers, correct?

3 A. That is correct.

4 Q. We've talked about ANSI and the  
5 committee and the standard, et cetera. Those folks,  
6 it's the American National Standards Institute,  
7 correct?

8 A. That is correct.

9 Q. And they have an office in New York?

10 A. Yes.

11 Q. I think it's still in New York. It may  
12 have moved to Philadelphia; I'm not sure. And one  
13 of their purposes is to disseminate information  
14 about standards for the use of materials in  
15 industrial concerns, correct?

16 A. Well, it's not only use of materials.  
17 Other standard practices that are important to a  
18 particular industry.

19 Q. So that there's some uniformity and  
20 consistency in what the customers of a particular  
21 industry will buy, correct?

22 A. That's one of the objectives, yes.

23 Q. And when this standard was adopted by  
24 ANSI, it was available from them for the asking,  
25 correct?

1 A. Yes.

2 Q. Any interested person who was either  
3 involved in the industry in some fashion or was  
4 concerned about what was going on with a particular  
5 issue could contact ANSI and could obtain it,  
6 correct?

7 A. Yes.

8 Q. Do you yourself know whether ANSI ever  
9 addressed the question of -- that may have been of  
10 common interest to manufacturers of lead-acid  
11 storage batteries?

12 A. I'm not personally familiar with that,  
13 no.

14 Q. Would it be the kind of thing that they  
15 might address and adopt standards for?

16 A. I wouldn't be surprised at all if they  
17 didn't address something like that.

18 Q. And it's equally reasonable to assume  
19 that people involved in the battery business would  
20 be aware of ANSI and its standards?

21 A. Again, I would be surprised if they were  
22 not.

23 Q. And would it be reasonable to assume  
24 that a reasonable standard for the manufacture of  
25 lead-acid storage batteries would include a

1 guideline or a recommendation not to discharge lead  
2 oxide waters into the environment?

3 A. It would be --

4 MR. WILCOX: Objection; beyond the  
5 scope of direct. It's beyond the scope of this  
6 witness's knowledge and testimony and is not  
7 material to this case.

8 Q. (BY MR. BURKE) I think we may have  
9 missed your answer. We want to be sure and get it,  
10 sir.

11 A. It would be reasonable.

12 Q. The indemnity agreement that we talked  
13 about, as you understand that particular document,  
14 sir, and that is for purposes of this discussion  
15 Exhibit 8, as you understand that agreement is it  
16 not accurate that that is a -- a standard commercial  
17 transaction between businesses that occurs on a  
18 routine basis, it's just that this one happened to  
19 address the sale of PCBs, correct?

20 A. That's my understanding, yes.

21 Q. Businesses in their dealings use  
22 indemnity agreements a lot, correct?

23 A. That's what I understand.

24 Q. Now, you told us that it was  
25 contemplated or it was hoped that someone using a

1 scrap dealer for the disposal of askarel  
2 transformers, for example, as described in the  
3 guidelines were using the scrap dealer with respect  
4 to any askarel-soaked materials or containing  
5 materials that the scrap dealer would be advised  
6 and/or cautioned about the need to prevent its entry  
7 into the environment, correct?

8 A. That is correct.

9 Q. The way that occurs and the way that is  
10 supposed to occur is by the person dealing with the  
11 scrap dealer to provide that information, correct?

12 A. Certainly.

13 Q. And if the scrap dealer gets that  
14 information from the person it's dealing with then  
15 it can conduct itself accordingly?

16 A. It is expected to, yes.

17 Q. And if that information is not  
18 transmitted, for example, it would be more  
19 difficult?

20 A. It certainly would.

21 Q. In terms of the relationship between  
22 manufacturers, for example, once the manufacturer  
23 has sold and distributed the product, he has no way  
24 of knowing who his customer disposes of it with,  
25 does he?

1 A. I don't see how he can.

2 Q. And with respect to the question of PCBs  
3 in the environment, you participated with Monsanto's  
4 customers in looking at and not necessarily  
5 approving but in reviewing correspondence that the  
6 manufacturers of electrical equipment who purchased  
7 PCBs from Monsanto wanted to pass on to their  
8 customers, correct?

9 A. Yes.

10 Q. Was one of those GE?

11 A. Yes.

12 Q. As you look back, Mr. Papageorge, over  
13 the years and in your work with the ANSI committee,  
14 and when you look at the work of the committee that  
15 was done in preparing the C107 standard, were you  
16 satisfied that the manufacturers who were producing  
17 this equipment were concerned and -- and cared that  
18 the issue be addressed and discussed and dealt with?

19 A. Oh, very much so. In fact, they were  
20 the leaders in -- in proposing this approach.

21 Q. And did the standard in your view that  
22 was promulgated meet that goal?

23 A. Yes.

24 MR. BURKE: Thank you, sir. That's  
25 all I have.

1 THE WITNESS: Thank you.

2 MR. NETTLETON: Go off the record  
3 for a second.

4 MR. RANKIN: Off the record.

5 (Deposition stood in temporary recess.)

6 MR. RANKIN: Back on the record.

7 MR. NETTLETON: Before we continue  
8 with the cross-examination, I'd just like to state  
9 on behalf of Westinghouse for the record that we  
10 understand this cross-examination is taken subject  
11 to our previous objections to documents. In light  
12 of the proffer that's been made, however, we're  
13 being required to go forward with the cross as if  
14 the documents were properly asked about and admitted  
15 into evidence.

16 MR. SPARROW: That's on behalf of  
17 all defendants, I believe?

18 MR. NETTLETON: Yes.

19 MR. BAKER: You have the objection  
20 that it's my position that our ability to  
21 cross-examine the witness has been improperly  
22 impaired by plaintiffs' counsel's refusal to specify  
23 the alleged relevance of the questions which were  
24 objected to during his direct examination so that  
25 cross-examination on whatever it is that he believes

1 is to be of relevance of this testimony can't be  
2 undertaken.

3 Therefore, we object and move to strike  
4 all of the direct examination.

5 CROSS-EXAMINATION

6 BY MR. McINTOSH:

7 Q. Mr. Papageorge, was it the consensus and  
8 the state of mind of the C107 committee that the  
9 primary sources of PCB contamination would be and  
10 was the results of accidents in the field in the  
11 maintaining and servicing of the transformers and  
12 not in the manufacture of the transformers?

13 A. Would you help me with contamination of  
14 what?

15 Q. Contamination of mineral oil with PCBs.

16 A. The answer to that is yes.

17 Q. And was it the opinion of the C107  
18 committee that there was not a consistent level of  
19 PCBs in mineral oil transformers as they left the  
20 manufacturers?

21 A. I'm confused by your use of the word  
22 consistent level.

23 Q. Well, that a certain percentage of  
24 mineral oil transformers as they left the  
25 manufacturers, was it the opinion of the -- of your

1 committee that when these transformers, these  
2 mineral oil transformers, left the manufacturers  
3 there was not a high percentage of them that  
4 contained PCB contamination?

5 A. That is true.

6 Q. And the most probable source of PCB  
7 contamination in transformer oil occurred after the  
8 transformers were delivered to the utility companies  
9 and the utility companies began to maintain them and  
10 service them or have them maintained and serviced by  
11 outside companies?

12 A. That was the opinion of the committee.

13 Q. And did that opinion ever change?

14 A. No.

15 Q. And, sir, is it correct to say that it  
16 was the duty and the responsibility of the user of  
17 the transformer to properly instruct the scrap yard  
18 or the disposer of the transformer in the proper way  
19 to handle the dielectric fluids in the transformer?

20 A. Yes.

21 Q. So as between Florida Power & Light and  
22 Pepper's Scrap Yard, it would be up to Florida Power &  
23 Light to instruct Pepper's Scrap Yard as to how to  
24 handle these fluids?

25 A. Certainly. They're the only ones in the

1 position to do this properly.

2 MR. McINTOSH: I have no further  
3 questions, sir.

4 May we go off the record while I pass  
5 the microphone to my colleague?

6 MR. RANKIN: We can continue on.

7 MR. McINTOSH: Okay.

8 MR. SPARROW: Kuhlman Corporation,  
9 Bert Sparrow. I have no questions of this witness.

10 MR. BAKER: I'm David Baker  
11 representing Central Moloney, Inc., and subject to  
12 the objections I've already registered both as to  
13 the direct examination and the inability to --  
14 improper impairment of cross-examination, I have no  
15 questions of the witness at this time.

16 CROSS-EXAMINATION

17 BY MS. MONTES:

18 Q. My name is Yelva Montes, and I represent  
19 RTE Corporation and I cross-examine subject to the  
20 objections that were previously made. I have very  
21 few questions, Mr. Papageorge.

22 Do you have any knowledge if Monsanto  
23 ever sold any PCBs fluids to RTE Corporation for  
24 electrical transformers, to be used in electrical  
25 transformers?

1 A. I do not.

2 Q. Sir, isn't it true that the only sales  
3 of Monsanto to RTE occurred in 1962 to your  
4 knowledge?

5 A. There were shipments of samples but  
6 there was no charge, so I cannot call it a sale.

7 Q. Do you have any knowledge as to the  
8 quantities of those shipments?

9 A. The records indicate three gallons that  
10 were sent to the RTE people over a period of time.

11 Q. Do you have any knowledge of what kind  
12 of fluid those samples contained?

13 A. This is the Monsanto product referred to  
14 as Aroclor 1221.

15 Q. And what is that Aroclor, sir?

16 A. That is a PCB which is 21 percent by  
17 weight of chlorine.

18 Q. Is it used in electrical transformers?

19 A. Not to my knowledge, no.

20 Q. Isn't it true that they're only used in  
21 capacitors as opposed to transformers?

22 A. Yes.

23 Q. Do you have any knowledge whether RTE  
24 was considered a consumer or -- of Monsanto?

25 A. It was --

1 MR. WILCOX: Consumer, you mean  
2 customer?

3 Q. (BY MS. MONTES) I'm sorry, a customer.

4 A. I have seen RTE listed on a list of  
5 customers of PCBs.

6 Q. Sir, I believe that your previous --  
7 previous testimony was that you sent all those  
8 letters marked as Exhibit 2, 3, 6, 7, and 8 to all  
9 the customers of Monsanto's during the three prior  
10 years to those letters?

11 A. That is correct.

12 Q. Is it possible that RTE was included in  
13 that list of customers?

14 A. It is possible, yes.

15 Q. Even though the only shipment that  
16 occurred to RTE was in 1962?

17 A. It is possible, yes.

18 MS. MONTES: Okay. I have no  
19 further questions.

20 CROSS-EXAMINATION

21 BY MR. NETTLETON:

22 Q. Mr. Papageorge, my name is Paul  
23 Nettleton representing Westinghouse Electric  
24 Corporation. I just have a few more questions for  
25 you.

1           You mentioned earlier in your testimony  
2 about the development of analytical methods to  
3 determine specific levels or detection levels of  
4 PCBs in various media. Isn't it true, sir, that you  
5 had no discussions with Westinghouse in the early  
6 1970s concerning detection of various levels of PCBs  
7 in mineral oil or oils as opposed to other media  
8 such as water or soils?

9           A.    I don't recall a discussion specific to  
10 mineral oils, that is correct.

11           Q.    Sir, isn't it true that the primary  
12 motivation behind the ANSI committee and the  
13 adoption of the guidelines that we've discussed here  
14 today was the electrical industry's recognition of  
15 the environmental concerns being raised about PCBs  
16 and the concern that if the industry itself did not  
17 take voluntary action to alleviate these concerns  
18 that the industry stood to lose an extremely  
19 valuable and beneficial product?

20           A.    Yes.

21           Q.    Sir, were -- were the utilities  
22 represented on the ANSI C107 committee?

23           A.    Yes, they were.

24           Q.    Were they represented from the beginning  
25 and inception of that committee?

1 A. Yes.

2 Q. Do you recall which members represented  
3 the utilities?

4 A. I remember very well Mr. Lengefeld, who  
5 represented the Electric Power and Light Group.

6 Q. And what is that group?

7 A. As I understood it, it represented the  
8 Edison Electric Institute and another trade group  
9 which in turn represented the utilities.

10 Q. Was it expected by the members of the  
11 committee that these representatives of the  
12 utilities would convey the information they received  
13 during these meetings to the utilities?

14 A. Yes, definitely.

15 Q. Now you said -- I think you've  
16 previously testified that FPL was a customer of  
17 Monsanto's; is that correct?

18 A. That is correct.

19 Q. When you say a customer, does that mean  
20 they purchased PCBs or askarel fluids from Monsanto?

21 A. Yes.

22 Q. And so would FPL have received those  
23 letters that -- that you previously discussed and I  
24 believe have been marked as Exhibits 2, 3, 6, 7, and  
25 8?

1 A. May I see Exhibits 2, 3, 7, and 8?

2 MR. WILCOX: Let me just hand you  
3 the whole package so you can look through them.

4 A. I am confused. Exhibit 7 is a copy of a --

5 Q. (BY MR. NETTLETON) I apologize.

6 A. -- guide. I have 2, 3, and 8.

7 Q. Were those letters sent to FPL as a  
8 customer of Monsanto?

9 A. The FP -- Florida Power & Light very  
10 likely received copies of Exhibits 2 and 3. They  
11 would not have received copies of Exhibit 8.

12 Q. If FPL had called your office or someone  
13 at Monsanto and requested information, would you  
14 have provided any information they requested?

15 A. Oh, yes, definitely.

16 Q. In fact, do you recall any contact  
17 directly by FPL by a Mr. Fair perhaps who requested  
18 information?

19 A. Yes.

20 Q. And did you provide information to FPL  
21 when requested?

22 A. Yes.

23 Q. And when you provided that information,  
24 did you give them the up-to-date information and  
25 state of the knowledge of Monsanto concerning PCBs

1 and environmental issues at that time?

2 A. As best I remember, yes.

3 Q. Do you recall when Mr. Fair had  
4 contacted you requesting information?

5 A. 1973, something close to that.

6 Q. Sir, on Plaintiffs' Exhibit No. 16, on  
7 the list of addressees in the right-hand column  
8 third from the bottom, do you recognize the name of  
9 Mr. Thue, T-h-u-e, as being an employee of FPL?

10 A. I do.

11 Q. And, sir, when you were talking about  
12 participation in the ANSI committee, you mentioned  
13 that you spoke with a Mr. Harry Sheppard and a  
14 Dr. Sloat who you testified were employed by  
15 Westinghouse; is that correct?

16 A. That is correct.

17 Q. In your discussions with them, were they  
18 helpful to you and to the other members of the  
19 committee about Westinghouse's knowledge concerning  
20 PCBs and -- and any knowledge they had about PCBs  
21 and entrance into the environment?

22 A. Oh, very much so, yeah. In fact, they  
23 were among the leaders.

24 Q. Was Westinghouse under any compulsion by  
25 law or regulation to join in or to volunteer any

1 information to this committee or to join the  
2 committee?

3 A. No.

4 Q. And you also mentioned that you reviewed  
5 some letters from various electrical manufacturer --  
6 electrical equipment manufacturers before they  
7 passed it along to customers; is that correct?

8 A. That is correct.

9 Q. And was one of those electrical  
10 manufacturers Westinghouse?

11 A. Yes.

12 Q. Okay. Did you find that the information  
13 they were passing along to their customers was  
14 accurate and up to date?

15 A. Yes.

16 MR. NETTLETON: I have nothing  
17 further.

18 MR. WILCOX: No redirect.

19 Thank you, Mr. Papageorge.

20 THE WITNESS: Thank you.

21 (Witness excused.)

22 IT IS FURTHER STIPULATED AND AGREED BETWEEN  
23 COUNSEL THAT THE DEPOSITION MAY BE SIGNED  
24 BEFORE ANY NOTARY PUBLIC.

25

1 I, WILLIAM B. PAPAGEORGE, do  
2 hereby state that I have read the foregoing  
3 questions and answers appearing in this transcript  
4 of my deposition Page 8 through and including Page  
5 140; that this is a true and accurate (corrected)  
6 report of said answers given in response to the  
7 questions appearing herein.

8

9

WILLIAM B. PAPAGEORGE

10

11

C E R T I F I C A T E

12

STATE OF MISSOURI )

) SS

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COUNTY OF ST. LOUIS )

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Before me personally appeared  
WILLIAM B. PAPAGEORGE to me known to be the person  
described in and who executed the foregoing  
instrument and acknowledged to and before me that he  
executed the said instrument in the capacity and for  
the purpose therein expressed.

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WITNESS my hand and official

seal this \_\_\_\_\_ day of \_\_\_\_\_, 1990.

NOTARY PUBLIC

My Commission Expires:

NOTARIAL CERTIFICATE

STATE OF MISSOURI     )  
                              ) SS  
COUNTY OF ST. LOUIS )

I, JUNE M. FUNKHOUSER, a  
Registered Professional Reporter and Notary Public  
in and for the County of St. Louis, State of  
Missouri, duly commissioned, qualified and  
authorized to administer oaths and to take and  
certify depositions, do certify that pursuant to  
Notice and Subpoena in the civil cause now pending  
and undetermined in the United States District Court  
for the Southern District of Florida, Miami  
Division, entitled FLORIDA POWER & LIGHT COMPANY, a  
Florida corporation, et al. vs. ALLIS-CHALMERS  
CORPORATION, et al. was attended at the offices of  
Clayton Reporting Company, 111 S. Bemiston, Suite  
124, in the County of St. Louis, State of Missouri,  
on the 12th day of June, 1990.

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24 Greensboro, North Carolina, attorneys for Monsanto  
25 and the deponent, by Mr. Gerard H. Davidson, Jr.

1                   The witness, WILLIAM B.  
2 PAPAGEORGE, being of sound mind, came before me, was  
3 duly sworn by me to testify the truth, the whole  
4 truth and nothing but the truth in the case  
5 aforesaid, thereupon testified as is shown in the  
6 foregoing transcript, said testimony being by me  
7 reported in stenotypy and caused to be transcribed  
8 into typewriting under my supervision; that the  
9 foregoing 140 pages correctly set forth the  
10 testimony of the aforementioned witness, WILLIAM B.  
11 PAPAGEORGE, together with the questions propounded  
12 by counsel, and remarks and objections of counsel  
13 thereto, and is in all respects a full, true,  
14 correct, and complete transcript of the questions  
15 propounded to and the answers given by said witness;  
16 that the said testimony, so transcribed, was  
17 subscribed to by him in the \_\_\_\_\_ of \_\_\_\_\_  
18 \_\_\_\_\_, State of Missouri, on the \_\_\_\_\_ day of \_\_\_\_  
19 \_\_\_\_\_, 1990.

20                   I further certify that I am not  
21 of counsel nor attorney for either of the parties to  
22 said suit, nor related to, nor interested in any of  
23 the parties or their attorneys.

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WITNESS my hand and notarial  
seal at St. Louis, Missouri, this \_\_\_\_\_ day of  
\_\_\_\_\_, 1990.

My Commission Expires: June 24, 1991.

REGISTERED PROFESSIONAL REPORTER and  
NOTARY PUBLIC in and for the County  
of St. Louis, State of Missouri.