

**STATE OF WISCONSIN : CIRCUIT COURT :
SHEBOYGAN COUNTY**

TECUMSEH PRODUCTS COMPANY, a

Milwaukee Corporation,

Plaintiff,

vs. Case No. 90-CV-0415

Volume I

THE TRAVELERS INDEMNITY COMPANY,

MARYLAND CASUALTY COMPANY,

CONTINENTAL

CASUALTY COMPANY, AMERICAN

EMPLOYERS

INSURANCE COMPANY, HARTFORD

ACCIDENT

& INDEMNITY COMPANY, INSURANCE

COMPANY

OF NORTH AMERICA, FIRST STATE

INSURANCE

COMPANY, THE HOME INSURANCE

COMPANY,

MICHIGAN MUTUAL INSURANCE COMPANY,

STONEWALL INSURANCE COMPANY,

AFFILIATED

FM INSURANCE COMPANY, ALLSTATE

INSURANCE

COMPANY OF NEW YORK, JEFFERSON

INSURANCE

COMPANY OF NEW YORK, UNITED STATES

FIRE

INSURANCE COMPANY and PURITAN

INSURANCE

COMPANY,

Defendants.

DEPOSITION of WILLIAM B. PAPAGEORGE,
was taken at the instance of the Defendants under and

pursuant to the provisions of Section 804.05 of the
Wisconsin Statutes, and the acts amendatory thereof
and
supplementary thereto, and pursuant to Notice, before
me,

KATHY A. HALMA, Registered Professional Reporter
and

Notary Public in and for the State of Wisconsin, at the
Ritz-Carlton, Clayton, Missouri, on the 28th day of
July, 1993, commencing at 9:00 o'clock in the forenoon.

A P P E A R A N C E S

FOLEY & LARDNER, 777 East Wisconsin

Avenue, Milwaukee, Wisconsin, 53202, by MR.

THOMAS C.

EWING, appeared on behalf of the Plaintiff.

SONNENSCHNIG, NATH & ROSENTHAL, One

Metropolitan Square, Suite 3000, St. Louis, Missouri,

20005, by MR. MARK D. RABE appeared on behalf of
the

Defendant, The Travelers Indemnity Company.

OTJEN, VAN ERT, STANGLE, LIEB & WEIR,
S.C., 700 North Water Street, Suite 800, Milwaukee,
Wisconsin, 53202-4206, by MR. MONTE WEISS,
appeared on

behalf of the Defendants, Hartford Accident &
Indemnity

Company and First State Insurance Company.

PIETTE & JACOBSON, S.C., 1233 North
Mayfair Road, Suite 204, Milwaukee, Wisconsin,
53226-0577,

by MR. RONALD L. PIETTE, appeared on behalf of
the

Defendant, The Home Insurance Company.

POPE & JOHN, LTD., 311 South Wacker
Drive, Suite 4200, Chicago, Illinois, 60606, by MS.
KRISTIN A. O'BRIEN, appeared on behalf of the
Defendant,

Affiliated First Mortgage Insurance Company.

SMITH, HELMS, MULLISS & MOORE, Suite
1400, 300 North Greene Street, P.O. Box 21927,
Greensboro,

North Carolina, 27420, by MR. GERARD H.
DAVIDSON, JR.,

appeared on behalf of Monsanto.

I N D E X

WITNESS	EXAMINATION	PAGE
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William B. Papageorge By Mr. Piette 4

By Mr. Davidson 200

E X H I B I T S

EXHIBITS	DESCRIPTION
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MARKED

Number 811 Johnson Letter; 8-27-70 105

R E Q U E S T E D D O C U M E N T A T I O N

Listing of Capacitor Suppliers - Page 185

(The original transcript was sent to Attorney
Vobornik.)

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1 PROCEEDINGS
 2 WILLIAM B. PAPAGEORGE, called as a
 3 witness herein by the Defendants, after having been
 4 first duly sworn, was examined and testified as
 5 follows:
 6 EXAMINATION
 7 BY MR. PIETTE:
 8 Q Would you state your name, please, sir.
 9 A William B. Papageorge.
 10 Q And your address?
 11 A 2321 Pebble Valley Drive, St. Louis, Missouri,
 12 63141.
 13 Q And your date of birth, please?
 14 A September 7, 1922.
 15 Q Which makes you how old, sir?
 16 A 70 going on 71.
 17 Q And you're now retired, are you, from Monsanto?
 18 A I am.
 19 Q When did you retire, sir?
 20 A My last working day was December 31, 1986.
 21 Q Since that time have you been engaged in any
 22 occupation?
 23 A Well, I consider myself self-employed.
 24 Q In what way?
 25 A Participating in activities of this type.

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1 Q I see. On behalf of Monsanto?
 2 A Indirectly, yes.
 3 Q From time to time you're called upon to testify in
 4 your capacity as a former employee of Monsanto?
 5 A That is correct.
 6 Q I see. I understand. In that capacity, you have
 7 been called upon to testify over the past seven
 8 years since you retired?
 9 A Yes.
 10 Q And even before you retired you testified as a
 11 Monsanto employee, did you?
 12 A That is correct.
 13 Q Your best estimate as to how many times you have
 14 testified in the past in connection with your
 15 activities as an employee of Monsanto?
 16 A Activities as an employee?
 17 Q Yes, um-hum.
 18 A Yes, sir. I have not kept an accurate score. I
 19 would suggest that it's 30 or so. It includes
 20 about a half dozen trials and the remaining are
 21 depositions.
 22 Q Does that include up until today, sir, the number
 23 of depositions you have testified in or trials?
 24 A Yes.
 25 Q And did you -- Why don't we do this, Mr.

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1 Papageorge. Why don't we talk about your
 2 educational background to begin with. Would you
 3 just tell us, please, what your formal education
 4 is?
 5 A I received a bachelor of science degree in chemical
 6 engineering in 1943 and a master of science degree
 7 in chemical engineering in 1947, both from
 8 Washington University in St. Louis, Missouri.
 9 Q Also now known as Wash-U?
 10 MR. DAVIDSON: Probably not by
 11 graduates.
 12 A Even then it was known as Wash-U, but it's more
 13 appropriate today, yes.
 14 Q Go ahead, please.
 15 A While I was in Oklahoma, I attended classes toward
 16 a doctorate, a doctor of science degree at then
 17 Oklahoma A&M. I believe now it's called Oklahoma
 18 State in Stillwater, Oklahoma. As best I recall, I
 19 believe I got 12 hours of credit toward 18
 20 required.
 21 Q Towards your doctorate?
 22 A Towards a doctorate. I did not start or, of
 23 course, complete the essential feature of a
 24 research project, a thesis, so to speak. I did not
 25 do that.

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1 Q When was that, sir, that you completed your last
 2 formal education, those 12 credits that you were
 3 taking towards your doctorate?
 4 A 1951.
 5 Q Okay. So you have your bachelor's degree and a
 6 master's degree?
 7 A Yes.
 8 Q The majors of which were both in chemical
 9 engineering?
 10 A Correct.
 11 Q You are a licensed registered professional
 12 engineer?
 13 A I am.
 14 Q In what state or states?
 15 A The State of Missouri.
 16 Q And when did you get your PE?
 17 A Early 1960's.
 18 Q In addition to your formal education that you have
 19 just related, you have also participated in a
 20 number of seminars and other type instructional
 21 sessions, have you?
 22 A I have, yes, sir.
 23 Q What's generally been the topic of your expertise
 24 in that area?
 25 A Generally they were business management related.

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1 Q In what way?
 2 A Well, the courses were conducted -- For example, I
 3 attended a series of sessions at Washington
 4 University sponsored by the school of business
 5 administration at Washington University. I also
 6 attended -- I have forgotten the total number --
 7 many sessions in New York of the American
 8 Management Association.
 9 Q Were these generally sponsored by Monsanto --
 10 A No.
 11 Q -- or did you do these on your own?
 12 A Well, Monsanto supported my attendance and paid
 13 the
 14 bills, so to speak, but they were not organized
 15 specifically for Monsanto.
 16 Q I'm sorry I interrupted you. You were going to add
 17 to your answer?
 18 A As I recall, too, I attended at least one series of
 19 sessions, associated series, with the Chamber of
 20 Commerce in Washington, D.C., as best I recall.
 21 Q And then in addition to the courses that you
 22 attended, the seminars and instructional courses,
 23 you have also given some yourself, have you not, in
 24 the past?
 25 A Yes, I have.
 Q Okay. Your best estimate as to the number of

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1 as a chemical engineer before you went to work for
 2 Monsanto?
 3 A Yes.
 4 Q Okay. What was your employment before Monsanto?
 5 A Phillips Petroleum Company in Bartlesville,
 6 Oklahoma.
 7 Q As a chemical engineer?
 8 A Yes.
 9 Q Okay. For how many years, sir?
 10 A Four years.
 11 Q Okay. Any other employment before Monsanto,
 12 professional employment?
 13 A Professional, no.
 14 Q After receiving your professional degrees as a
 15 chemical engineer, you spent four years with
 16 Phillips Petroleum?
 17 A Yes.
 18 Q Okay. And then started with Monsanto in 1951?
 19 A Correct.
 20 Q And retired from Monsanto in 1986, did you say, or
 21 '70?
 22 A '86.
 23 Q Thanks. So that I know in 35 years you have an
 24 extensive background and history with Monsanto.
 25 Could you just tell us briefly what those positions

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1 instructional-type courses or seminars that you
 2 have given, sir?
 3 A I don't quite know how to define the types of
 4 sessions. Are you including in your question the
 5 kinds of sessions I would conduct as a supervisor
 6 in Monsanto talking to his team?
 7 Q Maybe not that general, not that broad.
 8 A Would you include sessions I held on environmental
 9 issues of PCB's with a mixed audience?
 10 Q Yes.
 11 A I never kept count of those. It would only be a
 12 little bit of a wild guess. Over a four-year
 13 period, I conducted at least three a year of that
 14 type, so that makes about a dozen of those. I
 15 conducted within the Monsanto Corporation sessions
 16 with individuals other than those reporting to me
 17 at different sites throughout the United States. I
 18 would -- Again, I did not keep score. I would
 19 suggest that I had about ten of those. That's all
 20 that comes to mind at present.
 21 Q All right. Did you, prior to going to work for
 22 Monsanto -- Let me ask you this. When did you
 23 start with Monsanto?
 24 A November 1951.
 25 Q Had you been employed elsewhere after you
 graduated

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1 consisted of without going through necessarily all
 2 of the titles, but if it's necessary to do that, I
 3 do know you have been involved professionally with
 4 them for 35 years and so I know that this may be a
 5 longer answer, but I'll take it and Gerard is
 6 smiling.
 7 A I don't know quite how to respond, because I may
 8 leave out something that is important to you, but
 9 let me start and we can catch up with it later.
 10 Q Let me see if I can help just a wee bit, because
 11 your comment is probably appropriate. How about if
 12 you would give me generally what your employment
 13 history was with Monsanto first of all from 1951 to
 14 the late-'60's, 1969, because I think in '70 you
 15 become involved in a project involving PCB's, do
 16 you not?
 17 A That is correct.
 18 Q I don't mean to suggest that you weren't involved
 19 with PCB's before that, but in 1970 you became like
 20 a project director, didn't you?
 21 A That is correct.
 22 Q All right. How about if we use that as kind of a
 23 dividing line.
 24 A That's good dividing line. The period of time '51
 25 to '69, I would describe that as being assigned to

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1 the manufacturing function within Monsanto. From
 2 '51 to 1964 I worked at the J. A. Queeny,
 3 Q-U-E-E-N-Y, plant of Monsanto in St. Louis in
 4 which I had supervisory assignments in production,
 5 supervisory assignments in engineering and a
 6 supervisory assignment in a service department
 7 assisting the manufacturing departments. I was
 8 then assigned to a Monsanto plant in Sauget,
 9 S-A-U-G-E-T, Illinois known as W. G. Krummrich,
 10 and I there I supervised a part of the production
 11 operation, production of chemicals. In 1965 I was
 12 assigned as plant manager at the Anniston, Alabama
 13 plant. That takes me up to the end of 1969.

14 Q All right. Beginning then at some point, and I'm
 15 not sure, in 1970, can you tell us what month it
 16 was?

17 A Yes. My assignment in 1970 began on the first day
 18 of the year. January 1st, officially, I guess, is
 19 the way to describe it.

20 Q Okay. Then let me phrase the question
 21 appropriately that way then. Starting 1/1/70 you
 22 took on an assignment from Monsanto directly
 23 related to PCB's?

24 A That is correct.

25 Q What was that assignment, sir?

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1 addition to PCB's. The PCB issue was sort of
 2 leveling off in terms of activity and I was able to
 3 consider other materials. My job title changed and
 4 became manager environmental protection and then it
 5 became manager product acceptability with a broad
 6 range of products by the end of the period I
 7 discussed, '76.

8 Starting in 1977, I was appointed the
 9 director of environmental operations for one of
 10 Monsanto's operating units. This was the
 11 Intermediate Chemicals Company, Monsanto
 12 Intermediate Chemicals Company. I'm trying to
 13 recall the dates. I believe in about 1983 or
 14 thereabouts, I'm not certain of that date, I still
 15 had the same title, director environmental
 16 operations, but I was assigned to a different
 17 operating unit, the Monsanto Industrial Chemicals
 18 Company. For the year 1985, with another company
 19 reorganization, I was named manager occupational
 20 health and at the end of that year I retired. I
 21 think that takes us to the end of the year.

22 Q Okay. Fair enough. While you were a Monsanto
 23 employee, did you have occasion to author any
 24 articles or materials in connection with the PCB
 25 environmental issue?

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1 A The title of the assignment was manager
 2 environmental control. The responsibility was to
 3 serve as the communications focal point for all
 4 information relating to PCB's and the environment,
 5 and I was to share that information of course
 6 within Monsanto and with its customers, with the
 7 regulatory agencies, with laboratories wherever
 8 they existed, whether they be at universities or
 9 private laboratories and, of course, the -- anyone
 10 in the general public.

11 Q And did you do that?

12 A I tried as best I could.

13 Q Share all the information?

14 A Yes, all that I was aware of.

15 Q I understand. Why don't we, before we go back to
 16 that specific job for those years, why don't we
 17 continue your -- the balance of your employment
 18 with Monsanto and then we'll be up to speed with
 19 respect to that.

20 A All right. I was involved with a PCB environmental
 21 issue from the period January 1, '70 to about
 22 February 1976. During that period, starting in
 23 about 1973, as best as I recall, no, it might have
 24 been '72, I was assigned other products produced by
 25 Monsanto as being under my responsibility in

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1 A Will you help me with the word "author?" You mean
 2 for publication in scientific journals or news
 3 magazines?

4 Q Not necessarily.

5 A If that's the case, yes. I don't believe anything
 6 that I authored ended up in a formal publication of
 7 any sort.

8 Q Okay. You did have occasion to author some
 9 documents in connection with that issue, did you
 10 not?

11 A I did.

12 Q That PCB environmental issue?

13 A I did, yes, sir.

14 Q And you're saying they weren't necessarily
 15 published in a formal publication?

16 A Not to my knowledge.

17 Q What documents did you author? Is it a goodly
 18 number?

19 A Oh, half-a-dozen or so. They dealt with the
 20 general PCB environmental issue and were used as a
 21 text, so to speak, before different groups with
 22 which I shared that information. As I remember,
 23 also, there was at least a document that I used as
 24 a text for a presentation before the committee
 25 which was appointed by the EPA to address, as I

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1 recall, water pollutants, toxic water pollutants,
 2 some such title. I also authored a document that I
 3 used as a text and read before a hearing of the
 4 subcommittee in Congress that was involved. It was
 5 a subcommittee that was involved with marine
 6 matters. I have forgotten its formal title. I
 7 believe that generally describes the kinds of
 8 papers that I prepared.
 9 Q You mentioned a committee or committees that you
 10 were on?
 11 A Oh, I wasn't a member of the committee. I was a
 12 presenter of information to a committee.
 13 Q I see. Were you also on a committee dealing with
 14 the PCB environmental issue?
 15 A Yes, I recall a committee. I have forgotten its
 16 name. It related to PCB's, the environment and
 17 other chemicals in the environment and the economic
 18 impacts associated with chemicals and the
 19 environment.
 20 Q Was that an ANSI committee?
 21 A No. The committee I had in mind that I just
 22 described was a committee sponsored by the federal
 23 government, and I believe it was the Office of
 24 Science and Technology, but I'm not certain. It
 25 might have been the Council of Environmental

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1 Quality. One of those federal groups.
 2 Q Can you give me approximately when that was?
 3 A 1973 or 4. The ANSI you mentioned was another
 4 committee.
 5 Q You were on that, were you not, the ANSI committee?
 6 American National Standard Guidelines for Handling
 7 and Disposal of Capacitor and Transformer Grade
 8 Askerels Containing Polychlorinated Biphenyls?
 9 A Yes.
 10 Q I didn't do that by memory. I'm reading that, as
 11 you could see. And you were chairman of that
 12 committee?
 13 A I was.
 14 Q Can you explain a little bit more about what this
 15 ANSI committee did and how it got started and who
 16 participated in it and what the results of your
 17 work was?
 18 A I'll try.
 19 Q Please.
 20 A There were several manufacturers of electrical
 21 equipment that used fluids containing PCB's in
 22 their apparatus that were interested in
 23 communicating extensively what was known at the
 24 time about PCB's in the environment. As I
 25 understand it, they had made their own attempts to

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1 communicate, but they wanted to make certain that a
 2 broader audience was covered. That group went to
 3 their industry organization, which is the National
 4 Electrical Manufacturers Association, NEMA,
 5 N-E-M-A, to attempt to form a working committee.
 6 Some of the companies were represented on a group
 7 that was later referred to as a steering committee
 8 that addressed this approach and decided that
 9 working under NEMA would not quite cover the entire
 10 audience that they were seeking, because they had
 11 been talking, in essence, to each other, the
 12 manufacturers talking to manufacturers. They
 13 wanted a broader audience. They wanted regulatory
 14 people, they wanted the users of transformers and
 15 capacitors and they wanted Monsanto involved and so
 16 on.
 17 It was decided that the best approach
 18 would be to go to an existing industry standards
 19 setting organization, which is the American
 20 National Standards Institute, which is an
 21 industry-sponsored group and consists of a board of
 22 directors that managed the activities of that
 23 organization. The working groups are appointed as
 24 needed. The ANSI board of directors approved the
 25 formation of the group that was finally referred to

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1 as Committee C-107, which addressed PCB's in
 2 electrical equipment and the proper handling
 3 thereof.
 4 Invitations were mailed to not only the
 5 manufacturers of the equipment, but to utility
 6 people, that is, the power generating group. They
 7 went to government entities, such as the EPA, the
 8 Department of Agriculture, the Interior Department,
 9 the TVA Authority. It went to service companies
 10 that service transformers that are in use, such as
 11 Doball (phonetic) Engineering Company. It went to,
 12 I recall, an incinerator service that destroys
 13 unwanted materials. Of course, Monsanto was
 14 invited.
 15 Q And that's where you came into the picture?
 16 A Yes, sir.
 17 Q And you became the chairman?
 18 A Yes. At the first meeting I was asked if I would
 19 chair the meeting, and I accepted that challenge
 20 and served as its chairman. I then appointed two
 21 working groups, subcommittees, one to address the
 22 transformer use and the other to address the
 23 capacitor use.
 24 Q The forward that is recited at the beginning of
 25 this ANSI Standard that we have been talking about

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1 recites that American National Standards Committee
2 C-107 was established in April 1971. Is that
3 consistent with your recollection of it?
4 A It is.
5 Q So April 1971 was the establishment of the
6 committee and it also states that an organizational
7 meeting was held on September 14, 1971. Is that
8 the organizational meeting you're talking about
9 where you were appointed then chairman?
10 A It was.
11 Q Is that consistent with your recollection of it?
12 A It is.
13 Q What is or are askerels?
14 A The word askerels is a generic term, word, used by
15 the manufacturers and users of electrical equipment
16 and refers to the fluid that has the desired
17 characteristic of being fire resistant. So askerel
18 is not a capital A, it's lower case A describing
19 fire resistant dielectric fluids.
20 Q And at that time in 1971 did these askerels contain
21 PCB's?
22 A That was one of the ingredients, yes.
23 Q But they were a PCB fluid?
24 A Yes.
25 Q Am I properly expressing that? They were a fluid

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1 containing PCB's?
2 A Yes.
3 Q That would be more probably --
4 A There are chlorinated benzene, which is also fire
5 resistant, that are important ingredients in some
6 of these mixtures.
7 Q Was one of the main concerns of that committee the
8 proper disposal of the askerels that contained
9 PCB's?
10 A Yes.
11 Q Again reading from that forward, I'll ask you if
12 this is your understanding, also, of the scope and
13 objective of the committee. "The scope and primary
14 objective of the committee was designated as the
15 development of procedures and guides for the safe
16 use, maintenance and disposal of askerels and
17 askerel-soaked materials used in electrical
18 equipment." Is that consistent with your
19 understanding?
20 A It is.
21 Q Your alternate on that committee was Mr. P. G.
22 Benignus. Did I pronounce that right?
23 A Yes, Benignus.
24 Q He was the Monsanto alternate to you? It's
25 referenced here that way.

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1 A Yes.
2 Q Who is he at that time?
3 A At that time he was manager of marketing of
4 Monsanto's dielectric fluids containing PCB's.
5 Q And do you know is he still with Monsanto?
6 A No, he's retired.
7 Q Okay. That committee did eventually publish its
8 guidelines, did it not?
9 A Yes.
10 Q Again, the reference here is that the final draft
11 of the guidelines was completed in late November
12 1972. Is that consistent with your recollection?
13 A Yes.
14 Q And NEMA, who you referred to before, NEMA
15 issued
16 the guidelines as an official standards proposal in
17 January 1973?
18 A That is correct.
19 Q And it was submitted to the American National
20 Standards Institute for approval as an American
21 national standard and was approved by the Standards
22 Institute on January 9, 1974?
23 A That is correct.
24 Q Does that sound right to you?
25 A Yes.
Q Are those guidelines, then, are they available to

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1 industry in general for its use?
2 A Certainly.
3 Q Without going into detail with respect to the
4 entire ANSI standard, once it becomes accepted,
5 then it becomes an ANSI standard, does it not?
6 A That is correct.
7 Q Without going into great detail, this ANSI standard
8 specifically referred to PCB's and the arochlor
9 manufactured by Monsanto, did it not?
10 A It did.
11 Q Will you just explain, please, what is -- What does
12 arochlor mean?
13 A Arochlor is a Monsanto trade name describing two
14 families, in essence, of chlorinated hydrocarbon
15 chemicals. One of those are the PCB's we're
16 discussing, the polychlorinated biphenyls. The
17 other is the polychlorinated terphenyls,
18 T-E-R-P-H-E-N-Y-L-S.
19 Q It was the first family that you mentioned that was
20 the concern as far as the PCB environmental issue;
21 correct?
22 A That is correct.
23 Q And arochlor is a Monsanto trade name, did you say?
24 A Yes.
25 Q And it has various numerical designations, does it

1 not, such as arochlor 1242, arochlor 1248?
 2 A That is correct.
 3 Q And there is some significance to the number, is
 4 there not?
 5 A Yes.
 6 Q What is that?
 7 A The 12 refers to the PCB family of finished
 8 products. The last two digits, such as 1242, that
 9 indicates that that mixture of PCB's when analyzed
 10 has 42 percent by weight chlorine.
 11 Q And with respect to the -- and I hope you don't
 12 mind my repeatedly using the terminology you used
 13 before, PCB environmental issue, with respect to
 14 the PCB environmental issue, it's the percent by
 15 weight of chlorine that makes the difference as far
 16 as the environment is concerned?
 17 A There is a difference and it relates to the
 18 persistence of that particular mixture in the
 19 environment. By persistence I'm talking about
 20 persistence of some of the components of the
 21 mixture.
 22 Q And it's the persistence of what components of the
 23 mixture that was the concern?
 24 A The higher chlorinated types tend to persist in the
 25 environment longer than the lower chlorinated.

1 Q And so if you take, for example, arochlor 1248,
 2 that has 48 percent by weight chlorine?
 3 A That is true.
 4 Q And, therefore, a higher, stronger, whatever the
 5 terminology is, tendency to persist in the
 6 environment?
 7 A Some of the PCB's that are present, particularly
 8 those that have, say, five chlorines associated
 9 with each biphenyl or six chlorines and higher
 10 would tend under the average conditions in the
 11 environment to persist.
 12 Q And that was the concern, was it not, in the
 13 early-'70's, that persistence in the environment?
 14 A Yes.
 15 Q And so that when you refer to the PCB environmental
 16 issue, it's that persistence of the PCB's to remain
 17 in the environment?
 18 A That is a key factor in the environmental issue,
 19 yes.
 20 Q Arochlor 1254, again, would have 54 percent then by
 21 weight chlorine?
 22 A That is correct.
 23 Q And arochlor 1260, 60 percent?
 24 A That is correct.
 25 Q On this list that's the highest number of arochlor.

1 Was there higher numbers of arochlor?
 2 A When you say "this list" --
 3 Q I'm referring to the ANSI standard here and the
 4 descriptive descriptions that you have in that ANSI
 5 standard.
 6 MR. EWING: Ron, would you mind having
 7 the standard marked so there is no misunderstanding
 8 as to which we're talking about?
 9 MR. PIETTE: There is no
 10 misunderstanding as to which we're talking about.
 11 There is only one ANSI standard, and I have already
 12 designated it on the record and I don't have a
 13 complete copy of it, so I'll elect not to have
 14 these brief excerpts from it marked, if it's okay
 15 with you, Tom. Yes, go ahead.
 16 A The arochlor 1260 you mentioned was the highest in
 17 terms of chlorine content that was used in
 18 dielectric fluids. There were other arochlors that
 19 had higher percent chlorines that were not used in
 20 dielectric fluids.
 21 Q This ANSI standard, and you gave the number before,
 22 C-107, was it?
 23 A That is correct.
 24 Q This dealt with just the dielectric fluids?
 25 A It did.

1 Q When you first were appointed to your position
 2 1/1/70 as the manager environmental control, did I
 3 get that correctly?
 4 A That is correct.
 5 Q Thanks. When you were first appointed manager
 6 environmental control, what was the state of your
 7 knowledge, and by "your," I mean Monsanto's
 8 knowledge, with respect to the concern to the
 9 environment for the arochlors that were the lower
 10 numbered arochlors, those beneath 1254?
 11 A At that point in time, the lower chlorinated types
 12 of PCB's were not being reported as being found in
 13 the environment. The concern, therefore, was
 14 primarily to the higher chlorinated, not the lower
 15 chlorinated. I don't know how else to answer. At
 16 the time, there was no particular worry, if you
 17 will, about the lower chlorinated, because there
 18 was nothing known whether they are out there or
 19 whether they are harming anything, so there is
 20 nothing to support any concern.
 21 Q There was still a concern, though, was there not,
 22 with respect to any disposal of a hydraulic fluid
 23 into the environment, even though it was a lower
 24 numbered arochlor, isn't that true?
 25 MR. EWING: Object to the form.

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1 A Yes, that is true. The concern that applies to
2 really all industrial chemicals. You don't just
3 dump them in the sewer.
4 Q And how far back would you say that knowledge was
5 well-known in the industry?
6 MR. EWING: Object to the form.
7 A I personally can't tell you how far back. I'm
8 aware that before the formation of EPA, states had
9 their own water pollution statutes and regulations
10 and as best I recall, although I can't recall all
11 50 states, there was a -- let me call it a respect
12 for these chemicals that they should not be dumped
13 at midnight down the local sewer.
14 Q You're speaking of industrial chemicals?
15 A Industrial chemicals, yes.
16 Q And the proper disposal of them?
17 A Yes.
18 Q And was that knowledge that goes back into the
19 '60's?
20 A At least.
21 MR. EWING: Object to the form of the
22 question.
23 BY MR. PIETTE:
24 Q Let's relate it to the knowledge of the die cast
25 industry. Do you have familiarity with that?

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1 A Since I have never worked with them, I really can't
2 speak for them. I can't answer that.
3 Q Were your hydraulic fluids used in the die cast
4 industry?
5 A Yes.
6 Q Did you have knowledge with respect to the disposal
7 of those fluids, the hydraulic fluids, as early as
8 the early-'60's and the proper disposal of
9 hydraulic fluids?
10 MR. EWING: Object to the form and
11 foundation.
12 A I had my own personal knowledge as a user or
13 supervisor of the use of such fluids, yes.
14 Q And what was the proper disposal of a hydraulic
15 fluid when it contained PCB's or didn't contain
16 PCB's?
17 A At what point in time?
18 Q In the early-'60's.
19 A In the early-'60's disposal was in an authorized,
20 industrial chemical landfill.
21 Q And did that include both the fluid itself and any
22 materials that were used to absorb the fluid?
23 MR. EWING: Object, foundation.
24 A Yes.
25 Q Soon after you became manager of environmental

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1 control on 1/1/70, there were developments,
2 research, additional knowledge with respect to
3 PCB's in general and their potential for harming
4 the environment; correct?
5 MR. EWING: Object to the form.
6 A Can you help me with the "soon after?" Is it
7 months or years?
8 Q Within a matter of months after you became manager
9 of environmental control, you started communicating
10 to Monsanto's customers by letter, did you not?
11 MR. EWING: Object to the form.
12 A Yes.
13 Q And by "you," I mean Monsanto.
14 A Yes.
15 Q And within a matter of months thereafter, there was
16 additional knowledge gained by Monsanto such that
17 all PCB's were, whether they were the higher
18 numbered or lower numbered, were included within
19 your communications to customers with respect to
20 their environmental hazard potential?
21 MR. EWING: Object to the form.
22 Object, no foundation.
23 MR. PIETTE: You may answer.
24 A Yes.
25 Q Could you tell us, please, what took place, for

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1 instance, in the first six months of 1970 from the
2 time you became manager 1/1/70 and the development
3 and formulation of the letters that were sent out
4 to your customers?
5 A There was an awful lot of activity. I don't know
6 which would be of interest. In the first six
7 months of 1970 there were reports received by
8 Monsanto of alleged effects on wild birds, as I
9 recall, the pelicans of Southern California, the
10 prairie dune falcon as studied by Cornell
11 University investigators. By that time the
12 Commercial Fisheries Laboratory in Gulf Breeze,
13 Florida had reported effects on shrimp, juvenile
14 slump effects. Monsanto had ongoing degradation
15 studies in an attempt to determine which of the
16 PCB's would degrade and which would be persistent.
17 Those are the kinds of things that were going on in
18 the first six months.
19 Q As a result of the additional knowledge gained, did
20 you then, after the initial letter or letters,
21 start communicating to your customers that you were
22 going to reformulate your products to eliminate all
23 PCB's?
24 MR. EWING: Object to the form and
25 foundation.

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1 A As a result of the evolving information and
 2 Monsanto's desire to take action as quickly as it
 3 could without waiting for the last study to be
 4 performed regarding this, especially the lower
 5 chlorinated, and with the optimistic view that
 6 alternative materials could be developed, it was
 7 decided to consider all types of arochlors as being
 8 the type that should not be in the environment and
 9 the program was started to reformulate their
 10 production.
 11 Q At some point, then, did Monsanto stop producing
 12 arochlors, the PCB hydraulic fluids, all together?
 13 A Yes.
 14 Q And that was in 19 -- What year was that?
 15 A '72.
 16 Q All right.
 17 A As best I recall.
 18 Q And did Monsanto also convert its Therminol FR-0 to
 19 a non-PCB fluid?
 20 A Yes.
 21 Q And when was that?
 22 A That program started in -- earlier. About 1970,
 23 '71.
 24 Q All right. And was that program communicated to
 25 your Therminol customers?

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1 A Oh, yes, it was.
 2 MR. EWING: Object to form and
 3 foundation.
 4 BY MR. PIETTE:
 5 Q Were you personally involved, Mr. Papageorge, in
 6 the decision to communicate with your customers the
 7 knowledge that Monsanto was gaining with respect to
 8 the PCB environmental issue?
 9 A I was.
 10 Q And were you personally involved in the decision to
 11 send letters to those customers?
 12 A Yes.
 13 Q Were you personally involved in the formulation of
 14 those letters or at least in part?
 15 A Yes.
 16 Q Were the letters that were sent to your customers,
 17 and by "your" I mean Monsanto's, the result of
 18 review of a number of Monsanto people, yourself
 19 included?
 20 A Yes.
 21 Q And as a result of you and the other Monsanto
 22 people formulating these letters, they were then
 23 forwarded to your customers?
 24 MR. EWING: Object, foundation.
 25 A That is correct.

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1 Q And these letters were sent in the regular course
 2 of Monsanto's business to Monsanto's customers?
 3 A Yes.
 4 MR. EWING: Object, foundation.
 5 BY MR. PIETTE:
 6 Q And at that time you were personally involved as
 7 the manager environmental control. You were this
 8 project director, were you not?
 9 A Well, to me a director is --
 10 Q Wrong word?
 11 A It doesn't quite fit the assignment. It may well
 12 be from your understanding. I was part of the team
 13 and I tried to be as helpful and as influential as
 14 I could be, but I didn't personally direct a
 15 program in terms of hiring people and spending the
 16 money and so on.
 17 Q I see. I thought before you described it as a
 18 project and that you were the manager of the
 19 project.
 20 A I was a manager, but the project turned out to be
 21 primarily communication of information.
 22 Q And you were involved in or at least you were one
 23 of the people involved in the formulation of the
 24 letters or communications to the customer?
 25 A I was.

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1 Q Okay. What terms or procedures were taken to
 2 communicate these -- and forward these letters of
 3 communication on the PCB environmental issue to
 4 Monsanto's customers?
 5 MR. EWING: Object, foundation.
 6 A Of course, the initial step was the drafting of the
 7 document that was to be mailed. Then the records
 8 were searched to establish customers of record for
 9 the past three years. So for the first 1970
 10 mailing, it would cover the years '69, '68, '67,
 11 and then the other records that existed in
 12 Monsanto, such as the Invoicing Department, the
 13 Billing Department, the customer service function
 14 and all would be searched for additional names and
 15 the field salesmen offices were contacted to add
 16 any names that were missing from that initial
 17 three-year list. From the final list the mailing
 18 program was initiated out of St. Louis and the
 19 mailing was completed.
 20 Q As the manager of environmental control, you were
 21 directly involved in the program that you just
 22 described as far as developing who the mailings
 23 were going to go to?
 24 MR. EWING: Object to the form.
 25 A I was present when the lists were compiled. I was

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1 present when the mailings were stuffed, so to
2 speak, on the weekend and so on. I was involved in
3 the -- in reviewing the wording of the document
4 that was agreed to and so on. So my involvement
5 was of that nature.

6 **Q** You described a mailing list. Was that compiled as
7 a result of the records and documents that you just
8 described as far as invoices, accounts receivable,
9 Monsanto records of that nature to compile this
10 list?

11 **A** Yes.

12 **Q** And it went back for three years?

13 **A** At least three.

14 **Q** At least three years?

15 **A** Yes.

16 **Q** So that if a customer purchased an hydraulic fluid
17 or a Therminol from Monsanto in the years '68, '69
18 or '70, they would have been included on this
19 mailing list?

20 **A** It's really '67, '68, '69. The mailing was made in
21 February of '70, so if he received material in
22 January and February, yes, his name would have
23 appeared on that list.

24 **Q** I didn't go back far enough, did I. Actually, it's
25 '67, '68 and '69.

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1 **A** As a minimum, and there were many that were added
2 that went back as far as five and six years.

3 **Q** And so this mailing list that was compiled by
4 Monsanto was prior to the first letter having been
5 sent out?

6 **MR. EWING:** Object to foundation.

7 **A** The mailing list that I have just described --

8 **Q** Yes.

9 **A** -- applies to that first mailing. Subsequent
10 mailings started with that list and added any new
11 customers as time went on.

12 **Q** So that the list, the mailing list, was updated as
13 you went on?

14 **A** Certainly.

15 **Q** Okay. So that the first mailing list, I'll call
16 it, was prior to the February 1970 letter going out
17 and you followed that mailing list for the mailing
18 of that February 1970 letter?

19 **A** Yes.

20 **Q** What does Pydraul mean?

21 **A** Pydraul is a Monsanto trade name that is used on
22 products manufactured and sold by Monsanto for use
23 in hydraulic systems.

24 **Q** Have you had an opportunity to review the document
25 produced by Mr. Bistline about two months ago?

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1 **A** I understand -- I did see some documents and I
2 understand that Mr. Bistline was involved somehow.

3 **Q** And having reviewed some of the documents, are you
4 aware that Monsanto sold Pydraul F-9 to Die Cast
5 Division of Tecumseh?

6 **MR. EWING:** Object to form and
7 foundation.

8 **A** Yes.

9 **Q** Did Pydraul F-9 contain PCB's?

10 **A** Yes.

11 **Q** It was one of those hydraulic fluids, that is,
12 Pydraul F-9, which was reformulated by 1972 so that
13 it, under a new designation, no longer contained
14 PCB's?

15 **A** Yes.

16 **Q** The new designation was Pydraul F-9A was it?

17 **A** That was one of the new ones.

18 **Q** Okay. And one of the purposes of the series of
19 communications to your customers was to inform them
20 of this reformulation and the discontinuation of
21 Pydraul F-9 with PCB's?

22 **A** Yes.

23 **Q** What is Therminol?

24 **A** Therminol is Monsanto's trade name for liquid
25 chemicals sold for use in systems that transfer

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1 heat for industrial purposes.

2 **Q** Having reviewed the document produced by Mr.
3 Bistline, are you aware that Monsanto sold
4 Therminol to the Marion plant of Tecumseh?

5 **A** I am.

6 **Q** And did Monsanto discontinue the production or
7 manufacture of Therminol FR-0?

8 **A** Eventually, yes.

9 **Q** And replaced it with Therminol FR-55?

10 **A** Not FR anymore. It's not fire resistant. So it
11 would be Therminol 55.

12 **Q** All right. And that was non-PCB?

13 **A** Correct.

14 **Q** And that's what we meant before by this conversion
15 program?

16 **A** Yes.

17 **Q** As a part of the Therminol conversion program,
18 there was a recommendation made by Monsanto to
19 incinerate FR-0, was there not?

20 **A** Yes.

21 **Q** And that service at one point was offered by
22 Monsanto to incinerate the FR-0 or O, I'm not sure
23 which is correct there --

24 **A** Zero.

25 **Q** Thanks. The FR-0 at Monsanto's expense to

1 eliminate the PCB-containing fluid?
 2 **A** Yes.
 3 **Q** Monsanto came to the conclusion that the proper
 4 disposal of FR-0 was high-temperature incineration?
 5 **A** Yes.
 6 **Q** What about materials that absorbed Therminol? What
 7 was the proper disposal of those materials?
 8 **A** You're referring to solid materials?
 9 **Q** Yes.
 10 **A** Like rags and sawdust and that kind of thing?
 11 **Q** Yes.
 12 **A** At that time we were suggesting that they be
 13 containerized, put in steel drums, as an example,
 14 and taken to a properly authorized landfill for
 15 receiving industrial chemicals.
 16 **Q** When you say "at that time," what year are you
 17 talking about?
 18 **A** The period '70 to '75.
 19 **Q** So as early as 1970 you were recommending that the
 20 FR-0 should be incinerated?
 21 **A** The liquid, yes.
 22 **Q** At some point did Monsanto also recommend
 23 incineration of the Pydraul F-9 hydraulic fluid
 24 containing PCB's?
 25 **A** For disposal purposes, yes.

1 **Q** I meant for disposal purposes, yes. When was that?
 2 **A** Starting in 1970 and continuing on through five
 3 years or more.
 4 **Q** And what did Monsanto recommend with respect to
 5 the
 6 proper disposal of Pydraul F-9 containing PCB's
 7 that had been absorbed into solid waste, as you
 8 described before, Oil Dry or kitty litter?
 9 **A** Again, it should be placed in containers and these
 10 containers placed in a properly authorized landfill
 11 for industrial chemicals.
 12 **Q** And with respect to the PCB environmental issue,
 13 that also then started in 1970, that
 14 recommendation?
 15 **MR. EWING:** I'm sorry. Could I have
 16 that back, please?
 17 **BY MR. PIETTE:**
 18 **Q** Yes. With respect to the PCB environmental issue,
 19 that also started in 1970 then?
 20 **MR. EWING:** Object to the form.
 21 **BY MR. PIETTE:**
 22 **Q** That recommendation?
 23 **MR. EWING:** Object to the form of the
 24 question.
 25 **A** Recommendation for which, for the incineration?
Q For placing the solid waste in containers in a

1 chemical landfill.
 2 **A** Yes.
 3 **MR. DAVIDSON:** I think earlier he
 4 testified that that recommendation had been being
 5 made in earlier years. You were discussing
 6 disposal of PCB's and PCB wastes and Bill indicated
 7 that for industrial chemicals, which they would be
 8 one, it had always been our recommendation that
 9 they be properly landfilled or handled. Maybe you
 10 want to clarify that.
 11 **MR. PIETTE:** Please do. That's my
 12 understanding of what the record shows. I related
 13 this question just to the PCB environmental issue.
 14 **THE WITNESS:** And the incineration
 15 thereof. The incineration recommendation was made
 16 in 1970 after Monsanto determined, through some
 17 testing, that incineration was feasible.
 18 **BY MR. PIETTE:**
 19 **Q** And as far as the proper disposal of the solid
 20 waste resulting from spills of hydraulic fluids
 21 absorbed by Oil Dry or sawdust or whatever solid
 22 material, I understand that that recommendation for
 23 proper disposal in a chemical landfill had existed
 24 back into the early-'60's?
 25 **A** Yes.

1 **Q** But it was the PCB environmental issue that came to
 2 light in 1970, so you recommended that same type
 3 disposal and emphasized that now particularly in
 4 1970 because of the PCB issue? Is that fairly
 5 said?
 6 **A** Yes. Is this a good time for a break?
 7 **MR. PIETTE:** Anytime. Please just say
 8 so.
 9 (A recess was taken.)
 10 **BY MR. PIETTE:**
 11 **Q** We talked a little bit earlier about the
 12 communications that you were involved in as manager
 13 environmental control, and you listed a number of
 14 people or groups, I guess I should say, including
 15 regulatory agencies. Could you tell us, if you
 16 would, please, Mr. Papageorge, more about that?
 17 What communications did you have with regulatory
 18 agencies and their names and when it took place and
 19 what that involvement was?
 20 **A** I'll try to recall all of them.
 21 **Q** I realize it's a multiple question, but I think it
 22 might be easier if you would just recite that
 23 involvement and I'll ask you specific questions
 24 later about the individual ones then.
 25 **A** There were, of course, the federal departments and

1 regulatory agencies. Examples include the
 2 Department of Agriculture, the Food and Drug
 3 Administration, Department of Commerce,
 4 Department
 5 of Interior, Department of Defense. There were
 6 some state regulatory agencies. I don't claim to
 7 remember their official designations, but, for
 8 example, the agency in Georgia that's involved with
 9 agriculture and dairies. There's the Wisconsin --
 10 I believe it's the Department of Natural Resources
 11 or some such title, and they had to do with the
 12 environment. The Michigan equivalent both in
 13 environment and in dairy regulations.
 14 **Q** How about Ohio?
 15 **A** Yes. Yes, Ohio with the dairy. Dr. Hill, as I
 16 remember. That's all that comes to mind at
 17 present. I'm sure there were more.
 18 **Q** All right. And would all of these communications
 19 with these regulatory agencies have started in
 20 approximately 1970?
 21 **A** Where I was involved?
 22 **Q** Yes, when you were -- after you became manager of
 23 environmental control.
 24 **A** Yes.
 25 **Q** And would that have continued into 1971, '72, '73?
A Certainly, and it would have picked up.

1 Occupational Safety and Health Administration and
 2 NIOSH, N-I-O-S-H, the National Institute of
 3 Occupational Safety, and the Center for Disease
 4 Control comes to mind.
 5 **Q** More federal agencies?
 6 **A** That is true. Yes, they did start and continued on
 7 through the period that I was involved with PCB's,
 8 which was February '76.
 9 **Q** Okay. You mentioned or you referenced earlier
 10 water pollution statutes, and I know that there's
 11 one document that we're going to be seeing a little
 12 bit later that references the water pollution
 13 statutes. I think you included it as an addition
 14 to one of your letters?
 15 **A** That is correct.
 16 **Q** And a number of those, if not all of these states,
 17 had water pollution statutes even before 1970, did
 18 they not?
 19 **A** Oh, yes.
 20 **MR. EWING:** Object to the form.
 21 **THE WITNESS:** Yes. The 1970 attachment
 22 you're referring to was an update to the current
 23 statutes at that time.
 24 **BY MR. PIETTE:**
 25 **Q** What work did you have with the Department of

1 Agriculture? You list it as one of the federal
 2 agencies you communicated with.
 3 **A** They were interested in PCB's as it related to its
 4 presence in dairy production, dairy operations.
 5 They were also interested in the effects of PCB's
 6 on poultry and they were conducting studies at the
 7 Bethesda, Maryland laboratory. That's all I can
 8 recall of their interest.
 9 **Q** Okay. How about the Food and Drug Administration?
 10 **A** The Food and Drug Administration was interested in
 11 the presence of PCB's in human food.
 12 **Q** Did either of these departments, either the Food
 13 and Drug Administration or the Department of
 14 Agriculture, did they -- were there any rules or
 15 regulations that were promulgated as a result of
 16 these studies?
 17 **A** The Food and Drug Administration, beginning in
 18 about 1970, as best I recall, began issuing
 19 guidelines relating to the presence of PCB's in
 20 some select food items, such as milk and eggs, as I
 21 recall, and baby food and through subsequent years
 22 they would publish in the Federal Register what
 23 amounted to their latest thinking regarding the
 24 recommended levels of PCB's in some food items.
 25 **Q** Another federal regulatory agency you listed was

1 the Department of Commerce?
 2 **A** Yes.
 3 **Q** What was your work with them?
 4 **A** That related primarily to whether or not the
 5 continued use of PCB's in some applications was
 6 justified, and they were concerned primarily of the
 7 electrical application and the potential for impact
 8 on commerce in the economy, brownouts and the like.
 9 They were also interested and pursued the question
 10 of PCB's being imported into this country from
 11 ex-U.S. sources. I believe that was the area of
 12 interest on their part.
 13 **Q** Monsanto was the sole producer of PCB's in the
 14 United States, is that true?
 15 **A** I have some information, although I had a difficult
 16 time demonstrating its validity, that there may
 17 have been, on occasion, other producers that
 18 attempted to enter the market. I would personally
 19 describe Monsanto as being the key, principal
 20 producer, high 90-percent kind of number, but the
 21 potential for others to do so was there and
 22 difficult to demonstrate.
 23 **Q** There were producers outside the United States?
 24 **A** Yes.
 25 **Q** In a number of different countries?

1 A Yes.
 2 Q Do I understand correctly that some of them are
 3 still producing PCB's?
 4 A I have an understanding that PCB's are still
 5 produced in Germany for use in mine equipment. I
 6 cannot speak personally for the East European
 7 countries that were producing it back in '76, but I
 8 don't know what they are doing today. I'm talking
 9 now Czechoslovakia, Poland, that part of the world.
 10 I also cannot speak for the Spanish producers.
 11 Q In any event, Monsanto stopped completely in I
 12 think you said 1977, was it, producing any PCB's?
 13 A Did I say it? That's the right date.
 14 Q It is the right date?
 15 A It is the right date, but I don't know that it came
 16 up today yet.
 17 Q Is that, in fact, the case?
 18 A Yes.
 19 Q With respect to the electrical applications, the
 20 production of PCB's by Monsanto continued for a few
 21 years beyond 1972 up until 1977?
 22 A That is correct.
 23 Q There was a difference in the systems with respect
 24 to the use of the fluids?
 25 A One was a contained or enclosed system.

1 Q Can you describe that for us, please?
 2 A The electrical application was perceived to be an
 3 enclosed system in that the liquid containing the
 4 PCB's is in a sealed, metal container and that was
 5 perceived to be a use in which the control of
 6 escape to the environment was practical and
 7 feasible and the benefits from the continued use of
 8 that type of fluid would far outweigh the
 9 occasional mishap that might occur with this
 10 equipment.
 11 Q And what electrical equipment did that involve?
 12 A It involved transformers and capacitors and some
 13 starting -- electrical switches.
 14 Q How would you describe the system involving the die
 15 cast machine and the hydraulic fluid contained in
 16 that? What type of a system is that?
 17 MR. EWING: Object, foundation.
 18 A Well, it was originally perceived by Monsanto as an
 19 enclosed system, but with features that led to
 20 possible leakage therefore requiring more attention
 21 and prompt attention to control the loss of fluid
 22 to the environment, and the fact that these systems
 23 were under high pressure made that a very
 24 challenging task to just be prompt, shut down the
 25 line, repair the leak and put the system back in

1 service. So it was really an enclosed system on
 2 sort of a secondary order as compared to a
 3 transformer use.
 4 Q And what leakage are you referring to when you talk
 5 about it had some leakage from an enclosed system?
 6 A Oh, failed hose, hydraulic hoses or failed
 7 connections in the piping systems. Failure at the
 8 high pressure pumps that circulate this fluid. I
 9 think that about describes the general features.
 10 Q What about in the cooling water itself?
 11 MR. EWING: Object, foundation.
 12 A Oh, I understand that there was frequent
 13 opportunity for the water and the hydraulic fluid
 14 to mix. I don't know enough about the particular
 15 equipment designs to understand it all, but I do
 16 know there were many occasions when the water and
 17 the hydraulic fluid would mix.
 18 Q And was there a means for reclaiming the hydraulic
 19 fluid after it mixed with the water?
 20 MR. EWING: Object, form and
 21 foundation.
 22 A Yes.
 23 Q What was that?
 24 A Of course it varied from site to site, but in
 25 general what it amounted to was to capture or trap

1 the mixture of water and hydraulic fluid in the
 2 proper sump tank, below-level tank. The hydraulic
 3 fluid, being heavier than water, would settle to
 4 the bottom.
 5 Q With or without PCB's, hydraulic fluid is heavier
 6 than water?
 7 A No, some hydraulic fluids are a mineral oil base,
 8 they're lighter than water, they will float, but
 9 the PCB types were heavier than water and would
 10 settle to the bottom. It was encouraged by
 11 Monsanto that the material at the bottom of the pit
 12 would be salvaged and recycled, refinished, to make
 13 it acceptable and put back in the system, and it
 14 was one of really avoiding a waste problem, waste
 15 disposal problem, and it's an economic advantage to
 16 save it and reuse it.
 17 Q And was that recommendation by Monsanto
 18 something
 19 that existed as early as the early-1960's?
 20 A It existed even before that in the '50's, the
 21 literature and so on that's covered.
 22 Q And you have described now the means for reclaiming
 23 the hydraulic fluid mixed with water. What about
 24 hydraulic fluid that escaped or leaked from the
 25 hoses, for instance, that you described before onto
 the floor?

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1 A Well, there again, the advice that Monsanto gave
 2 was if these leaks are significant that, again, a
 3 below level sump tank will be installed to capture
 4 the material to avoid having sewer openings in that
 5 vicinity so it doesn't find its way into the sewer
 6 system. The fact that in this latest example there
 7 is no water present makes the recovery and
 8 recycling much easier. Except for perhaps some
 9 dirt and all, it's rather easy to filter and reuse.
 10 There is no water removal problem.
 11 Q And that which would be absorbed by waste material?
 12 A The solid material that contains these types of
 13 fluids, the only acceptable method of disposal is
 14 the approved industrial chemical landfill.
 15 Q So that was not something that you or Monsanto
 16 anticipated could be reclaimed once it was absorbed
 17 into a solid type material?
 18 A There was no good technology for doing that.
 19 Q Was the Pydraul F-9 hydraulic fluid a hydraulic
 20 fluid that was sold by Monsanto throughout the
 21 1960's?
 22 A Yes.
 23 Q And was that one of the hydraulic fluids that you
 24 just described that could be reclaimed by the means
 25 you just described?

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1 A Yes, unless it was severely contaminated with other
 2 chemicals.
 3 Q Okay. What arochlor was contained in Pydraul F-9?
 4 A Arochlor 1242.
 5 Q Your work with the Department of Interior, what did
 6 that consist of?
 7 A It was primarily with their laboratories that were
 8 involved with wild bird studies. I have in mind in
 9 particular the one in Maryland, Patuxent, Maryland.
 10 In some of their fish laboratories, there is one,
 11 for example, in Columbia, Missouri and Corvallis,
 12 at that time it was part of the Interior,
 13 Corvallis, Oregon, which later became an EPA
 14 laboratory.
 15 Q They were concerned with the PCB's in connection
 16 with all of these?
 17 A With, yes, fresh-water fish.
 18 Q Now did that work involve or did that concern or
 19 did their jurisdiction involve the Great Lakes
 20 area?
 21 A Yes. That's part of the Interior Department,
 22 right.
 23 Q Were there studies by the Interior Department that
 24 involved the Great Lakes in the early-'70's? Do
 25 you know?

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1 A I'm not aware of any specific studies that they
 2 sponsored, but they were interested and present at
 3 meetings of the group that was interested in the
 4 Great Lakes. It involved the States and Canada. I
 5 forgot the name of it, but there was a group at the
 6 time meeting or relating to the environmental
 7 quality of the Great Lakes.
 8 Q You participated in that?
 9 A I did. I attended some sessions that they held and
 10 spoke to the groups, to the group.
 11 Q Where was that?
 12 A Chicago. I recall one meeting.
 13 Q Do you recall when that was?
 14 A '71.
 15 Q Can you tell me again what group that was or don't
 16 you recall?
 17 A I'm going to try. As I remember, Great Lakes
 18 Governors Conference or some such title.
 19 Q There was a national conference on PCB's in
 20 Chicago, Illinois. Are you referring to that?
 21 A No.
 22 Q That's separate?
 23 A I think the one you're referring to is the 1975
 24 meeting sponsored by the Environmental Protection
 25 Agency.

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1 Q Yes.
 2 A November 1975?
 3 Q Yes.
 4 A That is the later meeting. The Great Lakes
 5 Governors Conference or some sort group met much
 6 earlier or several years earlier than that.
 7 Q As early as 1971?
 8 A Oh, yes, um-hum.
 9 Q Of course, you are right, this one was sponsored by
 10 the EPA, this national conference on PCB's. You
 11 participated in that, too?
 12 A Yes.
 13 Q And that was in cooperation with the Department of
 14 Agriculture, Council on Environmental Quality,
 15 Department of Health, Department of the Interior,
 16 all the departments you listed?
 17 A Yes.
 18 Q Do you know if there were any results or I should
 19 say any publications or conclusions that resulted
 20 from this Governors Conference in 1971? Any follow
 21 up?
 22 A There was certainly considerable follow up by
 23 several investigators, predominantly from the
 24 member states departments, whether they were
 25 environmentally-oriented departments or public

1 health departments and the like.
 2 **Q** Was Wisconsin a member of that conference, do you
 3 know, that Governors Conference?
 4 **A** Yes, they were, a very active member.
 5 **Q** Michigan?
 6 **A** Michigan, very active.
 7 **Q** Let's see. I have to think about this. Ohio?
 8 **A** I don't recall Ohio.
 9 **Q** You consider Ohio a Great Lake, don't you?
 10 **A** Yes, but I don't recall them as being a
 11 participant. Michigan, Wisconsin, Illinois is what
 12 stands out in my mind as the more active states.
 13 At least their representatives were more active.
 14 **Q** The next agency that you listed was the big DOD,
 15 Department of Defense. How were they interested in
 16 PCB's?
 17 **A** The Department of Defense through its Corps of
 18 Engineers was very interested in the electrical
 19 equipment. They were also interested in some of
 20 the PCB's that Monsanto stopped selling in August
 21 of 1970, because some of those PCB's were used in
 22 defense weaponry and the like that I was never made
 23 privy to, but they were upset, very upset that they
 24 could no longer get this -- these materials, so
 25 their interest was one of trying to persuade us to

1 with a representative of the Corps of Engineers was
 2 a telephone contact.
 3 **Q** And can you tell us more about that? When was that
 4 and what was the purpose of that phone call? I
 5 assume it was by them to you?
 6 **A** Yes. I'm trying to remember the name of the bay up
 7 in the Spokane, Washington area. I believe it's
 8 Spokane. Anyway, there was a shipment of military
 9 supplies being loaded for shipment to Alaska, and
 10 during the loading process, a transformer was
 11 accidentally dumped into the bay and released
 12 PCB's. There was quite a concern raised about the
 13 proper method of clean-up of the bay. This is when
 14 I got a call from the State of Washington
 15 authorities, as well as the Corps of Engineers
 16 people, regarding what's the best way to clean up.
 17 That was the general question. That was my only
 18 contact with the Corps of Engineers directly.
 19 **Q** You mentioned OSHA?
 20 **A** I did.
 21 **Q** NIOSH?
 22 **A** Correct.
 23 **Q** You had separate communications with them?
 24 **A** Yes.
 25 **Q** Okay. What communication did you have with OSHA?

1 violate -- not violate, but relax our ban or
 2 termination of sales to permit their defense
 3 contractors to continue using it. So they were
 4 active in that sense.
 5 **Q** Which ones did you stop selling in August 1970?
 6 Which ones did you ban?
 7 **A** All of the PCB's Monsanto made that went into what
 8 Monsanto described as open use. This was the
 9 printing ink use, the coats and paints use, the
 10 caulking use, the use in sealants of all kinds,
 11 adhesives, the carbonless copy paper and so on.
 12 **Q** Okay. You mentioned the Corps of Engineers. Did
 13 they also have responsibility for the Great Lakes
 14 area?
 15 **MR. EWING:** Object to the form and
 16 foundation.
 17 **A** I don't know.
 18 **Q** Okay. Did you have any communications, and we're
 19 still talking about your communications with
 20 regulatory agencies, as a part of your function
 21 starting 1/1/70 as manager environmental control?
 22 My question is did you have communication with the
 23 Corps of Engineers at all?
 24 **A** Yes. It was not a face-to-face, it was over the
 25 telephone. As I recall, my only contact directly

1 **A** I don't recall a specific set of meetings. It was
 2 just a general contact regarding exposure level of
 3 employees or workers to PCB's. They were in a
 4 position or the representatives of OSHA were in a
 5 position of monitoring the literature and the
 6 health studies and trying to get familiar with the
 7 overall situation.
 8 **Q** That exposure to employees, that was a concern of
 9 Monsantos from the outset in selling hydraulic
 10 fluids to the die cast industry?
 11 **MR. EWING:** I object to the form of the
 12 question and foundation.
 13 **A** Yes.
 14 **Q** And what was that concern?
 15 **A** The concern is one of avoiding employee exposure
 16 through skin contact and through breathing.
 17 **Q** And how did Monsanto communicate that to the
 18 customer/purchaser of the hydraulic fluid?
 19 **A** There were several ways. One, of course, is with
 20 the person-to-person contact with the Monsanto
 21 representative calling on the potential buyer of
 22 this type material or user of this type material.
 23 It appears on the product label and it appears in
 24 the literature that describes the fluid and its
 25 applications.

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1 Q And your communications with NIOSH?
 2 A Yes.
 3 Q What did that involve?
 4 A I recall a -- of course, there were telephone calls
 5 and the like that I don't recall specifically
 6 today, but I do recall a visit from NIOSH of
 7 representatives at our Sauget, Illinois plant to
 8 get familiar with our production unit and the kinds
 9 of things we were doing to minimize exposures and
 10 so on. I was also involved directly with NIOSH as
 11 a member of a committee that critiqued a proposed
 12 criteria document on PCB's that NIOSH put together
 13 in 1976.
 14 Q Did that deal at all with disposal, proper
 15 disposal?
 16 A No, this is slanted toward human exposure and
 17 effects.
 18 Q Handling?
 19 A Handling it, yes.
 20 Q And the Center for Disease Control?
 21 A That primarily involved one of their scientists who
 22 was conducting some animal studies with PCB's.
 23 Q Who was that?
 24 A Dr. Rinata Kimbro. She was a member of CDC and
 25 transferred to the Food and Drug Administration.

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1 Q And your communications with her were in the
 2 early-1970's?
 3 A I would suggest the latter part of '70 on into '71.
 4 Q When you left Monsanto, did all of your records
 5 that you personally kept in whatever capacity that
 6 you were as a Monsanto employee, did they stay with
 7 Monsanto?
 8 A As far as I know, yes.
 9 Q Did you have records that you kept with respect to
 10 some of these communications with these
 11 governmental agencies?
 12 A Such records existed, yes. I kept copies.
 13 Q Including correspondence back and forth?
 14 A Yes.
 15 Q How about the state regulatory agencies? You
 16 already mentioned Georgia. Did you mention what
 17 the involvement was there with Georgia? I don't
 18 recall.
 19 A It was presence of PCB's in milk.
 20 Q The next one you mentioned was Wisconsin DNR.
 21 What
 22 was your communications with them and what did that
 23 involve?
 24 A It was primarily with their analytical chemists who
 25 were interested in developing expertise in the
 analysis of PCB's in all kinds of samples.

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1 Q Samples?
 2 A Samples. All the types of samples.
 3 Q From various --
 4 A From any source, whether it be solid material or
 5 air or water.
 6 Q Okay. And when would you say that was?
 7 A As best I recall, it would be the latter part of
 8 the 1970's when I started to get involved.
 9 Q More specifically you say the latter part of the
 10 '70's?
 11 A Yes. Of course it went on into the '71, '72
 12 period.
 13 Q Are you saying the latter part of the '70's or '70?
 14 A I'm sorry. 1970.
 15 Q Okay. Thanks. So in the latter part of 1970 and
 16 into 1971 you are dealing with WDNR?
 17 A Yes.
 18 Q And some analytical chemists who are analyzing
 19 various samples of substances as to whether they
 20 contain PCB's?
 21 A That is correct.
 22 Q And the substances would have been things like
 23 water, soil, air, animals, fish, foul?
 24 A That type of thing, yes. Yes, those are typical
 25 examples.

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1 Q Who were you dealing with? Can you come up with
 2 any names?
 3 A I remember a Dr. Veith, V-E-I-T-H. I think that's
 4 the way he spells it, but I'm not certain.
 5 Q He?
 6 A I'm sorry?
 7 Q Was it a he?
 8 A Yes.
 9 Q Do you remember his first name?
 10 A I do not today, no. Then there was another doctor.
 11 I think he was associated with the university.
 12 Q Of Wisconsin?
 13 A Of Wisconsin who eventually went down to Arkansas.
 14 Lee. Fred Lee. Dr. Fred Lee, L-E-E. I think
 15 that's his name.
 16 Q Somebody from the South certainly ought to
 17 remember
 18 Fred Lee. I mean you probably know that name,
 19 don't you?
 20 MR. DAVIDSON: I remember Gilman Veith.
 21 THE WITNESS: Gilman. That's the name.
 22 MR. PIETTE: Thank you.
 23 THE WITNESS: They were very active in
 24 the analytical field and the presence of PCB's in
 25 environmental samples.
 BY MR. PIETTE:

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1 Q And Dr. Fred Lee was with the University of
 2 Wisconsin?
 3 A As best I recall, yes, he was with the university.
 4 Q Helping out WDNR as far as these analytical
 5 studies?
 6 A He was involved somehow with the WDNR.
 7 Q Any other names you remember from Wisconsin?
 8 A Not at the moment.
 9 Q Anybody that comes to mind that you dealt with at
 10 WDNR other than the analytical chemist, Dr. Veith
 11 and UW?
 12 A I just don't remember their names.
 13 Q Okay. But there were WDNR people involved other
 14 than these analytical chemists?
 15 A They were present at this Great Lakes Governors
 16 Conference. They were -- I recall attending a
 17 hearing in Madison on PCB's. This would be about
 18 1974. That may not be the exact date, but that's
 19 the best I can recall.
 20 Q Conducted by WDNR?
 21 A WDNR had a hearing.
 22 Q Did you actually meet with these analytical
 23 chemists or did you just talk to them over the
 24 phone, Dr. Veith and Dr. Lee?
 25 A I met with them face-to-face and over the phone

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1 their products?
 2 A I do not recall associating Tecumseh as a Monsanto
 3 customer, but I do recall the name of the company.
 4 Now what respect, I just don't recall anymore where
 5 I saw the name or heard the name.
 6 Q And having seen the documents that you reviewed
 7 that Mr. Bistline produced, it didn't refresh your
 8 recollection of ever having dealt with or talked to
 9 or met with anybody from Tecumseh?
 10 A That is true.
 11 Q Nor have you ever been to the Tecumseh plant in
 12 Sheboygan Falls?
 13 A That is true.
 14 Q Or Marion, Ohio?
 15 A That's correct.
 16 Q Or Tecumseh, Michigan?
 17 A Correct.
 18 Q Or any of the various Tecumseh plants or their
 19 research laboratory?
 20 A That's right.
 21 Q Do you ever have any recollection of ever dealing
 22 or talking to anybody from Tecumseh at all?
 23 A I do not.
 24 Q An environmental director, I believe his title was,
 25 by the name of Cy Desmet, D-E-S-M-E-T?

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1 and, of course, they did a lot of their
 2 communications with Monsanto's chemists,
 3 laboratory-to-laboratory-type contact.
 4 Q All right. Do you know if any of the samples that
 5 they had at that time came out of either of the two
 6 Great Lakes that Wisconsin abuts on?
 7 A I just --
 8 Q Like Michigan or Lake Superior?
 9 A I am under the impression they were, but I at the
 10 moment don't really recall.
 11 Q Do you know whether any came out of the Sheboygan
 12 River?
 13 A I don't remember.
 14 Q Had you ever heard of the Sheboygan River?
 15 A Oh, yeah, yes. I'm familiar with the name, but
 16 you're asking me did they mention samples from
 17 those sources. I just don't remember today.
 18 Q Okay. Before you looked at documents in connection
 19 with this case produced by Dr. Bistline a couple of
 20 months ago, were you at all familiar with the name
 21 Tecumseh?
 22 A Yes.
 23 Q Tecumseh Products?
 24 A I had heard the name before, yes, sir.
 25 Q As being a Monsanto customer or in connection with

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1 A I don't remember at all any of those contacts.
 2 Q Returning now to the WDNR, you don't recall
 3 whether
 4 there was or wasn't any samples from the Sheboygan
 5 River? You have heard of the Sheboygan River, but
 6 you don't have a recollection that that was
 7 involved?
 8 A I do not.
 9 Q I'm trying to get as much information as I can
 10 about your involvement with WDNR. You worked with
 11 two analytical chemists, Dr. Veith and Dr. Lee.
 12 You also said that they had a representative at the
 13 Chicago Governors Conference in 1970 or '71?
 14 A Yes.
 15 Q You don't recall who that representative was?
 16 A No, I don't.
 17 Q Okay. Was there any other Wisconsin representative
 18 at the Wisconsin -- at the Governors Conference
 19 that you can think of?
 20 A There was more than one person from Wisconsin.
 21 Q Okay.
 22 A But I don't remember just whether there were two or
 23 three or four. There was a group from Wisconsin as
 24 best I remember. I don't recall today what
 25 particular departments or agencies they
 represented.

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1 Q All right. I don't suppose it makes much sense to
2 ask the question, but was the governor there?
3 A No, no governors.
4 Q Any other involvement with WDNR other than those
5 occasions you have mentioned?
6 A You said occasions rather than people?
7 Q Okay. I consider an occasion as your work with Dr.
8 Veith and Dr. Lee. I know it was ongoing over a
9 period of time, so that's probably not fair to call
10 that an occasion, but that was ongoing over -- tell
11 us over what length of time, would you say?
12 A Gosh, '73, '74 period.
13 Q It was a matter of years?
14 A They were active. Dr. Gilman Veith was very active
15 in this field. He attended many -- several
16 meetings that I attended. He would also be an
17 attendee. One that comes to mind specifically was
18 a meeting called by the EPA laboratory in Duluth,
19 Minnesota. As I remember, Dr. Veith was there.
20 Q When was that Duluth meeting?
21 A March of '71.
22 Q Dealing with?
23 A PCB's and the environment. Just a broad subject.
24 Q Whenever they talked about PCB's in the
25 environment
or this broad subject that you were commenting on,

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1 did it include a proper disposal method?
2 MR. EWING: Object to the form of the
3 question.
4 A It depended on the group. The industry group, yes.
5 The government group were more interested in the
6 analytical methods and the health effects and uses,
7 and depending on period of time, it was quite
8 basic. What are PCB's kinds of question.
9 Q With respect to this Duluth meeting, who attended
10 that?
11 A This was attended by members of the Environmental
12 Protection Agency and representatives from several
13 of the Great Lakes states. They were primarily the
14 analytical-type person, analytical chemists.
15 Q And WDNR was present there? At least Dr. -- How do
16 you pronounce his name?
17 A Veith is the way I pronounce it.
18 Q Okay. Thanks. At least Dr. Veith was there?
19 A To the best of my recollection, yes.
20 Q Okay. Michigan. What was your involvement with
21 the Michigan DNR?
22 A Again, I don't recall specific individuals or
23 times. I do know that I met representatives of the
24 Michigan agency at the Great Lakes Governors
25 Conference. I met them, as I remember, in Duluth.

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1 I visited with them in Lansing, Michigan in their
2 laboratory, in their offices. Generally the
3 discussion centered on analytical methods, new
4 findings as to presence and it was a discussion on
5 what each of us knew regarding health effects,
6 particularly on animals, animal studies and the
7 like.
8 Q Did they also -- or I should say were they also
9 studying various samples as to whether or not they
10 contained PCB's?
11 A Yes, that was their principal activity at the time.
12 Q And you also dealt with Ohio, a Dr. Hill, I think
13 you said you recalled?
14 A Yes.
15 Q Okay.
16 A I met with Dr. Hill.
17 Q Was he also an analytical chemist?
18 A No, he was, as best I remember, he was a medical
19 doctor. He had a medical degree and he was the
20 principal person in the Ohio Department of
21 Agriculture dairy section. He had a lot to do or
22 had everything to do with setting standards for
23 chemicals or contaminants in dairy products, and he
24 was attempting to get some guidance from the Food
25 and Drug Administration, I recall. His contact

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1 with Monsanto and eventually me was to really get
2 some more information regarding PCB's and their
3 uses and types and analytical methods and so on.
4 Q Did any of the three states or actually four states
5 that you mentioned, Georgia, Wisconsin, Michigan
6 and Ohio, did any of them result in regulatory
7 action?
8 A Not to my knowledge.
9 Q How about publications? Did anything result in
10 statutes or codes or ordinances or anything of that
11 nature?
12 A It was not brought to my attention.
13 Q What about the FDA itself? Was there one of the
14 communications that you made to your customers
15 which included an FDA regulation?
16 A Yes, at least one. We had attached copies of the
17 Federal Register in which the Food and Drug
18 Administration was proposing some acceptable levels
19 of PCB's and a list of various types of foods.
20 Q Was that an ongoing study that you were involved in
21 in assisting them in their study?
22 A Well, when you say "study," I don't want to leave
23 an impression that this is a formal laboratory kind
24 of study. The FDA was conducting what they called
25 at the time a market basket analysis program where

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1 they would -- they have a select list of the
2 typical items that a household might purchase, and
3 that's the market basket concept. They would
4 analyze the products purchased at the local
5 supermarket to fit that market basket in different
6 parts of the country and see if PCB's were present
7 in these materials, and, if so, to what levels.
8 From that kind of study, they came up with levels
9 that they, as an agency, felt comfortable
10 healthwise and yet perceived to be achievable and
11 practicable without disrupting the entire food
12 system in this country.
13 Q And the earliest regulation they put out was when
14 on PCB levels?
15 A As best I recall, about '71.
16 Q And to the best of your knowledge, Mr. Papageorge,
17 is that the earliest regulation by any regulatory
18 agency, whether federal or state, with respect to
19 acceptable levels of PBC's?
20 A In the food chain?
21 Q All right. In the food chain.
22 A Yes.
23 Q All right. Were there earlier regulations in
24 connection with PCB's, exclusively PCB's, in any
25 respect?

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1 as distinguished from a regulation.
2 Q So that in 1971 it was an FDA guideline?
3 A Yes.
4 Q Did it then become an FDA regulation or remain a
5 guideline? Whatever your best understanding is.
6 A Subsequently they came out with a proposed
7 regulation, I believe that was about 1973 or
8 thereabouts, and there was another delay and I,
9 frankly, at this moment don't recall a regulation
10 being promulgated while I was involved with PCB's,
11 which would take me up to early-'76.
12 Q We can look at this later, but the enclosure with
13 one of your letters, was that the FDA guideline?
14 A I believe it was the proposed regulation, as best I
15 recall. We can read the document. It will speak
16 for itself.
17 Q Absolutely. And we will. Did you ever personally
18 visit Madison, Wisconsin in connection with your
19 work with the WDNR?
20 A Yes.
21 Q You actually had gone to Madison?
22 A Yes.
23 Q More than once?
24 A Yes.
25 Q How many times have you been there? Over those two

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1 A No, not to my knowledge.
2 Q The earlier regulations simply dealt with, for
3 instance, industrial waste in general?
4 A Yes.
5 MR. EWING: Object to the form of the
6 question.
7 BY MR. PIETTE:
8 Q Not just specifically related to PCB's, but, for
9 instance, wastewater and regulations in connection
10 with that?
11 A Yes.
12 MR. EWING: Again, I object to the form
13 of the question.
14 BY MR. PIETTE:
15 Q So as you sit here today, to the best of your
16 recollection, the earliest regulation was by the
17 FDA, the Food and Drug Administration, in about
18 1971 with respect to regulating the levels of PCB's
19 in the food chain?
20 A Yes. I don't want to mislead you. As I recall at
21 that time, instead of using the word regulation,
22 they were careful and used the word guideline. I
23 don't personally understand the difference when it
24 comes to enforcing, but as I understand it, there
25 is a difference in the way FDA looks at a guideline

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1 or three years, you were there on a number of
2 occasions?
3 A As best I recall, yes. I don't recall the number.
4 Once or twice a year for a couple or three years,
5 something like that.
6 Q Did any other Monsanto representatives accompany
7 you on those trips? Were there other Monsanto
8 people there, too?
9 A As best I recall, at least on one of the very early
10 trips when the emphasis was on analytical
11 procedures I believe, as best I recall, I was
12 accompanied by an analytical chemist from Monsanto.
13 Q Do you know who it might have been?
14 A Dr. Scott Tucker.
15 Q Scott Tucker?
16 A Scott Tucker. I believe that's the person. I
17 believe that's true.
18 Q You described a little earlier that you were a part
19 of a team at Monsanto in your capacity as the
20 manager of environmental control in dealing with
21 this PCB environmental issue?
22 A Yes.
23 Q Is that fairly said?
24 A Yes.
25 Q Okay. Who were some of the other team members at

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1 Monsanto in the early-1970's that were dealing with
2 the PCB environmental issue?
3 A Elmer Wheeler representing the Medical Department,
4 Dr. William Richards, Director of Research, Dr.
5 Martin Farrar, Director of Research, William Kuhn,
6 K-U-H-N, Manager of Manufacturing, Robert Kountz,
7 K-O-U-N-T-Z, Manager Engineering, Edward John,
8 J-O-H-N, Public Relations, Walter Schalk,
9 S-C-H-A-L-K, Director Marketing, Donald Olson,
10 O-L-S-O-N, Director of Marketing, Phocian,
11 P-H-O-C-I-A-N, Park, Attorney. I suspect there
12 were more. I can't remember any others. Now they
13 would attend or else send their alternates when
14 they were away from the office.
15 Q To your meetings?
16 A Yes.
17 Q I see. And the meetings then would result in the
18 input of each of these team members and, as you
19 described it, you became the focal point? Does
20 that sound right?
21 A That sounds correct.
22 Q For all of the communications dealing with this PCB
23 environmental issue?
24 A Yes.
25 Q You also list or describe as groups that you

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1 communicated with as various labs, both private and
2 public, including universities, I think you said?
3 A Yes.
4 Q Could you tell us, please, what labs or
5 universities, I know you mentioned the University
6 of Wisconsin already in connection with the WDNR,
7 that you dealt with in the early-1970's?
8 A I'll try to remember them all. There was Cornell
9 University and the University of
10 California-Berkeley. I believe that covers all
11 that I can remember at the moment.
12 Q And you mentioned UW analytical chemist Dr. Fred
13 Lee?
14 A Yes.
15 Q Okay. Did you deal with anybody from the
16 University of Michigan that you can recall?
17 A I, at the moment, can't recall.
18 Q Or Ohio?
19 A I don't recall any.
20 Q Okay. What were the methods by which you
21 communicated the information dealing with the PCB
22 environmental issue to your customers?
23 MR. EWING: Object to the form of the
24 question.
25 A Of course the typical ones are the telephone

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1 contacts. There were -- I was involved, of course,
2 in, as I discussed earlier, the mailing of
3 informational letters to customers of record.
4 There were letters composed in response to
5 questions raised either over the telephone or by
6 mail. There were contacts made through field
7 representatives, indirect contacts, where I would
8 pass on information to the field representative
9 who, in turn, would either call on the customer or
10 forward a document or call on the telephone or all
11 three.
12 Q Were the -- I'm sorry. Were you done with that?
13 A I believe I am, yes.
14 Q The methods of contacting or communicating with
15 Monsanto contactors?
16 A I was going to mention there were opportunities for
17 me to make personal visits to customer sites.
18 There weren't many, but there were some and there
19 were also opportunities for customers to come to
20 St. Louis to attend meetings designed to answer
21 their questions.
22 Q And by "St. Louis," you mean at Monsanto
23 headquarters?
24 A At Monsanto, yes.
25 Q And were the field representatives, as far as the

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1 usual business practice of Monsanto, were they
2 expected to prepare written reports, what I have
3 come to know as call reports, when they made
4 personal visits in the field?
5 MR. EWING: Object to the form and
6 foundation.
7 A Call reports were made and the decision on whether
8 a call report was appropriate or not for any
9 particular visit was left up to the field
10 representative's judgment.
11 Q That was the Monsanto practice?
12 A Yes.
13 MR. EWING: Same objections.
14 BY MR. PIETTE:
15 Q The telephone contacts you mentioned, were you
16 involved in some of them personally?
17 A Yes.
18 Q With whom? Does any customer come to mind that
19 you
20 had telephone contacts with?
21 A Oh, gosh, not any particular one. There were so
22 many. They would be either contacted directly when
23 I picked up the phone or else some salesman would
24 call me and say, "Would you call this customer."
25 Q So --
A Or a letter would come.

1 Q So as the manager environmental control, you became
 2 the designated person for whatever troubleshooting
 3 was involved in responding to questions or
 4 contacting customers?
 5 A I don't know that designated person would be
 6 totally appropriate. For example, if the question
 7 is a purely medical question, I did not play the
 8 role of a medical doctor. I would ask the
 9 corporate medical director to respond to that kind
 10 of question. This is the approach taken throughout
 11 Monsanto. When the question exceeded your limit of
 12 knowledge or expertise, pass it onto the right
 13 person. So I would be part of that chain, if you
 14 will.
 15 Q What if the question related to disposal of
 16 hydraulic fluid containing PCB's?
 17 A If the field salesman, and I'd be surprised, didn't
 18 have the answer to that after he'd been coached, he
 19 would send it onto, say, me.
 20 Q Coached by Monsanto people?
 21 A Oh, yes. We would hold meetings and coach him and
 22 say, "Here is the way you handle this kind of
 23 question."
 24 Q I see. But if there were further occasions for a
 25 customer to talk to somebody on that subject,

1 A Some of those documents are samples of the kind of
 2 letter I had in mind, yes.
 3 Q All right. And you mention also letters responding
 4 to inquiry by customers. Sometimes customers would
 5 write to you specifically with regard to questions?
 6 A They would write to me or write to somebody in
 7 Monsanto, and some of those letters would come to
 8 my desk for response.
 9 Q Okay. Are copies still in your records of those
 10 correspondence going back that 20 years?
 11 A I today don't know. At the time I was relieved of
 12 that type of responsibility, they were in the file.
 13 Q Do you recall whether or not you received any
 14 correspondence from anybody at Tecumseh?
 15 A I don't recall, no.
 16 Q You also described field representative contacts
 17 and that may or may not result in a call report;
 18 correct?
 19 A That is correct.
 20 Q You saw some of the call reports that were
 21 generated or I should say produced by Mr. Bistline
 22 a couple of months ago?
 23 A I did.
 24 Q And those call reports are on Monsanto's form?
 25 A Yes.

1 proper disposal of a hydraulic fluid containing
 2 PCB's, that would be directed to you?
 3 A Eventually. Sometimes they get a hold of the
 4 marketing manager or marketing manufacturing
 5 manager and eventually my phone would ring.
 6 Q That's what you meant by telephone contacts with
 7 customers? You were just involved with that on an
 8 ongoing basis?
 9 A Yes.
 10 Q And was it common for customers to call and discuss
 11 those things with you?
 12 MR. EWING: Object to the form of the
 13 question as vague.
 14 A I don't know how to describe "common," but it
 15 wouldn't be unusual in terms -- it wouldn't
 16 surprise me if that kind of question was asked.
 17 Q Would you have made notes with respect to those
 18 telephone contacts?
 19 A No, I did not have a practice of that.
 20 Q The second means that you described was mailings of
 21 information letters to customers of record, and
 22 that's the mailings that you described earlier and
 23 which refer to the documents produced by Mr.
 24 Bistline a couple of months ago?
 25 MR. EWING: Object to the form.

1 Q You mentioned personal visits by yourself to some
 2 customer sites. I take it that Tecumseh was not
 3 one that comes to mind?
 4 A That is correct.
 5 Q Okay. Where did you make personal visits to?
 6 A Oh, I don't remember all of them. Of course, I
 7 went to several transformer plants, several
 8 capacitor plants. I went to a defense contractor
 9 plant up in New England. I do recall going to a
 10 die casting plant, but I don't recall which one,
 11 what company it was. I went to a synthetic rubber
 12 plant. I went to a vinyl chloride producing
 13 facility. I'm sure there were others. I just
 14 don't remember them at the moment.
 15 Q What was the purpose of your visits, your personal
 16 visits, to these sites?
 17 A I kind of look upon it as a dual purpose. One is
 18 to educate myself a bit as to the types of
 19 customers and their operations that we have with
 20 the PCB's, and the other purpose was to share with
 21 the representatives of the customers what we knew
 22 about PCB's and the environment.
 23 Q And you did that?
 24 A Yes.
 25 Q And when you made your contacts, your personal

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1 visits, was the individual sales rep generally with
 2 you?
 3 A Yes.
 4 Q And would he have or she have made out a call
 5 report?
 6 MR. EWING: Object, foundation.
 7 A Occasionally, yes.
 8 Q Sometimes your name appears on copies of some
 9 communications and I believe, but this is by memory
 10 now, on some of the call reports. Is that -- Why
 11 would your name appear? I mean, was there some
 12 type of a procedure whereby if it dealt with the
 13 PBC environmental issue, you should get a copy of
 14 the report?
 15 A It was left to the judgment of the author of the
 16 report. If he felt it should be something I should
 17 be tuned in on or hadn't had a chance to call me on
 18 the phone, he was trying to fill some sort of
 19 communications gap by including me.
 20 Q There was no arrangement that you got copies of all
 21 materials generated with respect to the PBC
 22 environmental issue for some period of time?
 23 A No, there was no such arrangement.
 24 Q When you made your personal visits to the
 25 customer's site, generally were they prearranged

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1 visits where they knew you were coming?
 2 A Oh, yes, yes.
 3 Q Who, I sound like an owl, but who generally is the
 4 person that you would contact at the site? Who did
 5 you personally deal with?
 6 A In most instances it included the top manager and
 7 his staff. Generally we would end up in a
 8 conference room about this size with a dozen people
 9 in it.
 10 MR. EWING: Probably not this fancy,
 11 though.
 12 THE WITNESS: Some were pretty fancy
 13 and some weren't.
 14 MR. EWING: That means he never was at
 15 Die Cast.
 16 THE WITNESS: And the rest would
 17 generally meet with the purchasing representative,
 18 whether it be the purchasing agent or the
 19 vice-president of purchasing or buyer, whatever the
 20 title, along with the engineer that was involved
 21 with the material and usually a representative of
 22 the production unit that used the material, so
 23 there would be that smaller audience of about three
 24 or four people as compared to the bigger audience I
 25 mentioned earlier.

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1 BY MR. PIETTE:
 2 Q The top manager, by that you mean for that
 3 individual plant?
 4 A Yes.
 5 Q That site you were at?
 6 A The site manager, yes.
 7 Q A number of Monsanto's customers had more than
 8 one
 9 site or plant?
 10 A That is true.
 11 Q Did you make any attempt to communicate your
 12 information that you were sharing on PCB's with the
 13 corporate headquarters of the particular plant or
 14 site that you were visiting?
 15 A Whenever I had the opportunity, certainly, but I'm
 16 trying to recall -- I don't recall any situation
 17 where I personally spoke to the top corporate
 18 managers. I had to rely on the customer's
 19 representatives to communicate upward within their
 20 own organizations.
 21 Q So that your communications were with the top plant
 22 managers and staff people, including, as you
 23 mentioned, purchasing representatives, buyers,
 24 engineers, and Monsanto looked to them to make
 25 whatever communications were necessary to their
 corporate people?

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1 MR. EWING: Object to the form of the
 2 question. It's ambiguous and it mischaracterizes,
 3 I think, what his testimony was.
 4 A Well, the communications to the customer is not
 5 limited to just what I and others on my team that I
 6 mentioned earlier and the field salesman would
 7 convey. There were others higher up in Monsanto
 8 that communicated with their counterparts at their
 9 customer's sites or offices.
 10 Q Can you give me an example of that?
 11 A Well, yes, I recall one very vividly. Monsanto's
 12 vice-president of one of the operating units
 13 speaking to his counterparts at General
 14 Electric-Westinghouse. That's one that comes to
 15 mind quickly.
 16 Q With respect to the PCB environmental issue?
 17 A Yes, sir.
 18 Q How did you handle the mass mailings that you did
 19 to your customers when it came to whom to direct it
 20 to?
 21 MR. EWING: Object, foundation.
 22 A It was addressed to the individual or job title
 23 that was on Monsanto's records that we looked at to
 24 get the list of customers.
 25 Q And did that include, for instance, like the

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1 director of purchasing or plant manager? I'm
2 trying to get an idea of how you arrived at the
3 person to whom the notice was sent.
4 **A** Those titles you just described are typical.
5 Sometimes it would appear as a title only, like
6 vice-president so and so company, such and such a
7 street and so on. There are other times it would
8 be by name with a title, Mr. so and so, president,
9 or it might be the plant manager with his name or
10 it might be just a title, like purchasing agent or
11 engineering with no specific individual's name. It
12 depended really on the information that was on
13 record. Some of it was thorough and some of it was
14 not.
15 **Q** Monsanto's records?
16 **A** Yes, Monsanto's records.
17 **Q** So the information you gleaned, your group gleaned
18 from the Monsanto records, you used that for the
19 mailing purposes to your customers?
20 **A** Yes.
21 **Q** The mailing, was that by regular mail?
22 **A** Yes. Well, these large mailings, yes.
23 **Q** There were some exceptions?
24 **A** As I recall, there were some cases where they were
25 sent registered return receipt requested, but they

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1 were few and very specific.
2 **Q** And then Monsanto kept records of the mailing list
3 that a given letter was sent to?
4 **A** Yes.
5 **Q** And kept records of which customers got this
6 particular letter?
7 **A** Yes.
8 **Q** And you saw some of those records and some of those
9 mailing lists in the records produced by Mr.
10 Bistline in this case?
11 **A** I did.
12 **Q** And were they representative of the mailing list
13 for those letters in the early-'70's to your
14 customers? Have you seen mailing lists similar to
15 what they are in this case?
16 **MR. EWING:** Object to the form of the
17 question. It's vague and I object, no foundation.
18 **A** Yes.
19 **Q** In other cases where you have been called upon to
20 testify, have you had occasion to see the Monsanto
21 copy of the person or position to whom the letter
22 was addressed, that portion of the mailing list
23 containing that addressee?
24 **A** I have.
25 **Q** And these produced in this case by Mr. Bistline are

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1 the same or similar other than the addressee's name
2 as what you have seen in other cases?
3 **A** Yes.
4 **Q** And these were kept in the regular course of
5 business by Monsanto?
6 **A** Yes.
7 **MR. EWING:** Object, foundation.
8 **BY MR. PIETTE:**
9 **Q** As a matter of the regular business activity in the
10 early-'70's dealing with the PCB environmental
11 issue?
12 **MR. EWING:** Same objection.
13 **A** Yes.
14 **Q** The product itself -- Strike that.
15 The earliest letter that was sent was
16 February 1970 regarding the PCB environmental
17 issue?
18 **A** No, there was an earlier letter that was sent out
19 by a person other than me. I wasn't involved in
20 that earlier letter.
21 **Q** Earlier than February of 1970?
22 **A** Correct.
23 **Q** What month?
24 **A** March of '69, as best I remember, there was a
25 letter that was mailed to customers informing them

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1 of what Monsanto knew of PCB's at that time.
2 **Q** I don't think I have a copy of that, but that was
3 before you were appointed as the manager of
4 environmental control on 1/1/70?
5 **A** Yes, sir.
6 **Q** Who sent that?
7 **A** Elmer Wheeler.
8 **Q** Who did that go to?
9 **MR. EWING:** Object, foundation.
10 **A** I personally don't know. All I know is it was
11 intended to go to customers.
12 **Q** The intended recipients of the letter?
13 **A** I'm sorry?
14 **Q** The intended recipients of the letter?
15 **A** It was composed by Mr. Wheeler to be mailed to
16 customers of PCB's. I personally do not know what
17 list was used or who was sent the letter.
18 **Q** Who does know that?
19 **A** I don't know.
20 **Q** Would Mr. Wheeler?
21 **A** He's deceased.
22 **Q** Anybody else besides him who might have knowledge?
23 **A** That I really don't know anymore.
24 **Q** But you don't know what customer list was used as
25 far as the mailings in connection with that March

1 '69 letter?
 2 A That is correct.
 3 Q Okay. Then rephrasing the question slightly to
 4 after you become the manager of environmental
 5 control 1/1/70, the first letter sent out by your
 6 group in connection with the PCB environmental
 7 issue is February 1970, is it not?
 8 A That is correct.
 9 Q Who were the intended recipients of that letter?
 10 A All customers of record who purchased any product
 11 from Monsanto containing PCB's for at least the
 12 previous three full years.
 13 Q So that the mailing list that you compiled before
 14 sending the February 1970 letter included all
 15 customers of record regarding any product
 16 containing PCB's; is that correct?
 17 A That is correct.
 18 Q Not just the particular product that that
 19 particular customer was buying; is that correct?
 20 A I don't understand.
 21 Q Okay. I didn't articulate that very well. If a
 22 customer in February 1970 was purchasing a product
 23 that contained arochlors 1248 and higher, did they
 24 get a copy of that February 1970 letter?
 25 MR. EWING: I'm going to object,

1 designation.
 2 Q All of these are 1970?
 3 A Correct. I believe I have covered them all.
 4 Q So you sold some of the arochlors, as such?
 5 A Yes.
 6 Q As a product, as such, for use by others in other
 7 industries in whatever products they were going to
 8 use it in?
 9 A Correct.
 10 Q All the Therminols you mentioned contain PCB's?
 11 A Yes.
 12 Q All the Pydrauls you mentioned contain PCB's?
 13 A Yes.
 14 Q So in compiling this mailing list, this mass
 15 mailing less, before February 1970 you used the
 16 Monsanto records that you earlier described to mail
 17 to any Monsanto customer that got -- I should say
 18 that purchased a PBC-containing product?
 19 A That is correct.
 20 Q Did you then use the same mass mailing for the
 21 remaining letters or would you have to look at
 22 those individually?
 23 MR. EWING: Object to the form.
 24 A The mailing list that was originally put together
 25 for the first mailing in February was used as the

1 foundation.
 2 A Yes.
 3 Q If a customer purchased a product containing PCB
 4 with Arochlor 1242 or lesser number, did they also
 5 get a copy of that February 1970 letter?
 6 A Yes.
 7 MR. EWING: Same objection, no
 8 foundation.
 9 BY MR. PIETTE:
 10 Q What products of Monsanto contained PCB's in 1970?
 11 A The Arochlor 1221, 1232, 1242, 1248, 1254, 1260,
 12 1262, 1268 plus the Sanovac Roman numeral I,
 13 Sanovac Roman numeral II, Therminol FR-0,
 14 Therminol
 15 FR-1, Therminol FR-2, Therminol FR-3. I can't
 16 recall all of the Pydrauls. About half-a-dozen or
 17 so different Pydrauls. Pydraul F-9, Pydraul 312.
 18 I think there was a Pydraul 210. I have forgotten
 19 some of the numbers.
 20 There were also products manufactured
 21 and blended by Monsanto using other company's trade
 22 names, like the Inerteens, I-N-E-R-T-E-E-N-S, and
 23 then there were several of those Inerteens followed
 24 by some letter and number combination, and then
 25 there were such mixtures referred to as Pyranols,
 P-Y-R-A-N-O-L, followed by a number/letter

1 starting point for the next mailing and to that
 2 list were added the new customers, any new
 3 customers that were sold PCB-containing products
 4 from February to the date of the next mailing.
 5 Q The updated list we talked about before?
 6 A Correct.
 7 Q It is true then that even if one of your customers
 8 stopped buying a product containing PCB's from
 9 Monsanto in 1970, for instance, the customer was
 10 intended -- was still an intended recipient of the
 11 remainder of the notice letters? The customer
 12 remained on the list, in other words?
 13 A Yes, for those letters that addressed PCB's.
 14 Q Yes, that's what I meant.
 15 A Yes.
 16 Q The letters -- I'm speaking of the letters that
 17 address the PCB environmental issue. That customer
 18 would still continue getting those notice letters?
 19 A Um-hum.
 20 Q Even though he stopped buying your product?
 21 A That's right.
 22 MR. PIETTE: Why don't we take a break
 23 at this point.
 24 (A luncheon recess was taken.)
 25 BY MR. PIETTE:

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1 Q Mr. Papageorge, this afternoon I'd like to talk to
 2 you about the documents that Monsanto produced in
 3 May of this year in this case in response to a
 4 subpoena that we served on them and Mr. Bistline,
 5 as custodian of records for Monsanto, produced a
 6 number of documents. In that deposition we marked
 7 the documents as organized by Mr. Bistline, and
 8 what he did was organize them by folder in response
 9 to the request for the production of documents, and
 10 each of the folders were marked as exhibits so that
 11 Exhibit 725 is Monsanto's response to Tecumseh's
 12 subpoena, actually, not Tecumseh's subpoena but
 13 Home Insurance's subpoena Request No. 3 and Exhibit
 14 726 is Monsanto's response to Request No. 4.
 15 Exhibit 727 is Mr. Bistline's folder in response to
 16 Request No. 5. Exhibit 728 is the folder of
 17 documents which is his response to Request No. 6.
 18 Exhibit 729 is his response to Request No. 7.
 19 Exhibit 730 is his response to Request No. 9.
 20 Exhibit 731 is his response to Request No. 11. In
 21 each of these exhibits consisting of those folders
 22 I just identified, Mr. Bistline or a member of his
 23 staff numbered each document as TPC, standing for
 24 Tecumseh Products Company, and Bate stamped them
 25 1,
 2, 3, et cetera.

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1 In addition, we requested of Mr.
 2 Bistline to furnish additional documents at his
 3 deposition and he did so and sent us a follow-up
 4 letter identifying some additional documents that
 5 we requested of him and he identified some of the
 6 additional documents with a TPC 8.01, because he
 7 wanted to attach those documents to TPC 8. So he
 8 used a .01 on some of the documents. I'll use the
 9 same reference in this, your deposition, as he
 10 designated in his deposition. I think with that
 11 explanation the documents speak for themselves --
 12 MR. EWING: Good. We can go home then.
 13 BY MR. PIETTE:
 14 Q -- as to how they are designated. What I'd like to
 15 do, sir, is to talk to you about these documents
 16 that Mr. Bistline produced. Having said all that,
 17 have you reviewed those documents before your
 18 deposition here today?
 19 A I have seen some documents that I was led to
 20 believe were copies of documents that you're
 21 referring to, yes.
 22 Q All right. Sir, I have brought with me a copy of
 23 the documents and what I'd like to do is show you
 24 these documents and ask you some questions about
 25 them, if I may.

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1 A Sure.
 2 Q The first document is the letter that we previously
 3 referred to dated February 9, 1970, and it's been
 4 marked by Mr. Bistline as TPC 1 through 8 and Mr.
 5 Bistline in an additional document added 8.01 and
 6 stapled that then to 1 through 8. Do you see that?
 7 A I do.
 8 Q I'll show you the documents that are marked TPC
 9 1 through 8.01 and ask you to identify that,
 10 please?
 11 A This is a copy of a letter on Monsanto -- with
 12 Monsanto letterhead dated February 9, 1970 authored
 13 by Donald A. Olson of Monsanto and it's a two-page
 14 letter addressed to "dear sir" intended for
 15 customers. Attached to it is an article from
 16 Chemical Week of October 29, 1969 and the last page
 17 of this exhibit is a copy of an addressee of this
 18 letter.
 19 Q And that's Page 8.01?
 20 A Yes.
 21 Q Who is the addressee listed on Page 8.01?
 22 A Director of Purchases, Tecumseh Products, 333
 23 Joseph Street, Marion, Ohio, 53302.
 24 Q Is that the letter that you earlier reference in
 25 your testimony that was the initial letter after

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1 you became manager environmental control 1/1/70?
 2 A This is a copy of one of several versions of an
 3 initial letter, yes.
 4 Q And is that the letter that eventually was sent?
 5 A This was the letter that was sent to customers on
 6 record of industrial fluids that contained PCB's.
 7 Q At that time Mr. Donald Olson was director of
 8 sales, functional fluids group?
 9 A He was.
 10 Q And as I recall from your earlier testimony, he was
 11 a part of that team that you mentioned that was
 12 dealing with the PCB environmental issue?
 13 A He was.
 14 Q Did you have input with respect to drafting the
 15 content of this letter?
 16 A Yes.
 17 Q And with respect to the decision to send this
 18 letter?
 19 A Yes.
 20 Q And to attach the article from Chemical Week dated
 21 October 29, 1969?
 22 A Yes.
 23 Q The article from Chemical Week on the environment
 24 dated October 29, 1969 lists various state
 25 regulations under the caption, "A Summary of Water

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1 Quality Standards Set by All 50 States?"
 2 A It does.
 3 Q This attachment to your 2/9/1970 letter lists water
 4 quality standards for Michigan and Wisconsin?
 5 A It does.
 6 Q What was the purpose of this letter dated 2/9/70?
 7 A One of the purposes was to inform Monsanto's
 8 customers of PCB products, the fact that some PCB's
 9 were identified as being present in the environment
 10 and that there appear to be some questions being
 11 raised as to what effects these PCB's might be
 12 having on the environment and to inform the reader
 13 of this letter that the types of PCB's that thus
 14 far had been identified in the environment were
 15 contained in some of Monsanto's products and that
 16 the remaining products listed did not contain that
 17 particular type of PCB. Then to add that -- to
 18 caution the user of these materials, that care must
 19 be taken in the use and disposal of these products
 20 and attached to it was the Chemical Week article to
 21 refresh the reader's memory regarding what his
 22 particular state required in terms of wastewater or
 23 water contamination.
 24 Q And the document attached by Mr. Bistline in
 25 response to our request designated now as TPC 8.01

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1 Q And the address of that company -- the name and
 2 address of that company as shown on Monsanto's
 3 record is designated TPC 16.01?
 4 A Yes.
 5 Q Would you read that, please.
 6 A Director of Purchases, Tecumseh Products, 333
 7 Joseph Street, Marion Ohio, 53302.
 8 Q The next document -- I'm sorry. What was the
 9 purpose of this follow-up letter of 2/27/70?
 10 A This letter was mailed to customers of Monsanto's
 11 arochlor line of products.
 12 Q Which include Pydraul?
 13 A No.
 14 Q It does not?
 15 A No, this letter is only the arochlors that were
 16 used in what we referred to earlier this morning as
 17 the open uses.
 18 Q Oh, okay.
 19 A And it's signed by Mr. Schalk, who was director of
 20 sales of the plastisizers business group in
 21 Monsanto.
 22 Q The letter did not go exclusively to that group, it
 23 went to all customers using PCB's, is that true?
 24 A This particular letter went to all customers who
 25 purchased arochlors, as such.

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1 is Monsanto's's proof of mailing to the addressee
 2 shown according to their records?
 3 MR. EWING: Object to the form and to
 4 foundation.
 5 A Yes.
 6 Q As the manager of environmental control as of
 7 1/1/70, this document, TPC 8.01, tells you that
 8 this letter of 2/9/1970 was addressed to and mailed
 9 by Monsanto to that addressee shown?
 10 A Yes.
 11 MR. EWING: Object, foundation.
 12 BY MR. PIETTE:
 13 Q The next document is a letter dated 2/27/70, TPC 9
 14 through 16.01, is it not?
 15 A It is.
 16 Q And would you identify that document, please.
 17 A This is a copy of a letter with Monsanto letterhead
 18 authored by W. E. Schalk addressed to "dear
 19 customer" containing the same kind of information
 20 that we discussed for the previous document, and
 21 attached to it is a copy of Chemical Week of
 22 October 29, 1969, which is a list of states and
 23 their water quality standards, and the last page is
 24 a copy of the address of the company to which a
 25 copy of this letter was mailed.

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1 Q Is it your understanding then, since it was sent to
 2 Director of Purchases, Tecumseh Products, Marion,
 3 Ohio, that they purchased arochlors, as such?
 4 A Definitely.
 5 MR. EWING: Object, foundation.
 6 BY MR. PIETTE:
 7 Q What product would they have purchased --
 8 MR. EWING: Object, foundation.
 9 Q -- that contained arochlors, as such?
 10 MR. EWING: I'm sorry I interrupted. I
 11 object, foundation.
 12 A I have no way of knowing from this letter. It
 13 would have to be one of the arochlors, either
 14 arochlor 1221, 1242, 1254, 1248, 1260. One of
 15 those.
 16 Q Would that include Therminol?
 17 A No.
 18 Q So this letter tells you that that Tecumseh plant
 19 purchased one of the arochlors that you just
 20 mentioned?
 21 MR. EWING: Object. The document
 22 speaks for itself.
 23 A It does.
 24 Q And the products would be in the line of products
 25 known as the plastisizers?

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1 A It's the plastisizers business group, yes, sir.
 2 Q The next letter then is dated August 27, 1970
 3 signed by Mr. Johnson and it's TPC 17 and 17.01;
 4 correct?
 5 A That is correct.
 6 Q First of all, Mr. Johnson at that time was
 7 marketing manager of industrial fluids?
 8 A Correct.
 9 Q And he was also a part of the team that you
 10 mentioned before in connection with the
 11 environmental -- PCB environmental issues?
 12 A I don't think I mentioned him by name, but I
 13 mention him as an alternate to Donald Olson.
 14 Q Okay. What is the purpose of this letter of August
 15 27, 1970?
 16 A This letter is again to remind the reader about the
 17 PCB environmental presence and to specifically
 18 point out that Pydraul F-9 contains PCB's and that
 19 as of the date of this letter, that a new
 20 formulation had been developed which did not
 21 contain polychlorinated biphenyls.
 22 Q And document number TPC 17.01 is, again, the
 23 mailing label from Monsanto's records showing the
 24 addressee for that or -- for a copy of that
 25 particular letter?

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1 **MR. EWING:** Object, foundation.
 2 A It is.
 3 Q I'd like you to look at this copy of that Monsanto
 4 letter, August 27, 1970, and tell me if it's an
 5 identical copy of the one that you just identified
 6 as having been mailed to Tecumseh?
 7 A It doesn't appear to me to be identical. This
 8 reminds me at the time we had several typists
 9 working and this appears to me to have come off of
 10 two different typewriters.
 11 Q Are the contents of the letter the same?
 12 A Yes.
 13 Q The contents of the letter are identical?
 14 A Identical.
 15 Q Both are dated the same day?
 16 A Yes.
 17 **MR. PIETTE:** I'd like to mark that
 18 separately as an exhibit, please.
 19 (Exhibit 811 was marked for
 20 identification.)
 21 **BY MR. PYTLIK:**
 22 Q Exhibit 811 is a copy of the August 27, 1970 letter
 23 that we just referenced that was sent to Monsanto
 24 customers? -
 25 A It is.

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1 Q And it's a copy of the TPC document produced by Mr.
 2 Bistline?
 3 A It is.
 4 Q And it is correct, is it not, sir, that the
 5 identifying numbers on the bottom of Exhibit 811 is
 6 TP007655?
 7 A Yes.
 8 Q The next document is a letter dated 8/17/71;
 9 correct?
 10 A That's what's written on the document, yes.
 11 Q By the way, with respect to the last letter that we
 12 just referred to, I believe the last two letters,
 13 2/27/70 and 8/27/70, did you have input with
 14 respect to formulating the language and the content
 15 of the letter to be sent?
 16 A I participated, yes, sir.
 17 Q And did you participate in the decision to send
 18 those letters to the customer?
 19 A Yes, I did.
 20 Q Same questions with respect to this letter now
 21 dated 8/17/71. First of all, it's identified as
 22 TPC 19, is it not?
 23 A It is.
 24 Q And did you have input in -- participate in both
 25 the drafting of the contents of this letter and the

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1 decision to send it?
 2 A I did.
 3 Q What is the purpose of this letter? I should also
 4 say it's signed by Mr. J. J. Roder, product
 5 supervisor, heat transfer fluids, is it?
 6 A It is.
 7 Q Did you list him as a part of that team dealing
 8 with the PCB environmental issues?
 9 A I did not.
 10 Q He sent this letter in his capacity as product
 11 supervisor, heat transfer fluids?
 12 A Correct.
 13 Q And that would have been done at your request as
 14 the manager environmental control?
 15 A I would more correctly describe it at my strong
 16 recommendation rather than a request.
 17 Q All right. In other words, you made
 18 recommendations as the manager of environmental
 19 control along with the rest of the members of your
 20 team?
 21 A Yes. Not for every issue. I sometimes would make
 22 a recommendation without the team making that same
 23 recommendation.
 24 Q Was there someone who actually made the
 25 determination and decision to follow or not follow

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1 your recommendation to send necessary letters of
 2 communication or was it followed up on each time
 3 that you made a recommendation?
 4 **A** Oh, I would suggest that in the vast majority, the
 5 large majority of cases my recommendations were
 6 followed up. On the rare occasion when they
 7 weren't, I would appeal to the next step in the
 8 supervisory ranks until I got what I was after.
 9 **Q** Okay. So that would you say that you -- after you
 10 made your recommendation on sending letters of
 11 communication, that there was a follow up each time
 12 that letters were sent?
 13 **A** Yes. I don't recall any total rejection.
 14 **Q** All right. Then can you just tell us how it is
 15 that in this particular case Mr. Roder is the
 16 person who signed this letter dated 8/17/71?
 17 **A** As I recall, his supervisor, Mr. Phallen, who was
 18 the manager of marketing for these heat transfer
 19 fluids, assigned this particular letter to Mr.
 20 Roder.
 21 **Q** Once the decision was made to send the letter, it
 22 was a question of the appropriate person signing
 23 the letter dependent upon the category of products
 24 that was being -- that was a part of the
 25 supervision of that person?

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1 **A** Correct.
 2 **Q** Now would this letter have gone to all customers
 3 who bought products containing PCB's?
 4 **MR. EWING:** Object, foundation.
 5 **A** This letter we're now looking at?
 6 **Q** Yes, August 17, 1971.
 7 **A** No, not all PCB's.
 8 **Q** Okay. Who would this letter have gone to?
 9 **A** This would go to the customers of Therminol FR
 10 fluids.
 11 **Q** Okay. And would you identify whose -- who is the
 12 intended recipient of that particular letter as
 13 shown on your mailing label?
 14 **MR. EWING:** Object, foundation.
 15 **A** The addressee shown is Tecumseh Products, Marion,
 16 Ohio.
 17 **Q** And so based on that, it would be your
 18 understanding that Tecumseh Products, Marion, Ohio
 19 purchased Therminol fluids from Monsanto?
 20 **MR. EWING:** Object, foundation.
 21 **A** Yes.
 22 **Q** And, in fact, are there other documents that you
 23 have reviewed that show that that was, in fact, the
 24 case?
 25 **A** Yes.

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1 **Q** Was there any other documents that you reviewed or
 2 have seen produced by Mr. Bistline that indicate or
 3 show you that the Tecumseh Marion plant purchased
 4 any plastisizer products from Monsanto?
 5 **A** I don't remember seeing a reference to arochlors,
 6 as such, on any of those sales documents.
 7 **Q** No, I don't, either.
 8 **MR. EWING:** Neither do I.
 9 **MR. PIETTE:** Since we don't have the
 10 Marion, Ohio plant documents --
 11 **MR. EWING:** For the witness' benefit,
 12 that plant was sold in '83 or '84.
 13 **BY MR. PIETTE:**
 14 **Q** We're operating without any documents from the
 15 Marion, Ohio plant, so that's what's leading to
 16 this line of questioning. In any event, the
 17 arochlors that you mentioned before which were used
 18 for the manufacture of the plastisizers, you don't
 19 see any documents indicating what particular
 20 arochlors were purchased by Tecumseh-Marion or any
 21 documents indicating what particular product they
 22 used it for?
 23 **MR. EWING:** I guess I object to the
 24 extent it suggested, indeed, they did. I'm
 25 objecting to that as without foundation.

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1 **A** I have seen no such documents.
 2 **Q** Will you tell us again the type products that they
 3 would use the arochlors for?
 4 **A** Adhesives, inks, carbonless copy paper, caulking,
 5 coatings and paints, rubber additives, some floor
 6 tiles. I believe that covers as many as I can
 7 recall at the moment.
 8 **Q** All right. So we're talking about the 8/17/71
 9 letter signed by Mr. Roder, a copy of it, TPC No.
 10 19 and No. 20; correct?
 11 **A** Correct.
 12 **Q** And I don't recall if I asked you, but is there a
 13 mailing label attached to that one?
 14 **A** Yes.
 15 **Q** And the document number is TPC 20.01?
 16 **A** Correct.
 17 **Q** And the addressee on that mailing label, please?
 18 **A** Tecumseh Products, Marion, Ohio.
 19 **Q** The purpose of this letter is what?
 20 **A** Is to inform a purchaser of Therminol FR products
 21 again of the finding of PCB's in the environment
 22 and the possible harm to the environment. Then it
 23 goes on to explain that Therminol FR products would
 24 not be sold by Monsanto to systems that involve --
 25 new systems that involved a food or food-related

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1 product and that Monsanto was discontinuing
2 recommendations regarding the use of Therminol FR
3 series for that type of application.
4 **Q** The next document is dated January 31, 1972, is it
5 not?
6 **A** It is.
7 **Q** And it's a one-page letter signed by Mr. Bergen,
8 director specialty products group, Monsanto
9 Industrial Chemical Company?
10 **A** Yes.
11 **Q** And is there attached to that a mailing list, I'm
12 sorry, a mailing -- an addressee from a mailing
13 list?
14 **A** Yes.
15 **Q** And who is it, please?
16 **A** The addressee listed is Director of Purchases, Die
17 Cast Corporation, 415 Cleveland Avenue, Sheboygan
18 Falls, Wisconsin.
19 **Q** And to whom was this letter intended?
20 **A** For customers of Monsanto's Pydraul products.
21 **Q** So this would tell you that Die Cast Corporation,
22 Tecumseh, Sheboygan Falls purchased your Pydraul
23 hydraulic fluid?
24 **MR. EWING:** Object, foundation.
25 **A** Purchased at sometime in the past, yes.

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1 reformulated Pydrauls described in the previous
2 exhibit were now available and would be shipped
3 sooner than anticipated.
4 **Q** All right. And there's also attached to that
5 letter a conversion table, if you will, from --
6 identified as TPC 23?
7 **A** Yes.
8 **Q** And it lists the Monsanto old product and new
9 product?
10 **A** It does.
11 **Q** Obviously, the old product has the PCB's and the
12 new product is without PCB's?
13 **A** On this particular listing there I do not see any
14 PCB formulation. There are no PCB formulations
15 listed.
16 **Q** Okay. There is a Pydraul F-9A listed. I take it
17 that that F-9A was already a non-PCB product?
18 **A** That is correct.
19 **Q** I see. Okay. I understand. The next document is
20 dated April of 1972, is it not?
21 **A** It is.
22 **Q** And it's TPC 24 and TPC 25?
23 **A** That is correct.
24 **Q** And it's signed by a very distinguished gentleman?
25 **A** Obviously.

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1 **Q** All right. And what was the purpose of this
2 letter?
3 **MR. EWING:** Didn't you just ask him
4 that?
5 **A** This letter is to inform the customer that as of
6 June of 1972, all the Pydrauls will have been
7 reformulated and would not contain any chlorinated
8 chemicals.
9 **Q** Were you part of the decision to send this letter?
10 **A** Yes, sir.
11 **Q** And the formulation of the language of the letter?
12 **A** I was involved, yes.
13 **Q** The next letter is dated March 15, 1972, is it not?
14 **A** It is.
15 **Q** Identified as TPC 22 and 23; correct?
16 **A** Correct.
17 **Q** And does it have a mailing list attached as TPC
18 23.01?
19 **A** It does.
20 **Q** And who is the addressee to whom this was mailed?
21 **MR. EWING:** Object, foundation.
22 **A** Office of the President, Die Cast Corporation, 415
23 Cleveland Avenue, Sheboygan Falls, Wisconsin.
24 **Q** And the purpose of this letter, sir?
25 **A** It's to inform the customer of Pydrauls, that the

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1 **Q** Yourself; correct?
2 **A** Correct.
3 **Q** And at that time in April of '72 you were manager
4 environmental protection, as you have testified to
5 before?
6 **A** Yes.
7 **Q** To whom did this letter go, sir?
8 **A** This went to -- As I remember, this went to
9 customers of all PCB products sold by Monsanto.
10 **Q** Okay. And this one is written personally by you?
11 **A** Yes.
12 **Q** And you start your letter out, "Since early 1970,
13 we have been advising your company of significant
14 developments relating to the PCB environmental
15 situation;" correct?
16 **A** That is correct.
17 **Q** And what is the purpose of this letter that you're
18 sending out in April of '72 to all of your
19 customers who purchased products containing PCB's?
20 **A** This was to inform our customers that the
21 governmental regulatory agencies were contacting
22 Monsanto requesting information relating to
23 customer names, locations, amounts, purchases,
24 delivery schedules and the like, and that based on
25 Monsanto's practice of not divulging that

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1 information unless approved by the customer, that
 2 Monsanto was not sharing this information with the
 3 agencies, but also expressing a thought that
 4 Monsanto would -- may not be able to avoid
 5 disclosing that information for very long.
 6 **Q** Does that letter that you sent dated April 1972
 7 have attached to it a document entitled TPC 25.01?
 8 **A** It does.
 9 **Q** And would you identify the document, please?
 10 **A** It lists the addressee, one of the addresses of
 11 this letter, Plant Manager, Tecumseh Products, 333
 12 Joseph Street, Marion, Ohio, 53302.
 13 **Q** And that is a copy of a mailing label to that
 14 address, is it?
 15 **A** It is.
 16 **MR. EWING:** Objec foundation.
 17 **BY MR. PIETTE:**
 18 **Q** The next document is a letter dated May 25, 1972,
 19 is it not?
 20 **A** It is.
 21 **Q** And would you identify that document, please?
 22 **A** It's a copy of a letter on Monsanto letterhead
 23 authored by Cumming Paton, P-A-T-O-N, of Monsanto
 24 dated May 25, 1972 addressed to "dear sir."
 25 **Q** And the purpose of this letter of May 25, 1972?

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1 **A** The purpose is to share with the customer the fact
 2 that Monsanto was in a position to dispose of
 3 unusable Therminol FR fluids by high temperature
 4 incineration at a nominal cost with some
 5 arrangements made to pay the freight costs involved
 6 in shipping the material to Monsanto.
 7 **Q** Therminol FR-0 is a product containing PCB's?
 8 **A** It is.
 9 **Q** And this is a letter being sent to your Therminol
 10 customers offering to incinerate the Therminol for
 11 proper disposal?
 12 **MR. EWING:** Object. The document
 13 speaks for itself.
 14 **A** That is correct
 15 **Q** It refers to a flushing fluid?
 16 **A** It does.
 17 **Q** The purpose of that, please?
 18 **MR. EWING:** Of the flushing fluid or
 19 the reason for putting it in the letter?
 20 **MR. PIETTE:** Yes, the reason for the
 21 flushing fluid.
 22 **A** The flushing fluid was a material which was very
 23 compatible with the PCB's in the Therminol FR-0 and
 24 would serve to clean the residual Therminol FR-0
 25 that clings to the interior surfaces of the system

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1 using Therminol FR-0. By doing so it, of course,
 2 becomes contaminated and must be destroyed
 3 appropriately.
 4 **Q** Because it's got some of the residual PCB's in it?
 5 **A** Yes, definitely, um-hum.
 6 **Q** Were there competitive products with Monsanto's
 7 Pydraul fluids that were compatible with the
 8 Pydraul fluids, if you know?
 9 **MR. EWING:** Object to the form of the
 10 question. It's vague.
 11 **A** I'm aware and I know that there were competitive
 12 fluids for Pydraul. I personally don't know if
 13 they were compatible. In other words, using a
 14 competitive fluid to top off a system that needs a
 15 few pounds of additional fluid. I don't know that.
 16 **Q** Was Chem-Trend one of the competitors for that
 17 hydraulic fluid?
 18 **A** I have heard of them, yes.
 19 **Q** Do you know if they bought arochlor from you?
 20 **A** I have never heard of Chem-Trend buying arochlors
 21 from Monsanto.
 22 **Q** You can't say one way or the other?
 23 **A** That's right.
 24 **Q** If Chem-Trend had a fluid that was compatible and
 25 they used it for that purpose that you just said,

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1 topping off their hydraulic machines, I mean their
 2 die cast machines with Chem-Trend's hydraulic fluid
 3 and they didn't use a flushing fluid, then the
 4 PCB's remain within the die cast machine?
 5 **MR. EWING:** Object to the form of the
 6 question. Also, the witness does not have adequate
 7 foundation to answer that question.
 8 **A** I think I understand your question. Using the word
 9 "top off" means that there is still some PCB-type
 10 fluid in the system.
 11 **Q** Right. Let's say it's your Pydraul F-9.
 12 **A** All right. Just topping off to raise it to an
 13 appropriate level?
 14 **Q** Right, with Chem-Trend fluid.
 15 **A** The combined mixture now contains PCB's.
 16 **Q** And will contain PCB's as long as that procedure
 17 continues?
 18 **MR. EWING:** Same objections.
 19 **A** That is my opinion, yes.
 20 **Q** At some point, if you're going to switch to a
 21 non-PCB fluid, at some point you have to go through
 22 a flushing system of some sort?
 23 **A** As a minimum, yes.
 24 **Q** We'll see a work order later on in the files here
 25 referring to the attempt by Monsanto to keep

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1 Tecumseh-Sheboygan Falls as a customer for their
2 hydraulic fluids and apparently Tecumseh topping
3 off, adding to the already existing fluids. My
4 question to you is until there's a complete
5 flushing, at a minimum the PCB's remain within the
6 hydraulic system of the die cast machine?
7 **MR. EWING:** Object to the form of the
8 question, the characterization of the document and
9 foundation.
10 **A** Yes.
11 **Q** So that even though a purchaser of Monsanto
12 hydraulic fluid Pydraul F-9 has stopped purchasing
13 from you that fluid, they are still dealing with
14 PCB's for as long as they have that fluid in their
15 die cast machines in the hydraulic systems thereof?
16 **MR. EWING:** Object to the form of the
17 question.
18 **A** That is correct.
19 **Q** Did any letter similar to the May 25, 1972 letter
20 that deals with Therminol PCB fluid, did a letter
21 similar to that go to the Pydraul PCB customers --
22 **MR. EWING:** Object to the form of the
23 question.
24 **BY MR. PIETTE:**
25 **Q** -- offering to incinerate?

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1 **A** I don't recall such a letter.
2 **MR. DAVIDSON:** Are you talking about at
3 that time or at some subsequent time?
4 **MR. PIETTE:** At any time. At any time.
5 **BY MR. PIETTE:**
6 **Q** This letter of May 25, 1972 is offering to
7 incinerate the Therminol for free?
8 **MR. EWING:** Object. The document
9 speaks for itself.
10 **A** I'm sorry. Which letter is that?
11 **Q** May 25, 1972.
12 **A** Yes, up until a certain date.
13 **Q** Yes. I'm interested in the second numbered
14 paragraph where you offer to incinerate
15 non-Monsanto fluids at a charge of five cents a
16 pound. That would include Chem-Trend, of course?
17 **MR. EWING:** Well, I'll object,
18 foundation.
19 **BY MR. PIETTE:**
20 **Q** If there is a non-Monsanto non-aqueous fluid --
21 **A** Yes.
22 **Q** -- contaminated with PCB's?
23 **A** Yes.
24 **Q** The difference is you'd charge them five cents a
25 pound for that, since it's a non-Monsanto fluid?

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1 **A** Yes, as compared to the three cents a pound for the
2 Monsanto material, which is a known material.
3 **MR. EWING:** I'm sorry. Which is a what
4 material?
5 **THE WITNESS:** Which is a known
6 material. We know what it's composed of.
7 **BY MR. PIETTE:**
8 **Q** What we find out later on in the correspondence is
9 that Tecumseh's Marion plant did not accept
10 Monsanto's offer to incinerate their Therminol
11 FR-0 prior to July 1, 1972, right?
12 **A** I recall seeing such a report, yes.
13 **Q** Were there occasions like that, for instance, that
14 I just referred to when Monsanto knew that a
15 customer had gotten a particular letter because
16 they applied with reference to the letter? In
17 other words, did you get some response
18 correspondence from some customers in connection
19 with these letters that you sent out?
20 **A** Yes, um-hum.
21 **Q** Later on we'll see a letter from the Marion, Ohio
22 plant engineer referencing the offer to incinerate.
23 Would you again read into the record to whom that
24 mailing label shows that was sent?
25 **MR. EWING:** Which document are we on?

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1 **MR. PIETTE:** TPC 27.01.
2 **THE WITNESS:** 26.01.
3 **MR. PIETTE:** Sorry about that. 26.01.
4 **THE WITNESS:** 26.01 shows two
5 addresses, Mr. Glen Watkins, Tecumseh Products, 333
6 Joseph Street, Marion, Ohio, 43302 and also Plant
7 Manager, Tecumseh Products, 333 Joseph Street,
8 Marion, Ohio. This one says 53302.
9 **BY MR. PIETTE:**
10 **Q** Glen Watkins, do you recall, is the author of the
11 letter that we'll see later on as the plant
12 engineer requesting Monsanto to again offer free
13 incineration service for the Therminol FR-0?
14 **MR. EWING:** I'm going to object to
15 that. There is no foundation that this witness
16 knows that.
17 **MR. PIETTE:** Go ahead.
18 **A** I recall the name, yes, on a letter.
19 **Q** Thanks. Okay. Then the next letter is March 15,
20 1972. Can we keep going, Gerard?
21 **MR. DAVIDSON:** Yes.
22 **MR. PIETTE:** Thanks. Sorry about that.
23 **BY MR. PIETTE:**
24 **Q** So the next letter then, I'm sorry, is August 3,
25 1973. It's another letter signed by Cumming Paton,

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1 product manager, fluids; correct?
 2 A It is.
 3 Q Identified as TPC 29 and 30 with some attachments,
 4 a number of attachments?
 5 A That is correct.
 6 Q And will you tell us, please, what this letter --
 7 what the purpose of this letter is?
 8 A It had several purposes.
 9 Q Okay. First of all, did it -- is there a mailing
 10 label showing, based on Monsanto's records, that it
 11 was mailed to Tecumseh?
 12 MR. EWING: Object, foundation.
 13 A The last sheet, TPC 43.01, shows the addressee as
 14 being Director of Purchases (Hydraulic Fluids), Die
 15 Cast Corporation, 415 Cleveland Avenue, Sheboygan
 16 Falls, Wisconsin.
 17 Q All right. Sir, continuing with respect to this
 18 letter of August 3, 1973, will you just tell us
 19 what the purpose of that letter was and what are
 20 the purposes of the attachments?
 21 A There were several purposes associated with this
 22 letter. One is to inform the customer of
 23 Monsanto's Pydrauls, that the Pydrauls as of August
 24 3, 1973 did not contain chlorinated materials any
 25 longer. Secondly, to inform the reader of the

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1 Department of Health, Education and Welfare, Food
 2 and Drug Administration Regarding Polychlorinated
 3 Biphenyls, Contamination of Animal Feeds, Foods and
 4 Food Packaging Materials and Availability of
 5 Supplement to Environmental Statement on
 6 Rulemaking; correct?
 7 A Correct.
 8 Q Let me call your attention, if I might, to this
 9 August 3, 1973 letter with respect to incineration
 10 on the last paragraph on the first page, TPC 29.
 11 A I see it.
 12 Q And it's my impression, and you tell me if this is
 13 correct, but it's my impression that you are
 14 referring here to the reformulation of your Pydraul
 15 industrial fluid products, and you're referring to
 16 Pydraul fluids that may have been purchased by the
 17 customer prior to the changeover of mid-1972 which
 18 might still contain PCB's?
 19 MR. EWING: I will object. The
 20 document speaks for itself.
 21 A Correct.
 22 Q Doesn't this suggest to you, this letter, that you
 23 are offering to your Pydraul customers that method
 24 of disposal that is incineration for their
 25 PCB-containing fluids?

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1 letter that the Food and Drug Administration had
 2 finally issued a rulemaking regarding the presence
 3 of PCB's in animal feed, food packaging materials,
 4 foods and so on.
 5 Q This is that Food and Drug Administration guideline
 6 that we had talked about earlier in the deposition
 7 and, in fact, it's a final rulemaking order, is it
 8 not?
 9 A Yes, it is more than a guideline. It's the final
 10 rulemaking as of this date in '73.
 11 Q And you paraphrase it or by "you" I should say
 12 Cumming Paton paraphrases it by saying, "Recently
 13 the Food and Drug Administration published in the
 14 Federal Register," and then the citation, "a final
 15 rulemaking order regulating the sources by which
 16 PCB's may contaminate animal feed, food and food
 17 packaging materials during manufacturing, handling
 18 and storage and limiting the levels of PCB's that
 19 may be present in animal feed, food and food
 20 packaging materials as a result of unavoidable
 21 environmental contamination," and then he attaches
 22 a copy of the actual rulemaking order?
 23 A Correct.
 24 Q And that is dated on it's face sheet Federal
 25 Register, Friday, July 6th, 1973, Washington, D.C.,

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1 MR. EWING: Again, I object. The
 2 document speaks for itself.
 3 A Well, it's a little bit broader than just PCB's,
 4 per se. It refers to chlorinated materials, which
 5 include PCB's.
 6 Q Okay. And you attach or you state Monsanto has
 7 installed a facility at it's Sauget, Illinois plant
 8 and has made the service available to its
 9 customers; correct?
 10 A Yes, that's what it says.
 11 Q The reason I'm bringing this up is because earlier
 12 I asked you a question about offering the
 13 incineration service to your Pydraul customers. I
 14 think you meant -- I think you might have
 15 understood me to mean at that time I was asking
 16 you. At some point here in this letter of August
 17 3, 1973 you actually say that to your Pydraul
 18 customers, don't you?
 19 A That is true.
 20 Q So, in fact, Monsanto offers to its Pydraul
 21 customers the incineration of their chlorinated
 22 materials?
 23 MR. EWING: Object, document speaks for
 24 itself.
 25 A Correct.

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1 Q Well, that's the purpose of this letter, at least
2 that paragraph of it, anyhow?
3 MR. EWING: Same objection.
4 A Yes.
5 Q And then you actually attach a Monsanto document
6 entitled, "Incineration Service for Pydraul
7 Fluids," do you not?
8 A Yes.
9 MR. PIETTE: And would you say that
10 speaks for itself?
11 MR. EWING: I'm sorry?
12 MR. PIETTE: Would you say that speaks
13 for itself?
14 MR. EWING: Certainly. The document
15 speaks for itself. You know that, Ron. You have
16 heard that objection enough times.
17 BY MR. PIETTE:
18 Q It's designated TPC 32, is it not?
19 A It is.
20 Q And it goes on for a page and one-half to tell your
21 Pydraul customers how they might accomplish this
22 incineration for Pydraul fluids at the rate of five
23 cents per pound; correct?
24 A I see it. I was looking for the five cents per
25 pound. Yes, that is correct.

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1 Q And this is signed by W. N. Maddox, supervisor,
2 customer service center?
3 A It is.
4 MR. EWING: I guess I object. My
5 document is not signed. Is yours signed? You said
6 it was signed.
7 MR. PIETTE: Typed signature.
8 MR. EWING: All right. Thank you.
9 BY MR. PIETTE:
10 Q I want to call your attention to the top of TPC 33,
11 the paragraph referencing sawdust, rags or sludge.
12 Do you see that?
13 A I do.
14 Q Consistent with what your testimony was before, the
15 incineration was for the fluids not for solids
16 which may have been used to absorb those fluids;
17 correct?
18 A That is correct.
19 Q And then the document states, "For these materials,
20 meaning the sawdust, rags and sludge, we suggest
21 you check local authorities and your own
22 Environmental Department for an approved disposal
23 method." Do you see that?
24 A I do.
25 Q You agree with that statement?

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1 A Yes.
2 Q Sir, I'll just ask you, if you will, please, does
3 your -- does the document we just referenced,
4 August 3, 1973, have attached to it a mailing
5 label?
6 A It does.
7 Q And that's TPC No. 43.01?
8 A It is.
9 Q And to whom is the mailing label addressed?
10 A Director of Purchases (Hydraulic Fluids),
11 Die Cast Corporation, 415 Cleveland Avenue,
12 Sheboygan Falls, Wisconsin.
13 Q And based upon Monsanto's records and the copy of
14 the mailing label you just read, that shows you
15 that Monsanto addressed and mailed this letter to
16 Tecumseh?
17 MR. EWING: Object, foundation.
18 A It mailed it to Die Cast Corporation.
19 Q At that Sheboygan Falls address?
20 A Yes.
21 Q Thank you.
22 Mr. Bistline included in this folder,
23 Exhibit No. 725, a MSDS dated July 30, 1972 marked
24 as TPC 44 and 45. Do you see that?
25 A I do.

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1 Q And that's an MSDS for what product?
2 A This is for the product Therminol FR-0.
3 Q And we referenced that before as a product that was
4 being used by their Marion, Ohio plant?
5 MR. EWING: Object, foundation.
6 A Yes.
7 Q Based upon the documents you have seen?
8 MR. EWING: Same objection.
9 A Yes.
10 Q Can you tell me, first of all, please, how in 1972
11 was this MSDS utilized by Monsanto?
12 A It was shared with customers of Monsanto who at one
13 time were listed as having purchased Therminol
14 FR-0.
15 Q What this something that was mailed to them or
16 handed to them or was it shipped with the product?
17 MR. EWING: Object, foundation.
18 A Let's see. In 1972 there was no product being
19 shipped, so it could not have accompanied the
20 product. As best I recall, this was supplied to
21 the field salesmen to drop off as they made their
22 customer calls to share with the customer and also
23 have a supply available in the event anyone called
24 and requested this kind of data.
25 Q Is there a reference on the second page to proper

1 disposal methods?
 2 **A** Yes.
 3 **Q** And what does it state in that regard?
 4 **A** Shall I read the whole paragraph or just the one
 5 sentence there?
 6 **Q** Try just the one sentence at this point.
 7 **A** "Bury in approved chemical landfill in accordance
 8 with local and state regulations," and then
 9 further, "Burn in an approved incinerator in
 10 accordance with local and state regulations."
 11 **MR. RABE:** What document was that?
 12 **THE WITNESS:** It's MSDS TPC 44 and 45.
 13 **BY MR. PIETTE:**
 14 **Q** What I'd like to do, so the record is clear on
 15 that, what you were reading was from two different
 16 entries under Section 8, I'm sorry, 7, Spill or
 17 Leak Procedures, and under the caption, "Steps To
 18 Be Taken in Case Material is Released or Spilled,"
 19 the entry is, "Absorb on clay, sawdust or other
 20 absorbent material. Place in drums. Bury in
 21 approved chemical landfill in accordance with local
 22 and state regulations;" correct?
 23 **A** Correct.
 24 **Q** And the entry under the caption, "Waste Disposal
 25 Method: Burn in an approved incinerator in

1 accordance with local and state regulations;"
 2 correct?
 3 **A** Correct.
 4 **Q** Mr. Bistline produced a folder marked as Exhibit
 5 726 in response to our Request No. 4, and I'll ask
 6 if you can identify the documents contained
 7 therein.
 8 **MR. EWING:** I'm going to object based
 9 on form and foundation.
 10 **A** This exhibit consists of a series of product
 11 bulletins or product brochures, product literature,
 12 relating to the Monsanto Pydraul product line in
 13 which the types of liquids are described and their
 14 applications are recommended along with some
 15 pricing and shipping information. These product
 16 brochures represent various publications that
 17 reflect changes through a period of time. Can you
 18 give us that period of time?
 19 **A** As best I can tell from just a quick look here, it
 20 seems to run from the middle- to late-'50's on into
 21 the '60's. In addition to the Pydraul literature,
 22 I see a collection of similar types of publications
 23 that relate to the heat transfer fluids, the
 24 Therminol product line. Again, as best I recall,
 25 most of these are in the 1960's, the dates of

1 publication. Also included I noticed would appear
 2 to be copies of advertising literature that
 3 appeared in trade journals, one for the
 4 Therminols -- Well, they were both Therminols.
 5 **Q** How are those documents designated? What number
 6 are they?
 7 **A** One of them is TPC 140 and the other is TPC 205.
 8 Finally, there are two documents, TPC 233, 234,
 9 235, 236 and TPC 237, 38 that are toxicity
 10 statements on Pydraul F-9 and Therminol FR-0.
 11 **Q** Those toxicity statements, were they sent to the
 12 customers.
 13 **MR. EWING:** Object to foundation, form.
 14 **A** Not in a mass mailing, but they were available on
 15 request or the field salesman would drop them off
 16 at his calls, and they were certainly available to
 17 potential new customers that were showing some
 18 interest in these kind of products.
 19 **Q** All right. In the product bulletins for both
 20 Pydraul and Therminol that comprise the majority of
 21 that folder, is there reference to disposal of the
 22 Pydraul fluids or the Therminol fluids?
 23 **MR. EWING:** Object to the form of the
 24 question. It's multiple and thereby vague.
 25 **A** I don't recall any reference to disposal, but I'd

1 have to read each document to make certain of that.
 2 **Q** Are there references to reclamation?
 3 **A** Yes. The emphasis was not on disposal, it was on
 4 reclaiming and reusing to get maximum benefits from
 5 these materials.
 6 **Q** I see. What are the references to reclamation and
 7 reusing?
 8 **MR. EWING:** Object to the form.
 9 **BY MR. PIETTE:**
 10 **Q** Wasn't that your wording, reclamation and reusing?
 11 **A** Yes.
 12 **Q** What are the references to reclamation and reusing?
 13 **MR. EWING:** Same objection.
 14 **MR. PIETTE:** Same question.
 15 **MR. EWING:** It's multiple.
 16 **A** I don't quite know how to respond, but I see an
 17 example here. For example, TPC 68. There's a page
 18 and it has a section entitled, "Reclaiming Pydraul
 19 Fluids," and it refers to water removal in the
 20 final filtration.
 21 **Q** And that's provided for right in the bulletin, the
 22 marked bulletin?
 23 **A** Yes.
 24 **Q** And are there references with respect to the proper
 25 handling of it?

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1 **MR. EWING:** Object to the form. It's
 2 vague and multiple.
 3 **A** As an example, TPC 69 is a full page on handling.
 4 **Q** All right. Okay. Turning your attention now to
 5 the Therminols, are there any references in the
 6 Therminol literature to either handling,
 7 reclamation or disposal?
 8 **A** A reference to safe handling and disposal appears
 9 on page TPC 161 for the Therminol systems.
 10 **Q** And what would be the date of that document?
 11 **MR. EWING:** Foundation.
 12 **A** This document, TPC 142, in the fine print at the
 13 very bottom there's a reference in the middle of
 14 all those numbers to 0173?
 15 **Q** I see it.
 16 **A** That's January '73.
 17 **Q** Okay. Thank you.
 18 You were going to refer to safe
 19 handling and disposal on TPC 161 contained within
 20 that product bulletin on Therminol fluid heat
 21 systems; correct?
 22 **A** That is correct.
 23 **Q** Can you tell us, please, what is the recommendation
 24 for safe disposal?
 25 **A** The only reference is in the middle of the

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1 **A** Yes.
 2 **Q** What's the date of this document?
 3 **A** The copy is very unclear and difficult to read. I
 4 just cannot say specifically.
 5 **Q** All right. Does it apply to the Therminol fluids
 6 with PCB's?
 7 **A** Yes.
 8 **Q** All right. So we know at sometime prior then to I
 9 think you said 1971 you discontinued Therminol or
 10 '73?
 11 **A** '71 was the end of the PCB-type formulation.
 12 **Q** For Therminol?
 13 **A** In Therminols, yes, um-hum.
 14 **Q** All right. So this then should be prior to that
 15 date then?
 16 **A** Correct.
 17 **Q** And there is a caption on page TPC 231 entitled,
 18 "Environmental Considerations?" That's what you
 19 were referring to, I believe?
 20 **A** Yes, sir, um-hum.
 21 **Q** And in general what does that provide?
 22 **A** Well --
 23 **MR. EWING:** Object, the document speaks
 24 for itself.
 25 **THE WITNESS:** It does refer to the

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1 paragraph under the safe handling and disposal
 2 section, which is the fourth paragraph, in which it
 3 refers to exercise care in the handling and
 4 disposal of this and all other such products.
 5 That's the only reference to disposal.
 6 **MR. DAVIDSON:** Just to clarify the
 7 record, I think that this one does not apply to
 8 PCB-containing Therminols.
 9 **MR. PIETTE:** Just that product
 10 bulletin, the one we referred to?
 11 **MR. DAVIDSON:** That's correct.
 12 **MR. PIETTE:** Why is that, Gerard?
 13 **MR. DAVIDSON:** It's after 1973.
 14 That's after they reformulated, and it doesn't
 15 mention the FR fluids and the language is not the
 16 language that's appropriate.
 17 **THE WITNESS:** Another example of
 18 disposal and safe handling and all is in the
 19 document that starts with TPC 220, which does
 20 include the PCB type for heat transfer fluids. On
 21 Page TPC 231 --
 22 **Q** The caption is, "Therminol FR Safety of Handling?"
 23 **A** Yes.
 24 **Q** And there's the caption, "Environmental
 25 Considerations?"

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1 presence of PCB's in that paragraph and it cautions
 2 against environmental contamination through
 3 spillage, leakage, careless disposal and refers
 4 further down to Therminol FR fluids or any other
 5 PCB-containing products.
 6 **BY MR. PIETTE:**
 7 **Q** And does it say at the end, "Every care should be
 8 taken by users?" Can you read that?
 9 **A** Yes, I found it.
 10 **Q** Please.
 11 **A** "Every care should be taken by users of Therminol
 12 FR fluids or any other PCB-containing products to
 13 prevent entry into the environment through spills,
 14 leaks, disposal, vaporization or everyday uses in
 15 handling," and from there -- I believe that's the
 16 end of it.
 17 **Q** Yes. Okay. You describe this as a product
 18 bulletin?
 19 **A** Yes, that's what we at Monsanto call it.
 20 **Q** And how does that get to the user or consumer?
 21 **MR. EWING:** Object, foundation.
 22 **A** Primarily through the marketing representative who
 23 makes the call.
 24 **Q** This is something he would leave with the customer
 25 as a typical practice?

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1 **MR. EWING:** Objection, foundation.
 2 **A** Yes.
 3 **Q** All right. Are you able to tell what the dates are
 4 on this toxicity and safe handling information
 5 prepared by Mr. Emmett Kelly?
 6 **A** Yes, they are on the documents.
 7 **Q** It's May '68, January '64. I don't see the other
 8 two or do they --
 9 **A** The two dates you mentioned refer to Pydraul F-9.
 10 The top sheet, TPC 233, does not have a date. I
 11 have no way of knowing when that was prepared. The
 12 toxicity statement for Therminol FR-0, on the page
 13 TPC 238 there's a date April 27, 1971.
 14 **Q** I see it. And that document is put out by the
 15 Medical Department of Monsanto?
 16 **A** Yes.
 17 **Q** Dr. Kelly?
 18 **A** Yes.
 19 **Q** And he concludes that because these chlorinated
 20 materials have displayed a persistence in nature
 21 and have entered our food chain, we no longer
 22 recommend that they be used as heat transfer fluids
 23 in food process applications; correct?
 24 **A** Correct.
 25 **Q** And then he refers to the Food and Drug

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1 Administration having issued guidelines; correct?
 2 **A** Correct.
 3 **Q** Now these are the guidelines you referred to
 4 earlier that they had issued as early as 1971, I
 5 think you said?
 6 **A** That is correct.
 7 **Q** And then later they become the rule?
 8 **A** Correct.
 9 **Q** Anything else in that folder that we haven't talked
 10 about yet, Mr. Papageorge?
 11 **A** I noted that there was one of these documents that
 12 referred to standard analytical methods for
 13 determining Therminol.
 14 **MR. EWING:** What number is that, Bill?
 15 **THE WITNESS:** It starts with TPC 206.
 16 **MR. EWING:** Thank you.
 17 **THE WITNESS:** And it shares with the
 18 reader the Monsanto laboratory methods used to
 19 determine the various physical and chemical
 20 properties of these materials and it applies to
 21 both the Pydrauls and the Therminols.
 22 **BY MR. PIETTE:**
 23 **Q** And that document, does it have a date on it?
 24 **A** I see a reference to February 1970 --
 25 **Q** All right.

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1 **A** -- as the date of the printed material. I do not
 2 know when the pencilled marginal notes were added
 3 suggesting an activity leading to a revision of
 4 this bulletin.
 5 **Q** All right. Are there references in that bulletin
 6 to handling or disposal or reclamation?
 7 **A** I see no reference to disposal in this particular
 8 product bulletin. I do see a paragraph that
 9 addresses safety.
 10 **Q** Safety in the handling of the Therminol?
 11 **A** Correct. It's on Page TPC 209.
 12 **Q** That's a reference to the safety of the employee or
 13 the worker handling the -- being exposed to the
 14 Therminol?
 15 **A** Yes.
 16 **Q** I see. All right. Any other documents in that
 17 exhibit, that folder?
 18 **A** I think my description covered all the others.
 19 That's it.
 20 **Q** I'm not sure I put into the record, and I want to
 21 make sure that the document that we just previously
 22 referred to with respect to the environmental
 23 warning, I want to make sure that we had the date
 24 on that. I don't recall. We did not have a date
 25 on that, did we?

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1 **A** I could not determine the date, no.
 2 **Q** Okay. But we knew it was prior to 1971 because
 3 it -- that's the year in which the Therminol FR-0
 4 was discontinued?
 5 **A** That is correct, and we know it was after 1970
 6 because the environmental considerations are
 7 listed.
 8 **Q** Okay. And you know of your own knowledge that at
 9 some point in 1970 Monsanto started adding this
 10 environmental warning sticker to the products
 11 containing PCB's?
 12 **MR. EWING:** Object, foundation.
 13 **A** Yes.
 14 **Q** As a matter of fact, didn't you personally draft
 15 that environmental warning sticker?
 16 **A** I was involved, yes.
 17 **Q** And you would know of your own personal knowledge
 18 that you drafted that sometime in 1970?
 19 **A** Yes.
 20 **Q** And that it was added by Monsanto to a number of
 21 documents in order to communicate it to the
 22 customers?
 23 **A** It was.
 24 **MR. EWING:** Object to the form and
 25 foundation.

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1 **BY MR. PIETTE:**
 2 **Q** Well, I want to use your terminology. Do you call
 3 it an environmental warning, a PCB warning? How
 4 did you term that?
 5 **A** I don't know that I had any special term. It was
 6 intended as a warning to be careful, don't let it
 7 escape. Use extreme care. These kinds of words
 8 were in that paragraph. So warning is an
 9 appropriate word, um-hum.
 10 **Q** Based on Mr. Bistline's deposition and the
 11 documents he produced and the additional documents
 12 he produced, my recollection is that there were a
 13 number of places where that environmental warning
 14 were added by Monsanto to communications to
 15 customers.
 16 **MR. EWING:** Object to the form of the
 17 question, if that's the end.
 18 **A** That's correct.
 19 **Q** Can we go through those? This would be a good time
 20 to do that. I know we're going to come across some
 21 of those documents, but just by way of
 22 recollection -- I don't like the form of that
 23 question.
 24 Tell me from your own recollection
 25 where this environmental warning was placed in

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1 **A** It was red ink on a white background.
 2 **Q** And when did you start doing all this?
 3 **A** May 1970.
 4 **Q** So that if Tecumseh Die Cast Division purchased
 5 Pydraul F-9 in May 1970 and the procedures were
 6 followed by the Monsanto people who forwarded those
 7 invoices, they would have stamped that
 8 environmental warning on the invoice?
 9 **MR. EWING:** Object to the form, vague
 10 as to time, foundation.
 11 **MR. PIETTE:** If I didn't say May 1970,
 12 I meant to include in the question May 1970.
 13 **MR. EWING:** Same objections.
 14 **A** The May date referred to the stick-on label on the
 15 package, on the drum. The stamping of the
 16 paperwork, as best I remember, occurred later in
 17 1970.
 18 **Q** Okay. When did that start?
 19 **A** I don't recall the exact month, but it was the
 20 latter part of 1970 that this was perceived to be a
 21 good idea to further communicate.
 22 **Q** Later in 1970?
 23 **A** Yes, sir. I don't recall which month. I just
 24 don't remember anymore.
 25 **Q** All right. Is it your recollection that by the end

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1 order to communicate it by Monsanto to its
 2 customers.
 3 **MR. EWING:** Foundation.
 4 **A** It was on documents that accompanied the shipment.
 5 Bills of lading. It was on invoices. It was on
 6 documents acknowledging the order. That's all that
 7 comes to mind at present.
 8 **Q** How about the product label?
 9 **A** Oh, yes. I didn't -- Okay. It was on the product
 10 label. I didn't associate that with documents, but
 11 it's a form of communication, um-hum.
 12 **Q** Sorry about that. It was added as a sticker to
 13 some of the product labels?
 14 **A** To some of the product labels, and eventually when
 15 the labels were reprinted, the paragraph was
 16 included on the new printing.
 17 **Q** Mr. Bistline produced a stamped impression of that
 18 environmental warning regarding PCB's. Was there a
 19 stamp that Monsanto had prepared where the person
 20 dealing with the invoices or the bill of lading or
 21 documents acknowledging the order could simply
 22 stamp that right on the document?
 23 **A** That is true, yes.
 24 **Q** What color was that sticker that you added to the
 25 product label to convey this environmental warning?

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1 of 1970, the stamped environmental warnings were
 2 being stamped on the invoices?
 3 **A** Yes.
 4 **Q** By the end of '70?
 5 **A** By the end for sure, yes.
 6 **Q** Okay. And is that true with respect to the bills
 7 of lading and the documents acknowledging the
 8 order?
 9 **A** As best I can remember. That's my recollection.
 10 **Q** Okay. Then my question then is rephrased now that
 11 by the end of 1970, if Tecumseh either in the
 12 Die Cast Division in Sheboygan Falls or the Marion
 13 Division were receiving products with PCB's, the
 14 invoices would have been stamped with this stamped
 15 impression with the environmental warning?
 16 **MR. EWING:** Object to foundation.
 17 **A** Yes. As best I remember, yes, sir.
 18 **Q** The environmental warning sticker was started to be
 19 added onto the products, the PCB products, in May
 20 1970?
 21 **A** Yes.
 22 **Q** So that if Tecumseh Products-Sheboygan Falls
 23 purchased Pydraul F-9 in May 1970, that
 24 environmental warning sticker should have been on
 25 the labels on the 55-gallon drums containing the

1 Pydraul F-9?
 2 **MR. EWING:** Object, vague as to time
 3 and no foundation this witness knows.
 4 **A** Yes.
 5 **Q** Okay. Let's go to the next folder then. I think
 6 that concludes that exhibit then, so let's go to
 7 our next folder. This is Exhibit 727, Monsanto's
 8 response to our Request No. 5, and I wonder if you
 9 would look at these documents, Mr. Papageorge, and
 10 identify these documents. They are Bate stamped by
 11 Mr. Bistline TPC 239 through 251.
 12 **A** This exhibit consists of copies of Pydraul F-9
 13 labels, Therminol FR-0 labels as well as a copy of
 14 the environmental stick-on label.
 15 **Q** That we referred to earlier?
 16 **A** Correct.
 17 **Q** And that's TPC?
 18 **A** 251 is the environmental stick-on label that was
 19 used starting in May of 1970.
 20 **Q** These labels for Pydraul F-9 and Therminol FR-0?
 21 **A** They represent the changes through a period of time
 22 as well as also reflect the different size
 23 containers that were used to ship the product.
 24 **Q** Let me state, Mr. Papageorge, that I asked if Mr.
 25 Bistline would provide me with the dates that his

1 records showed that these product labels were used,
 2 and so he forwarded me additional documents, which
 3 I'll hand to you, which should be the same as the
 4 document you have in your hands but with some dates
 5 that Mr. Bistline had his staff put on the top of
 6 the product label. Do you see that?
 7 **A** I see some, yes, I do.
 8 **Q** Will you use look through those and tell me if that
 9 would be consistent with your understanding of when
 10 those product labels were used?
 11 **MR. PIETTE:** Gerard, I think they are
 12 identical and what he did was just write dates on
 13 them.
 14 **MR. DAVIDSON:** My copies didn't come
 15 out very clear and I'm just writing down what they
 16 are supposed to be.
 17 **MR. PIETTE:** That was at my request.
 18 **A** I have looked at the dates that are written on
 19 these copies and they fit my understanding in terms
 20 of what year they would have been used. Now the
 21 collection does include a copy of the -- which it
 22 looks to me like the stamp that we talked about
 23 earlier that appears on documents as distinguished
 24 from the copy of the stick-on label.
 25 **Q** You are correct. He does state that in his letter.

1 I asked for that, also, and I didn't realize I had
 2 handed that to you. That's his letter of June 1st,
 3 1993, Paragraph 4. You asked for a copy of the
 4 rubber stamp impression which was placed on
 5 customer invoices from approximately May 1970
 6 onward. Attached to this letter is Document No.
 7 TPC 442, a copy of that rubber stamp impression.
 8 So that's what you're referring to?
 9 **A** Yes, I am.
 10 **Q** I didn't realize that was in with the product
 11 labels. All right. So there is two additions in
 12 1970. In May of 1970 the sticker, environmental
 13 warning sticker, and later in 1970 the rubber stamp
 14 impression, both of which are environmental
 15 warnings?
 16 **A** Yes.
 17 **Q** Would you read into the record the sticker that was
 18 added onto the product label? I believe you said
 19 it was red on white?
 20 **A** Yes. It reads as follows, "This product contains
 21 polychlorinated biphenyls which some studies have
 22 shown may be an environmental contaminant.
 23 Extreme
 24 care should be taken to prevent any entry to the
 25 environment through spills, leakage, use, disposal
 vaporization or otherwise."

1 **Q** Okay. And now would you please read into the
 2 record the stamp, a copy of the stamp impression
 3 that was placed on invoices, bills of lading and
 4 other documents you have referenced?
 5 **A** "This product contains polychlorinated biphenyls
 6 (PCB's) which some studies have shown may be
 7 persistent, an environmental contaminant and
 8 possibly injurious to certain forms of bird,
 9 aquatic and animal life. Prevent any entry into
 10 the environment through spills, leakage, disposal,
 11 vaporization, reuse of containers or otherwise.
 12 Spills, leakage and waste product must be
 13 collected. During shipment avoid spills and
 14 leakage into inland waterways and the sea. Keep
 15 away from food, animal feed stuffs and
 16 pharmaceuticals."
 17 **Q** You mentioned before that you personally drafted
 18 the environmental warning that was placed on the
 19 sticker. Were you also instrumental in drafting
 20 the environmental warning that went into the stamp
 21 impression?
 22 **A** I was privileged to see a proposed version. I have
 23 forgotten today what comments, if any, I made, but
 24 I was involved in that to that extent. I do not
 25 know who the originator of the reworded paragraph

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1 was.
 2 **Q** With respect to that environmental warning sticker,
 3 I assume it was necessary for Monsanto to have
 4 produced or printed up a large number of these
 5 stickers for add-ons to the product label?
 6 **A** It's quite a few to take care of all the inventory
 7 on hand and the future needs.
 8 **Q** What system or what practice or procedure did
 9 Monsanto employ to accomplish getting the stickers,
 10 the environmental warning stickers, onto the actual
 11 drum, the 55-gallon drum?
 12 **MR. EWING:** Object, foundation.
 13 **BY MR. PIETTE:**
 14 **Q** Certainly you were a part of making the necessary
 15 arrangements to get this all accomplished, right?
 16 **A** Yes. The responsibility for putting this add-on
 17 label rested with the supervisor of the warehouse
 18 from which the material was shipped. At the same
 19 time his superintendent made his own personal
 20 inspections of the material in inventory, in stock,
 21 to see that all the drums had this add-on label
 22 affixed after it was reported to him. "We're
 23 finished putting the labels on, come out and check
 24 it." That sort of communication did take place.
 25 **Q** A double-checking, so to speak?

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1 **A** Yes.
 2 **Q** So it is heavier than water by that calculation in
 3 my recollection of known statistics? I think
 4 that's right, water weighs 8.33 pounds per gallon,
 5 doesn't it? I think that's right. What do you
 6 say?
 7 **MR. EWING:** Whatever you say, Ron, I go
 8 along with on that issue.
 9 **BY MR. PIETTE:**
 10 **Q** I think we have finished that one. Let's move
 11 along here. We talked about the product labels,
 12 but let's get them all back correctly now. The
 13 original exhibit are without the dates on. The
 14 next exhibit is work orders. I'm sorry. The next
 15 exhibit is Monsanto call reports, and this is in
 16 response to our Request No. 6. They are Monsanto
 17 call reports numbered TPC 252 through 286, except
 18 the last -- Well, I take it back. There is some
 19 correspondence, as well, mixed in there, so I'll
 20 ask you to identify those, please.
 21 **MR. EWING:** I'm going to object. So
 22 far there is no foundation that he knows.
 23 **MR. PIETTE:** Knows what?
 24 **MR. EWING:** If all you're going to do
 25 is ask him to say what's in there, that's fine.

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1 **A** Yes. And really the final check is made on the
 2 shipping dock just before it's loaded by the
 3 supervisor of the shipping crew. As it's going
 4 onto the truck, he sees to it that this paragraph
 5 is on the container.
 6 **Q** All right. Have we talked about all the documents
 7 and the additional dates that Mr. Bistline provided
 8 us as contained in your folder, the product labels?
 9 **A** I believe we have.
 10 **Q** As far as the product labels that were on Pydraul
 11 F-9 in the '60's, there are or I should say there
 12 was a caution, was there not, with respect to
 13 employee safety?
 14 **A** Yes.
 15 **Q** And the reference is that it contained chlorinated
 16 hydrocarbons?
 17 **A** Yes.
 18 **Q** Is that, just out of curiosity, this net weight,
 19 558 pounds, that's the weight of one of the
 20 55-gallon drums of Pydraul F-9?
 21 **A** Yes, sir.
 22 **Q** Which makes it slightly more than 10 pounds per
 23 gallon?
 24 **A** Correct. -
 25 **Q** And water weighs what, 8.33 pounds per gallon?

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1 But without any foundation that he was involved in
 2 this multiple document exhibit, I have a foundation
 3 objection before he answers a question about a
 4 particular document.
 5 **A** This exhibit, as you say, consists of a mixture of
 6 types of documents, including the call reports, a
 7 letter from Tecumseh Products Company to a
 8 Monsanto
 9 employee. There's a letter from Monsanto to a
 10 Tecumseh Products employee. There's a memorandum
 11 here that I see that refers to PCB electrical use
 12 and Tecumseh Products interest in that subject. I
 13 don't know how else to describe it. There's only
 14 one document in here that I am listed as receiving
 15 a copy of. That's the one referring to dielectric
 16 use of PCB's.
 17 **Q** Okay. For starters, then, why don't you pull that
 18 one out. You don't have to keep them all in order,
 19 because Mr. Bistline has them all numbered. So
 20 let's pull that one out.
 21 **A** The only document I have seen before yesterday is
 22 this document I now have which is TPC 282 and
 23 283.
 24 **Q** And it is what?
 25 **A** This is a Monsanto memorandum authored by P. G.
 Benignus, B-E-N-I-G-N-U-S, addressed to C. Paton

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1 dated January 7, 1974 and the subject appears to be
 2 the use of PCB's in capacitors and their
 3 relationship to Tecumseh Products air conditioning
 4 equipment.
 5 Q All right. And the date on that?
 6 A January 7, 1974.
 7 Q And your understanding of the document is that it's
 8 related to PCB's?
 9 A Yes.
 10 Q Okay. In what way?
 11 A As a fluid used in capacitors that were destined
 12 for use in Japan.
 13 Q By Tecumseh?
 14 A Supplied by -- used in Tecumseh air conditioning
 15 equipment.
 16 Q So the air conditioning equipment would need a
 17 capacitor?
 18 A Apparently.
 19 Q Which would contain a PCB fluid?
 20 A Correct.
 21 Q And that's one of those enclosed or contained
 22 systems that you referenced before? I forget the
 23 language you used.
 24 A Enclosed system, yes.
 25 Q And who is Mr. Benignus?

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1 A At the time Mr. Benignus was manager of marketing
 2 of dielectric fluids.
 3 Q A Monsanto employee?
 4 A Correct.
 5 Q And is he still, do you know?
 6 A Is he still with Monsanto?
 7 Q Yes.
 8 A No, he's retired.
 9 Q And this is a Monsanto memo then, is it?
 10 A Yes.
 11 Q By him?
 12 A Yes.
 13 Q And he's addressed it to Cumming Paton, and at that
 14 time, what was his title or capacity?
 15 A Cumming Paton was involved really with -- in a
 16 general way with any PCB use still existing in
 17 1974.
 18 Q Okay. And you got a copy of this why?
 19 A Because I was still involved with the PCB
 20 environmental issue.
 21 Q Okay. And did you have any follow up, you
 22 personally have any follow up with respect to the
 23 subject of this memo?
 24 A No.
 25 Q Okay. This memo references two Tecumseh
 employees

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1 that were contacted, according to the memo, by Mr.
 2 Benignus, is that right?
 3 MR. EWING: Object. The document
 4 speaks for itself.
 5 A Yes.
 6 Q Who are those two Tecumseh employees?
 7 A I don't know.
 8 Q Will you look at the memo and see if the memo
 9 refers to who they were?
 10 A Oh, you mean by title?
 11 Q No, by name.
 12 A Oh, by name. Sure. Mr. Ron Wisner, Manager of
 13 Product Engineering, and Mr. Tom Jacoby, Assistant
 14 Director of Engineering.
 15 Q And the document references Mr. Benignus having
 16 contacted those two gentlemen?
 17 MR. EWING: I'm going to object. The
 18 document speaks for itself.
 19 BY MR. PIETTE:
 20 Q Having contact with those two gentlemen?
 21 A There was a contact made. I don't know who
 22 initiated the call.
 23 Q That's why I changed my question. There was a
 24 contact made. I'm sorry. There was contact
 25 between Mr. Benignus and these two gentlemen, at

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1 least according to the memo?
 2 A The memo also indicates in the last paragraph -- it
 3 states he appreciated my phone call.
 4 Q That would suggest it was Mr. Benignus that made
 5 the contact?
 6 A Correct.
 7 Q The memo reflects that Mr. Benignus discussed
 8 PCB's?
 9 MR. EWING: Objection. The document
 10 speaks for itself.
 11 A Yes.
 12 Q With Mr. Wisner and Mr. Jacoby, right?
 13 A Yes.
 14 Q And you received a carbon copy of that, did you
 15 say?
 16 A I did.
 17 Q What is your understanding of the -- whether or not
 18 there was any follow up by either Mr. Wisner or Mr.
 19 Jacoby with reference to the PCB fluid that's used
 20 in the capacitors that were needed by Tecumseh for
 21 their refrigeration equipment?
 22 A I have no recollection at all of the follow up
 23 regarding this matter.
 24 Q The company listed this time in this January 7,
 25 1974 telephone call report by Mr. Benignus, the

1 company listed is Tecumseh Products Company,
 2 Tecumseh, Michigan; correct?
 3 A Yes.
 4 Q My point is the location is specifically Tecumseh,
 5 Michigan not Sheboygan Falls and not Marion this
 6 time?
 7 A That is true.
 8 Q Page 2 of the memo reference an ANSI guide. Do you
 9 see that?
 10 A I do.
 11 Q What was your understanding of the ANSI guide
 12 that's been referenced here by Mr. Benignus?
 13 A He's referring to the ANSI C-107 Committee's
 14 guideline on the use and proper handling and
 15 disposal of dielectric fluids containing PCB's.
 16 Q Of which you were chairman?
 17 A Yes.
 18 Q And he was your designated alternate?
 19 A Yes.
 20 Q And what is your understanding of Mr. Benignus'
 21 reference to arochlor 1016? He says, "He did not
 22 know arochlor 1016 and how it relates to prior
 23 PCB's relative to environmental problems."
 24 A Arochlor 1016 was a rerefined arochlor 1242 from
 25 which the higher chlorinated types of PCB's were

1 removed. It was deliberately designed for use in
 2 capacitors admitting it's still a PCB mixture, but
 3 the more troublesome types of PCB's have been
 4 removed. In the event that there is an accidental
 5 entry into the environment, the chances of
 6 degradation are improved.
 7 Q Degradation of the arochlor 1016?
 8 A Of the components of what make up arochlor 1016.
 9 Q He seems to express that by way of surprise. In
 10 other words, Mr. Benignus seems to be surprised
 11 that Wisner "did not know arochlor 1016 and how it
 12 relates to prior PCB's relative to environmental
 13 problems."
 14 MR. EWING: Well, I'm going to object.
 15 The document, obviously, speaks for itself. I also
 16 object to foundation. There is no foundation
 17 established that the witness even remembers this
 18 letter.
 19 BY MR. PIETTE:
 20 Q I thought you said you did recall the letter?
 21 A I recall the letter. The follow up is what I don't
 22 recall.
 23 Q That is what I thought was the testimony. You
 24 recall having seen this before yesterday?
 25 A Yes.

1 Q Getting back to my question, Benignus seems to be
 2 surprised that Wisner, Tecumseh Products, Tecumseh,
 3 Michigan didn't know about this arochlor 1016, and
 4 I wonder if my impression is correct, that he seems
 5 to be surprised by that. Do you have any comment
 6 on that?
 7 MR. EWING: Object to the form of the
 8 question. You're asking him to comment on the
 9 state of mind of someone else.
 10 MR. PIETTE: No. No, I'm asking him to
 11 comment on this statement he did not know arochlor
 12 1016.
 13 A I don't know that that's a surprise. That's
 14 just -- I just read it as Mr. Benignus is
 15 reporting to the readers of that document that the
 16 individual had never heard of arochlor 1016, for
 17 whatever that meant to the reader.
 18 Q He goes on to say he, meaning Mr. Wisner, pointedly
 19 said that, "No one has been around to tell them
 20 anything along these lines." I suppose I'll have
 21 to ask Mr. Benignus what he meant by that, right?
 22 A That certainly would help.
 23 MR. PIETTE: What did you say, Tom?
 24 MR. EWING: I didn't say a word, Ron.
 25 BY MR. PIETTE:

1 Q Did you discuss this with Mr. Benignus after you
 2 got a copy of this? Do you recall?
 3 A I don't remember. There was so many things going
 4 on at this time that this appeared to be a
 5 relatively minor point. I just don't remember any
 6 follow up on that.
 7 Q All right. He goes on to say, "However, what he
 8 does have is copy of GE's promotional brochure
 9 entitled, "New Econol Non-PCB Impregnated 26F
 10 Capacitors for General Applications, Including
 11 Power Supply and Motor Run Independent of Title."
 12 Do you see that?
 13 A I saw that, yes.
 14 Q What is that?
 15 A That's a reference to a material that was not a PCB
 16 that GE at that time was introducing into some of
 17 their capacitors as an alternative fluid.
 18 Q Benignus puts two exclamation marks after that
 19 statement. Do you see that?
 20 A Um-hum.
 21 Q Do you know where he is now, Mr. Benignus?
 22 A The last I heard he's living in the St. Louis area.
 23 I don't know his exact address.
 24 Q I want to go through the list of names of people
 25 who got a copy of this memo and maybe you can just

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1 tell me -- I think you have already mentioned most
 2 of these, Mr. Bergen, Mr. Gossage, Mr. Munch, Mr.
 3 Richard. I think you mentioned these earlier in
 4 the deposition, didn't you?
 5 A I have mentioned some of those names. Not all of
 6 them, though.
 7 Q Okay. I think we covered Bergen, did we not?
 8 A Yes.
 9 Q Mr. Gossage?
 10 A He replaced Mr. Don Olson as the director of sales
 11 for functional fluids.
 12 Q Mr. Munch?
 13 A Dr. Munch was the top research chemist working on
 14 dielectric fluids in Monsanto's Research
 15 Department. Dr. Richard was Dr. Munch's
 16 supervisor. Dr. Richard was the Director of
 17 Research. Dave Mellon and I forget Seger's first
 18 name, the two listed there with the mail code 1010,
 19 they were field marketing men.
 20 Q Monsanto marketing individuals?
 21 A Right. I think you have a number of call reports
 22 from Mr. Seger in there. Yes, I recall seeing
 23 those.
 24 Q Okay.
 25 A That completes the list.

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1 Q Have you ever, to your recollection, have you ever
 2 talked to Mr. Ron Wisner who at that time was
 3 Manager of Product Engineering at Tecumseh,
 4 Michigan?
 5 A No.
 6 Q How about Mr. Tom Jacoby, who at that time was
 7 Assistant Director of Engineering?
 8 A I don't recall ever talking to either one of them.
 9 Q Do you know whether or not there was any follow up
 10 by Mr. Benignus on this phone call?
 11 A No. As I said earlier, I know nothing about the
 12 follow up.
 13 Q Nor by anybody else listed on here?
 14 A That is correct.
 15 Q Any explanation, based on your understanding of
 16 Monsanto's practices and procedures, any
 17 explanation why a telephone call report like this
 18 from Mr. Benignus would get copied to so many
 19 people?
 20 A That's sort of a typical distribution list.
 21 Q Is it?
 22 A It covers the marketing guys, the research guys and
 23 the field salespeople. That's sort of typical. I
 24 don't see anything unusual about it.
 25 Q All right. Any explanation why Mr. Seger would get

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1 a copy, who was the, as I understand it, was the
 2 sales rep for the Marion, Ohio plant?
 3 MR. EWING: Object, foundation.
 4 A I can't speak for Mr. Benignus as to where he got
 5 the names and why he included them there.
 6 Q How about Mellon? Did you say he was a sales rep,
 7 too?
 8 A He was a sales rep, too, out of the same field
 9 office.
 10 Q What do you mine?
 11 A Mail code 1010 designates the field office. I
 12 would suggest -- I just at the moment can't tie
 13 that in. I think it's the Chicago office. That's
 14 my recollection.
 15 Q Okay. So 1010 is Monsanto's designation for a
 16 field office?
 17 A Yes.
 18 Q Do you have any information with respect to the
 19 first part of the memo where Mr. Benignus says,
 20 "Information that Japan will ban PCB equipment
 21 1/1/74?" Do you know if that, in fact, happened?
 22 A Yes.
 23 Q They did?
 24 A Um-hum.
 25 Q Because of PCB's and the concern for the

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1 environment?
 2 A That's right.
 3 Q Okay. Let me ask you this. As far as your
 4 recollection is concerned, did you receive anything
 5 prior to 1/7/74, the date of this memo, in
 6 connection with this -- the topic of this memo,
 7 that is, contact with Tecumseh, Tecumseh, Michigan
 8 with respect to their capacitors containing PCB's?
 9 A No.
 10 Q No recollection of anything before this?
 11 A That's correct.
 12 Q What did you say Benignus' title was at this time?
 13 A He was manager marketing for dielectric fluids.
 14 Q For all of Monsanto?
 15 A Yes.
 16 Q So would he have had or would Monsanto, that
 17 department, have had somebody in Michigan, a
 18 representative in Michigan that may have called on
 19 Tecumseh, Michigan?
 20 A They certainly had a representative who would call
 21 on any customer, but I don't recall specifically
 22 anybody out of Michigan.
 23 Q I'm wondering how Mr. Benignus got involved in
 24 this.
 25 A I would only be speculating.

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1 Q All right. Go ahead.
 2 MR. EWING: I'll object, foundation.
 3 A Either Mr. Seger or Mr. Mellon called Benignus and
 4 said, "Tecumseh has these questions about
 5 dielectric capacitors, dielectric fluids in
 6 capacitors and they mentioned the PCB type. Paul,
 7 would you call them." That's what I speculate
 8 happened and Paul placed the call and he was then
 9 communicating the results of this call with this
 10 document.
 11 Q Paul Benignus?
 12 A Yes. I'm guessing this is what happened.
 13 Q That's okay. I'll move onto another document.
 14 You wouldn't have any personal knowledge of the
 15 call reports themselves, I assume?
 16 A I don't see any.
 17 Q Let me ask you this about the call reports in
 18 general. Is it a form that you're familiar with, a
 19 Monsanto form that you were aware was the practice
 20 and procedure they used for reports on a particular
 21 call that they made?
 22 A Yes.
 23 Q The call report at the top here, TPC 252, reflects
 24 a salesman, Bob Damiani?
 25 A Yes.

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1 Q Did you know him?
 2 A I know Bob, yes.
 3 Q And it reflects that he called upon Die Cast
 4 Corporation, Sheboygan, Wisconsin on April 28,
 5 1970, right?
 6 A Yes.
 7 Q At that time it appears from his call report that
 8 Monsanto was still selling to Die Cast?
 9 MR. EWING: Well, I object. There is
 10 no foundation. This witness has already testified
 11 he has no personal knowledge about any of the call
 12 reports and the document speaks for itself.
 13 BY MR. PIETTE:
 14 Q Isn't that correct?
 15 A That's what it says.
 16 Q It seems to refer to Pydraul F9.
 17 MR. EWING: Same objections.
 18 BY MR. PIETTE:
 19 Q It also seems to refer, does it not, that they were
 20 going to discuss a Pydraul 312 with Dee Sherman,
 21 the plant superintendent?
 22 MR. EWING: Same objections.
 23 A That's what it says.
 24 Q Do you recognize the name R. V. Whalen?
 25 A Yes.

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1 Q Did I pronounce that correctly?
 2 A Yes.
 3 Q And he was a sales representative out of Chicago?
 4 A Yes.
 5 Q Also, according to this call report dated May of
 6 19 -- Oh, I'm sorry. The date of the call by Mr.
 7 Damiani was 4/21/70. The date of the call from Mr.
 8 Whalen was 5/18/71.
 9 MR. EWING: Same objections.
 10 BY MR. PIETTE:
 11 Q And at this point now, this call report seems to
 12 reflect, does it not, that Monsanto lost the
 13 Pydraul business by this time?
 14 MR. EWING: Object. There is no
 15 foundation that this witness has any personal
 16 knowledge concerning these documents and the
 17 documents speak for themselves.
 18 A That's what I read there, sir.
 19 Q All right. I want to ask you some questions about
 20 this document which speaks for itself. He refers
 21 to the Tecumseh representative, Mr. Snoyenboss, as
 22 saying that they replaced Pydraul F-9 in their 27
 23 machines several months ago with a Chem-Trend fire
 24 resistant product. Do you see that?
 25 MR. EWING: Same objections.

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1 A I do.
 2 Q And do you also see where he refers to Tecumseh at
 3 Die Cast using Chem-Trend's product HF-31?
 4 MR. EWING: Same objections.
 5 BY MR. PIETTE:
 6 Q Do you see that right here?
 7 A Yes, I see it.
 8 Q Are you familiar at all with that HF-31 product?
 9 A I am not.
 10 Q Snoyenboss apparently told Whalen that they had
 11 been using this HF-31 product about three months?
 12 MR. EWING: Object. Document speaks
 13 for itself.
 14 BY MR. PIETTE:
 15 Q And prior to that they used a product containing
 16 chlorinated biphenyls. Do you see that?
 17 A I see that.
 18 MR. EWING: Same objections.
 19 BY MR. PIETTE:
 20 Q Is it your understanding that if this is correct
 21 what Mr. Whalen says when they switched from their
 22 product containing chlorinated biphenyls to a new
 23 product, HF-1 or 31, I think it means, which does
 24 not contain chlorinated biphenyls, in order to have
 25 properly disposed of those -- that PCB fluid, it

1 should have been incinerated?
 2 **MR. EWING:** Object to the form of the
 3 question. It's vague, no personal knowledge on
 4 this witness. Document speaks for itself.
 5 **A** It's Monsanto's considered opinion that the proper
 6 disposal method was incineration at that time.
 7 **Q** In 1971?
 8 **A** In 1971. At that time, as I recall, it was still
 9 permissible to place these in an authorized
 10 landfill.
 11 **Q** In some type of a drum?
 12 **A** Yes, it was permissible.
 13 **Q** Here are some call reports by Mr. Seger. Do you
 14 see that?
 15 **A** I do.
 16 **Q** In connection with the Marion, Ohio plant?
 17 **A** I see it.
 18 **Q** And a reference to Glen Watkins, engineer?
 19 **A** I see that.
 20 **Q** This Monsanto letter dated October 17, 1974 that
 21 Mr. Bistline provided to a Glen Mathis of Tecumseh
 22 Products, Marion, Ohio from C. Field, Supervisor,
 23 Customer Service Center, that's an additional
 24 letter, is it not, from what we were looking at
 25 before? That's not a copy of anything we looked at

1 before, is it?
 2 **A** No, this is -- I don't recall seeing a copy of
 3 this. We saw a blank that was attached to a letter
 4 and on this particular copy the blanks are filled
 5 in.
 6 **Q** And so this letter references incineration of the
 7 Therminol, does it?
 8 **MR. EWING:** Object, no foundation. The
 9 document speaks for itself.
 10 **A** Yes.
 11 **Q** Mr. Bistline also provided us with an additional
 12 follow-up letter to Mr. Glen Watkins from Paul
 13 Gann. Do you recognize the name Paul Gann?
 14 **A** I do, yes.
 15 **Q** The date on that letter is October 26, 1972;
 16 correct?
 17 **A** It is.
 18 **Q** And who is Mr. Paul Gann?
 19 **A** At that time Mr. Gann was a project coordinator,
 20 heat transfer fluids.
 21 **Q** For Monsanto?
 22 **A** For Monsanto.
 23 **Q** And this letter references the incineration of the
 24 Therminol and the fact that Tecumseh didn't take
 25 advantage of the free incineration offer that

1 expired I believe it was in 1972 sometime?
 2 **MR. EWING:** Object, no foundation that
 3 this witness knows anything about this letter.
 4 Secondly, the document speaks for itself.
 5 **A** It does refer to the fact that the service was not
 6 used by Tecumseh Products and the date was 1971 not
 7 1972.
 8 **Q** I'm sorry. That particular letter has a number of
 9 enclosures that Mr. Gann attached to that letter,
 10 does it not?
 11 **MR. EWING:** Object. There is no
 12 foundation that this witness knows what Mr. Gann
 13 did or did not attach to this letter.
 14 **BY MR. PIETTE:**
 15 **Q** Do you see the enclosures that Mr. Bistline
 16 provided marked TPC 264, 265 and so forth?
 17 **A** I do.
 18 **Q** I want to ask you some questions about those
 19 enclosures. He lists them in the letter and, first
 20 of all, it's a letter dated December 15, 1971
 21 identified as Mr. Bergen's letter. That's one of
 22 the communication letters we referred to before, is
 23 it not?
 24 **A** It is.
 25 **Q** So he is sending Mr. Mathis another copy of that

1 letter; correct?
 2 **MR. EWING:** Well, I object. The
 3 documents speak for themselves. There is no
 4 foundation that the witness has any independent
 5 knowledge of this document other than what he's
 6 reading at your request.
 7 **BY MR. PIETTE:**
 8 **Q** He also encloses or also lists as an enclosure the
 9 April Mr. Papageorge letter. That's your letter?
 10 **A** Yes, sir.
 11 **Q** And do you see that there?
 12 **A** I see it.
 13 **Q** And he also lists the government task force letter.
 14 What is the government task force letter?
 15 **MR. EWING:** Object, foundation.
 16 **A** It's a multipage document that describes the
 17 federal government's activities relating to PCB's
 18 with emphasis on the fact that the interagency task
 19 force on PCB's had just issued their report in May
 20 of 1972.
 21 **Q** The interagency task force? What was that?
 22 **A** That is a group of individuals from many federal
 23 agencies and departments that met and considered
 24 PCB's impact on the environment and the methods of
 25 analyses and the impact on the environment and made

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1 some suggestions as to -- that supported the
 2 continued use of dielectric fluids and supported
 3 Monsanto's withdrawal from the open systems.
 4 Q Did you provide assistance to them?
 5 A In a way, yes. Monsanto, and I was one of them,
 6 spoke before this group.
 7 Q All right.
 8 A And we also provided available information
 9 regarding the number of pounds of PCB's that
 10 Monsanto had produced through the years and by
 11 types of PCB as well as how many of those pounds
 12 went into each of the major uses, how many pounds
 13 in dielectric, how many in hydraulic fluids, how
 14 many in heat transfer and so on. That's the extent
 15 of Monsanto's help in this report.
 16 Q This is entitled, "A Federal Government Task Force
 17 on the Chemicals Known as PCB's." Was this one of
 18 the governmental agencies that you had mentioned
 19 earlier in your testimony that you communicated
 20 with and worked with or is this somebody altogether
 21 separate and distinct from the people you mentioned
 22 before?
 23 A This multiagency group consisted of representatives
 24 of the agencies I described earlier today. There
 25 were FDA people there, there were Department of

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1 Georgia?
 2 A That's correct.
 3 Q Are you familiar with that article?
 4 A Yes.
 5 Q And that, apparently, is dated sometime -- Well,
 6 I'll have to look. Apparently it's October of '78
 7 or '79?
 8 A No, it's October 1970.
 9 Q Okay. It's quite blurred. I can't read it.
 10 A It's one of the early articles. I'm pretty sure
 11 it's 1970.
 12 Q And the last enclosure listed is a Wall Street
 13 Journal article dated May 15, 1972. Have you seen
 14 that before?
 15 A Yes, I have.
 16 Q And do you recall having read it when it came out?
 17 A I recall reading it, but I don't recall the details
 18 any longer.
 19 Q Sure. But in any event, they also refer in the
 20 Wall Street Journal in 1972 to PCB's and the
 21 potential harm to the environment?
 22 A They do.
 23 Q That, by the way, is marked by Mr. Bistline as TPC
 24 278, and then the last thing listed as an enclosure
 25 in this letter is Cumming Paton's letter of May 25,

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1 Agriculture and Transportation and so on.
 2 Q It was called an interdepartmental task force?
 3 A Correct.
 4 Q And their report, PCB report, was released May
 5 1972, according to this document?
 6 A That is correct.
 7 Q It apparently references a task force report
 8 entitled, "PCB's and the Environment," and it was a
 9 result of a six-month review by eight federal
 10 agencies?
 11 A That's correct.
 12 Q By the way, there's also, is there not, a mailing
 13 label attached to this group of documents, also,
 14 this October 26, 1972 letter TPC 271.01. Do you
 15 see that?
 16 A I do.
 17 Q And who is that mailing label addressed to?
 18 A Director of Purchases, Tecumseh products, 333
 19 Joseph Street, Marion, Ohio, 53302.
 20 Q Another enclosure that's referenced is an article
 21 apparently from Environmental Science and
 22 Technology entitled, "PCB's Prevalent and
 23 Persistent," by Karl G. Gustofson?
 24 A Yes, sir. -
 25 Q Federal Water Quality Administration, Athens,

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1 1972 with respect to incineration of the Therminol
 2 product that we discussed before and that's TPC
 3 279. I believe we covered all those enclosures and
 4 I have asked you about them. Okay. Any other
 5 documents in that folder? We have talked about a
 6 number of those call reports. Did you ever
 7 personally talk to or deal with Glen Watkins, the
 8 plant engineer at the Tecumseh-Marion Division?
 9 A No.
 10 Q This letter from Mr. Watkins dated October 19, 1972
 11 from Tecumseh-Marion, Ohio, he references
 12 considering the Therminol 55, which was the non-PCB
 13 fluid that Monsanto produced?
 14 A Yes.
 15 Q Okay. And I believe we have talked about -- Did
 16 you know Mr. Gustofson personally?
 17 A I met the man, yes, sir.
 18 Q At one of the conferences or meetings that we
 19 talked about?
 20 A Yes. I don't remember just which one. I have met
 21 him more than once, but I don't recall just which
 22 meeting.
 23 Q Let's continue on then with the documents so we can
 24 conclude. I want to ask you a couple more
 25 questions on this telephone call report by Mr.

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1 Benignus. With respect to their -- with respect to
 2 the PCB fluid in Tecumseh's air conditioner
 3 capacitors, what fluid would that have been? What
 4 Monsanto product would that have been?
 5 **A** At what point in time?
 6 **Q** 1973. Let's make it right before this 1/7/74 call
 7 report. What Monsanto product would have been the
 8 PCB-containing fluid in those capacitors?
 9 **MR. EWING:** Object, foundation.
 10 **A** Arochlor 1016.
 11 **Q** Okay. That's the one.
 12 **MR. DAVIS:** That's assuming they were
 13 newly manufactured capacitors or recently
 14 manufactured capacitors.
 15 **MR. PIETTE:** Let me go into that.
 16 Thanks, Gerard.
 17 **BY MR. PIETTE:**
 18 **Q** That's the one referenced in the Benignus letter,
 19 arochlor 1016?
 20 **A** It is.
 21 **Q** Now if it was right before, the fluid as of January
 22 1974 that Monsanto was producing for those
 23 capacitors would have been arochlor 1016?
 24 **A** That is correct.
 25 **Q** Earlier the fluid would have been that higher

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1 numbered chlorine -- higher numbered arochlor?
 2 **A** True.
 3 **Q** What was that again? You mentioned it before.
 4 **A** Arochlor 1242.
 5 **Q** 12?
 6 **A** 1242.
 7 **Q** Can you tell me, Mr. Papageorge, when the switch
 8 was made from arochlor 1242 to arochlor 1016,
 9 approximately?
 10 **A** 1971.
 11 **MR. DAVIDSON:** Just for clarification,
 12 I'd like for the record to reflect that these
 13 questions and the responses are somewhat
 14 speculative in the sense that Monsanto did not
 15 manufacture the capacitors, we manufactured the
 16 arochlor fluid and it was placed in by some other
 17 manufacturer.
 18 **MR. PIETTE:** I was getting to that next
 19 because he refers to their suppliers.
 20 **BY MR. PIETTE:**
 21 **Q** Mr. Benignus refers to their suppliers in this
 22 letter. He says, "seeking to cover their immediate
 23 concern in Japan, Tecumseh requested trial non-PCB
 24 air conditioner capacitors from their suppliers."
 25 I think Gerard's point here is that there was

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1 somebody between them and Monsanto on this.
 2 **MR. EWING:** Well, I'm going to object.
 3 The document speaks for itself and you're asking
 4 the witness to speculate about something that he
 5 didn't write.
 6 **MR. PIETTE:** That's not where I'm going
 7 on this line of questioning. What I'm trying to
 8 determine is it appears, whether it's correct or
 9 not, that Tecumseh was asking their suppliers to
 10 supply them with a non-PCB air conditioner
 11 capacitor, and what I'm trying to get at here is
 12 Monsanto is producing in 1971 an arochlor 1242 and
 13 switches to an arochlor 1016. What we can't tell
 14 from this is who the supplier was, right?
 15 **MR. EWING:** Well, I object to the form
 16 of the question. It's multiple. I also object --
 17 **MR. PIETTE:** Or can you tell?
 18 **MR. EWING:** Let me finish. I also
 19 object to any characterization of the document.
 20 The question is vague and lacks foundation.
 21 **BY MR. PIETTE:**
 22 **Q** Can you tell, Mr. Papageorge, from reviewing this
 23 document of Mr. Benignus of January 7, 1974 who the
 24 suppliers would have been of Tecumseh's capacitors
 25 for their air conditioners?

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1 **MR. EWING:** Object, no foundation,
 2 calls for speculation.
 3 **A** I cannot.
 4 **Q** Was Monsanto in the United States the only supplier
 5 of the arochlor 1016?
 6 **A** Yes.
 7 **Q** If it's arochlor 1016 it has to be a Monsanto
 8 product, doesn't it?
 9 **A** Yes.
 10 **Q** Isn't that your trade name or, you know what I
 11 mean, Monsanto's trade name?
 12 **A** Yes.
 13 **Q** And by this time you have switched from 1242 to
 14 1016 and that's the arochlor 1016 Benignus is
 15 referring to?
 16 **MR. EWING:** Object to the form of the
 17 question, vague, multiple.
 18 **A** (No response.)
 19 **Q** Can you tell me or would you be able to tell me who
 20 Monsanto would have supplied arochlor 1242 or 1016
 21 to in those years? Who was making capacitors for
 22 air conditioners or have you no idea? No idea on
 23 that one?
 24 **A** When you said "those years" --
 25 **Q** '71, '72, '73. What I'm looking for is who would

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1 Monsanto have been selling those two arochlors to
 2 for the purpose of these capacitors?
 3 **A** If the capacitors are manufactured with a fire
 4 resistant dielectric fluid, Monsanto would have
 5 been the most likely supplier of arochlor 1242
 6 until about 1971 and then they revised that PCB
 7 mixture and made what was then sold as arochlor
 8 1016 as a substitute for the original arochlor
 9 1242.
 10 **Q** Can you tell me who would have bought the arochlor
 11 1016 and 1242?
 12 **A** About a couple dozen capacitor manufacturers.
 13 **Q** Monsanto would have sold their -- these two
 14 products, arochlor 1016 and arochlor 1242, to these
 15 couple dozen, more or less, capacitor
 16 manufacturers?
 17 **A** Correct.
 18 **Q** They, in turn, supply these capacitors to
 19 manufacturers who need capacitors for their
 20 particular product?
 21 **A** Correct.
 22 **Q** Okay. So can you just give me the names, for
 23 example, of some of those capacitor manufacturers
 24 that Monsanto sold its products to?
 25 **A** I'll try.

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1 **MR. DAVIDSON:** We have to come back.
 2 **MR. EWING:** I'll do it prior to the
 3 time we come back.
 4 **MR. PIETTE:** Not a good thought. It
 5 may be weeks or a month before we come back and I
 6 have to move ahead on this one. Apparently you're
 7 buying PCB products from another supplier and
 8 that's going to lead to a whole 'nother line of
 9 inquiry, it seems to me, and so can't we set at
 10 least some reasonable time? Can't we get you off
 11 the golf course and make it two weeks or three
 12 weeks or something?
 13 **MR. EWING:** Let me think about it. I
 14 don't know how big a deal it's going to be. I also
 15 wouldn't agree to ten days especially if it's going
 16 to be months before I get a chance to ask Mr.
 17 Papageorge some questions.
 18 **MR. PIETTE:** With that understanding,
 19 then, I'm going to finally put this document behind
 20 me, but at this point I just have a lot more
 21 questions about this document and these
 22 conversations and the -- what I perceive to be the
 23 involvement here of a completely separate
 24 PCB-related purchase of products by Tecumseh.
 25 **MR. EWING:** So the record is clear, I

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1 **MR. DAVIDSON:** Monsanto would normally
 2 adopt the policy of not identifying its customers
 3 on a wholesale basis, but would ask you to
 4 determine from Tecumseh who their suppliers might
 5 have been and then we can identify whether they
 6 were a customer of ours or not.
 7 **MR. PIETTE:** Okay. Can you identify
 8 who those suppliers were of the capacitors?
 9 **MR. EWING:** Not right now I can't. I
 10 think General Electric was one of them, but I'm not
 11 certain.
 12 **BY MR. PIETTE:**
 13 **Q** GE?
 14 **A** Yes.
 15 **MR. EWING:** That's the only one I'm
 16 guessing at.
 17 **MR. PIETTE:** Can we do this, Gerard?
 18 Maybe Tom can find out within ten days or
 19 something, find out who the capacitor suppliers
 20 were. I'll supply that list to you and Mr.
 21 Papageorge can respond as to whether Monsanto sold
 22 them. Fair enough?
 23 **MR. DAVIDSON:** Yes.
 24 **MR. EWING:** I don't know about the ten
 25 day part.

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1 don't know if I agree with that characterization
 2 and I don't think what you have done with this
 3 witness establishes that.
 4 **MR. PIETTE:** I think this document
 5 speaks for itself.
 6 **MR. EWING:** It, indeed, does.
 7 **MR. PIETTE:** Do me a favor and just
 8 mark that spot on the transcript, please, Kathy, so
 9 I don't forget to have a follow up on that on this
 10 document.
 11 **BY MR. PIETTE:**
 12 **Q** The next and almost the last documents are in
 13 response to Request No. 7. Bistline Exhibit No.
 14 729 contains TPC documents 287 through 354, and
 15 I'll ask you to review those and identify those.
 16 **MR. PIETTE:** While he's doing that,
 17 Gerard, any chance -- Off the record.
 18 (Discussion off the record.)
 19 **A** I have reviewed the exhibits and it's a collection
 20 of copies of Monsanto news releases and it appears
 21 to cover the years starting in 1970 up into the
 22 early-'80's on the subject of PCB's and the
 23 environment.
 24 **Q** Releases released by Monsanto to the news media?
 25 **A** Yes.

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1 Q Can you say, Mr. Papageorge, which newspapers or
2 what media would have carried any of these news
3 reports?
4 A Oh, I don't -- I have an understanding that it's a
5 long list of news services, journals of several
6 types, as well as the -- many newspapers are
7 listed. I have never seen a complete list
8 personally, but it's a standard distribution that
9 is followed each time.
10 Q Do you know that some newspapers carried some of
11 these news reports from your personal --
12 A As I recall, yes, they carried some of these.
13 Q -- from your personal review of newspaper accounts?
14 A Correct.
15 Q Besides St. Louis?
16 A Yes.
17 Q New York papers? Wall Street Journal?
18 A I think some references were made in the Wall
19 Street Journal. I can't recall exactly which
20 newspapers.
21 Q How about some of the industry or trade-type
22 journals or magazines? Any magazines or journals
23 that come to mind that would have carried news
24 reports or information released by Monsanto?
25 MR. EWING: Object to the form. It's

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1 documents that you have, so I have a foundation
2 objection, as well.
3 MR. PIETTE: I thought that Mr.
4 Bistline already produced and identified these
5 documents.
6 MR. EWING: That's fine, but that
7 doesn't mean this witness has any foundation to
8 testify. Many of those documents were prepared by
9 Mr. Bistline's staff presumably without the
10 knowledge or involvement of Mr. Papageorge, so I
11 have a foundation objection.
12 MR. PIETTE: You can answer.
13 BY MR. PIETTE:
14 Q My question is do these documents that you
15 referenced from Tecumseh refer to Therminol product
16 that was returned to Monsanto for incineration?
17 MR. EWING: Same objections. No
18 foundation and the documents speak for themselves.
19 A I see a reference to Therminol, but I also see a
20 reference to Innerteen and I also see a reference
21 to flushing liquid, so these documents represent
22 several types of scrap liquid for incineration.
23 Q Okay. And so based on these documents speaking for
24 themselves, you can tell that the document refers
25 to incineration of Therminol, at least, and

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1 vague as to time.
2 A I just don't recall them now.
3 Q Did you ever author anything separately for
4 industry or trade journals on PCB's in the
5 environment?
6 A No.
7 Q Request No. 9 is Bistline Exhibit 730 and it
8 contains sales invoices and summaries, does it not,
9 sir?
10 A I see the sales invoices you talked about and the
11 summaries, but I also see some documents that
12 relate to the shipment of material from Tecumseh to
13 Monsanto.
14 Q Okay.
15 A I don't know how else to describe it. It appears a
16 different set of documents regarding unusable
17 material as distinguished from the beginning, the
18 finished product that was shipped to Tecumseh and
19 to its die casting facility.
20 Q All right. The Tecumseh documents refer to
21 product, used product, that was returned to
22 Monsanto for incineration?
23 MR. EWING: I object. The documents
24 speak for themselves and there is no testimony that
25 the witness knows anything about any of these

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1 flushing fluid as two of the items that were
2 returned to Monsanto by Tecumseh?
3 MR. EWING: Excuse me. Same
4 objections. Foundation, documents speak for
5 themselves. This witness has no personal knowledge
6 of these documents.
7 A Yes.
8 MR. RABE: What is the third liquid?
9 THE WITNESS: There is a reference in
10 one of these documents to returning two drums of
11 Innerteen scrap. Innerteen is a Westinghouse
12 trademark for dielectric fluid.
13 BY MR. PIETTE:
14 Q Can you show me that document that speaks for
15 itself on that?
16 A (Witness responds.)
17 Q Do you recognize that word Innerteen?
18 A I do.
19 Q Okay. In other words, it takes somebody who has
20 some knowledge with respect to the words used in
21 this document in order to identify what it means?
22 MR. EWING: Object.
23 A Well, yes.
24 Q Innerteen is a Westinghouse trademark?
25 A It is.

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1 Q And would you identify that one for the record?
 2 That's TPC 42, is it, Mr. Papageorge?
 3 A It is.
 4 Q And that's a dieelectric fluid?
 5 A It is. The trade name refers to dielectric fluids.
 6 I have no way of knowing that this fluid was a
 7 dielectric fluid other than by looking at this
 8 trade name.
 9 Q What is WGK?
 10 A That's the Monsanto plant in Sauget, Illinois, the
 11 W. G. Krumrich plant.
 12 Q The interplant requisition form, that's a Monsanto
 13 form?
 14 A I don't know. I haven't seen this particular form
 15 before.
 16 Q All right. It seems for reference that the bill is
 17 to be submitted to Tecumseh Products of Marion,
 18 Ohio?
 19 A That's what it says.
 20 Q Was there any reference in the Tecumseh documents
 21 to disposal or incineration of any other products
 22 other than the three that you have referred to now?
 23 I think it was three products, was it not,
 24 Therminol, the flushing fluid and this Innerteen?
 25 A There's a reference to Innerteen again on this

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1 Do you see that?
 2 A I do.
 3 Q And that's September of '71?
 4 A I see that.
 5 Q Your practice of stamping invoices with the
 6 environmental warning, as I understand Monsanto's
 7 practice, was already in existence at that time,
 8 right, for the PCB Therminol FR-0?
 9 MR. EWING: Object. I think that's
 10 mischaracterizing his prior testimony.
 11 A I think it was the latter part.
 12 Q So in the latter part of '71 it would have been in
 13 effect?
 14 A Yes, sir.
 15 Q And this invoice is dated -- I thought I said '71.
 16 Let's start over. I thought it was FR-0 for 1971.
 17 Okay. I'll just use this as an example. It's
 18 TPC 413.
 19 A I see that.
 20 Q September '71 and you're selling two, 600-pound
 21 metal drums of Therminol FR-0?
 22 A That's right.
 23 Q That would be a PCB fluid?
 24 A Right.
 25 Q So this invoice is shipped to same, meaning

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1 document. I don't know if it's the same. It
 2 appears to be the same by weight.
 3 Q All right.
 4 A This document is not specific, it just refers to
 5 plastic liquid NOI, meaning not otherwise
 6 identified. This particular document refers, this
 7 is TPC 430, refers to arochlor. It's scrap.
 8 Q Ten drums of arochlor?
 9 A That's what it reports.
 10 Q And it's a bill to be submitted to Tecumseh
 11 Products, Marion, Ohio?
 12 A That's what it says.
 13 Q Dated 12/31/74 or returned 12/31/74. The date is
 14 1/8/75?
 15 A Correct.
 16 Q Any other products returned by Tecumseh?
 17 A The rest of the documents refer to flushing fluid.
 18 Q All right. Are you familiar with the practice, Mr.
 19 Papageorge, of Monsanto shipping products to one
 20 location and billing then to another location?
 21 A Certainly.
 22 Q I note, for instance, that some of these invoices
 23 by Monsanto indicate sold to Tecumseh Products
 24 Company, Tecumseh, Michigan and shipped to the
 25 same
 at Marion, Ohio. It's referencing Therminol FR-0.

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1 Tecumseh at Marion, Ohio, and sold to Tecumseh
 2 Products Company, Tecumseh, Michigan, right?
 3 A Right.
 4 Q This invoice then would have been stamped with your
 5 environmental warning?
 6 A It would have been, but I don't see any on this
 7 copy.
 8 Q It would not have been stamped on a Monsanto copy,
 9 would it have? This is Monsanto's copy?
 10 A That's true. The copy that was sent out to the --
 11 Q To the customer?
 12 A -- to the customer.
 13 Q Would have had the stamp?
 14 A Yes.
 15 Q Okay. I think I'm through with that. Oh, there
 16 was one other reference I wanted to make in this
 17 folder. Mr. Bistline was good enough or his staff
 18 was good enough to prepare these sales summaries,
 19 one for the Pydraul F-9 for Die Cast and one for
 20 the Therminol FR-0 for Marion, Ohio. It does
 21 reference Pydraul F-9 being sold in 1970 to Die
 22 Cast Corporation?
 23 A It does.
 24 Q 64,900 pounds?
 25 A It does.

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1 **Q** And he attaches invoices to Die Cast Division from
 2 April and it appears May 19th, 1970 is the last
 3 invoice?
 4 **A** Yes.
 5 **Q** A follow-up question with respect to some of your
 6 meetings with the various people you testified to
 7 before at the Great Lakes Governors Conference in
 8 '71, the WDNR meetings in Madison in approximately
 9 the early-'70's, the March '71 meeting in Duluth.
 10 Were any documents generated as a result of any of
 11 those meetings?
 12 **A** I seem to recall documents, but they are not very
 13 clear in my thoughts here. I know the Duluth,
 14 Minnesota meeting was publicized in some of the
 15 trade journals and all, the chemical trade
 16 journals. I just can't recall the details. I just
 17 can no longer remember.
 18 **Q** And do you recall when you were giving your
 19 speeches and seminars to various groups that you
 20 mentioned, whether it's regulatory agencies or
 21 universities, whoever you were working with or
 22 communicating with, did any of them include like
 23 industry trade groups where you made presentations
 24 to a trade group, such as apparently there's an
 25 American Die Caster Association?

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1 **A** I did make some presentations to industry trade
 2 groups, but not the one you just mentioned, the
 3 die casting people.
 4 **Q** Which ones would you have?
 5 **A** I remember, of course, NEMA, the electrical group
 6 we mentioned earlier, and then the other group I
 7 recall is the EIA, Electronic Industries
 8 Association. Those are the only two groups that I
 9 recall as representing industry.
 10 **MR. PIETTE:** I think that's all I have.
 11 I'm just going to review my notes here for just a
 12 second.
 13 **MR. EWING:** While he's doing that,
 14 obviously, we have not had a chance to ask any
 15 questions here today and I'd ask Mr. Papageorge and
 16 Mr. Davidson whenever the earliest convenient time
 17 is for us to get back together again, I'd like to
 18 do that, if that's okay.
 19 **MR. DAVIDSON:** Do you have your
 20 schedule here?
 21 **THE WITNESS:** I didn't bring it with
 22 me. August is starting to stack up pretty fast, so
 23 we better box in some dates.
 24 **MR. EWING:** Off the record.
 25 (Discussion off the record.)

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1 **BY MR. PIETTE:**
 2 **Q** Mr. Papageorge, if one of your customers had spills
 3 or leaks of Pydraul F-9 hydraulic fluid from one of
 4 their die cast machines in 1970 and 1971, would you
 5 have been critical of them for dumping waste
 6 material in their backyard that contained hydraulic
 7 fluid absorbed into waste material, such as Oil Dry
 8 or kitty litter?
 9 **MR. EWING:** Object, foundation, calls
 10 for speculation.
 11 **BY MR. PIETTE:**
 12 **Q** Would this have been contrary to Monsanto's
 13 recommended practice, if they had dumped these
 14 waste materials containing the absorbed hydraulic
 15 fluid in their backyard?
 16 **A** Yes, it would not have met the suggestions that
 17 they seek an authorized, properly managed landfill.
 18 **Q** For that matter, would you have been critical of
 19 them for that same practice or procedure for
 20 dumping in their backyard in the 1960's?
 21 **MR. EWING:** Same objection.
 22 **BY MR. PIETTE:**
 23 **Q** Hydraulic fluid that had been absorbed by Oil Dry
 24 or kitty litter and then dump the waste material in
 25 the backyard?

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1 **MR. EWING:** Same objections.
 2 **A** I would have been, yes.
 3 **Q** That waste material with the hydraulic fluid
 4 absorbed into the Oil Dry, that also should have
 5 gone to a proper landfill?
 6 **MR. EWING:** Object, foundation.
 7 **A** I thought that's what we were talking about, yes.
 8 **Q** Yes, indeed, we were. If you dig a hole, a pit,
 9 and dump the Oil Dry waste material into the pit,
 10 the Oil Dry that you have used to absorb the
 11 spilled hydraulic fluid with the PCB's on the floor
 12 by the die cast machine, you scoop it up, put it in
 13 a wheelbarrow, you wheel it out the door and you
 14 dump it into a pit in the backyard, okay?
 15 **A** I understand.
 16 **Q** Will the PCB's in the hydraulic fluid migrate from
 17 that pit?
 18 **A** I'd have to know much more about the situation. Is
 19 there a low -- is there a water level that would
 20 work its way through that hole?
 21 **Q** Let's say rain or flooding could work its way into
 22 the hole.
 23 **A** And is the hole itself pervious or has it got a
 24 good layer of clay under it to prevent movement?
 25 **Q** All those factors come into account?

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1 A Oh, yes, and is it disturbed frequently by
 2 bulldozers or what have you working their way
 3 through it, climate. Temperature changes do affect
 4 it. I would suggest that certainly it doesn't
 5 sound -- the description you gave doesn't sound
 6 like the kind of hole that the authorities would
 7 approve for disposal of industrial chemicals. What
 8 you're talking about is a minature landfill and it
 9 lacks some of the features of a well managed,
 10 properly located landfill.
 11 MR. EWING: I object. The answer is
 12 not responsive to the question.
 13 MR. PIETTE: That's all I have. Thank
 14 you. I appreciate very much your patience and your
 15 time.
 16 MR. EWING: It was very nice to meet
 17 you.
 18 MR. DAVIDSON: I have some
 19 clarification.
 20 EXAMINATION
 21 BY MR. DAVIDSON:
 22 Q I'd like to try to clarify what I think is a
 23 misconception about one of the documents that you
 24 asked about here at the end and it's the TPC 429
 25 through the collection of documents that go through

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1 TPC 438. I'd like to ask Mr. Papageorge to direct
 2 his attention to TPC 437, I'm sorry, TPC 435, which
 3 appears to be a purchase order from Tecumseh
 4 Products Company. Do you see anything on this
 5 document that identifies what was being shipped?
 6 A Yes, I see the reference to Monsanto flushing fluid
 7 and I also see the reference to Monsanto's
 8 designation of that fluid as MCS-681.
 9 Q Do you, as we are here right now, do you know what
 10 MCS-681 was?
 11 A As best as I can recall, it was a hydrogenated
 12 biphenyl.
 13 Q Would that have been a non-PCB product?
 14 A Correct.
 15 Q Did Monsanto ever recommend using a PCB product
 16 as
 17 a flushing fluid to flush PCB's out of a system?
 18 A No.
 19 Q And is it correct that this purchase order is
 20 designated number M-7587?
 21 A Yes.
 22 Q And then I direct your attention to the top sheet,
 23 TPC 429. Do you recognize what this is?
 24 A This is a billing request form.
 25 Q Is it a Monsanto form?
 A COP is customer order process, as I remember, COP.

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1 Q Is there anything on this form to indicate that it
 2 relates to the purchase order that we just looked
 3 at, TPC 435?
 4 A I'm looking for the reference. First of all, I do
 5 see an MCS-681, the ten drums. I see a reference
 6 to the Tecumseh Products Company Purchase Order
 7 M-7587 on Line 633. M-7587 dated 12/18/74, which
 8 is the same as the date on TPC 435.
 9 Q All right. Lastly, I direct your attention to TPC
 10 430, which is a document which indicates that ten
 11 drums of arochlor scrap were returned. Is there
 12 anything that indicates to you that this interplant
 13 requisition, TPC 430, is related to the TPC 429,
 14 the COP billing request?
 15 A Well, I see the reference to this charge number
 16 where it says, "Credit WGK 47-3-10868-00." That
 17 number appears on TPC 429 on Line 666. I also see
 18 the reference to ten drums of material, which
 19 matches the ten drums on TPC 435. I also see the
 20 MCS-681 which appears on both of these documents.
 21 So it looks like the use of the word arochlor was
 22 an in-house Monsanto use. It does not describe the
 23 material actually in the drums.
 24 Q So it does not appear, I take it, that Tecumseh was
 25 returning scrap arochlor, but rather MCS-681

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1 containing PCB's?
 2 A That's my understanding of what I see here.
 3 MR. DAVIDSON: Thanks.
 4 (Whereupon, the deposition was
 5 concluded at 6:08 p.m.)
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1 **STATE OF WISCONSIN)**
2 **MILWAUKEE COUNTY) SS:**
3
4 I, KATHY A. HALMA, Registered
5 Professional Reporter and Notary Public in and for the
6 State of Wisconsin, do hereby certify that the
7 deposition
8 of WILLIAM B. PAPAGEORGE was taken before me
9 at the
10 Ritz-Carlton, Clayton, Missouri, on the 28th day of
11 July, 1993, commencing at 9:00 o'clock in the forenoon.
12 That it was taken at the instance of
13 the Defendants upon verbal interrogatories.
14 That said statement was taken to be
15 used in an action now pending in the State of
16 Wisconsin,
17 Circuit Court, Sheboygan County, in which
18 **TECUMSEH**
19 **PRODUCTS COMPANY**, a Milwaukee Corporation
is the Plaintiff
and **THE TRAVELERS INDEMNITY COMPANY**,
MARYLAND CASUALTY
COMPANY, CONTINENTAL CASUALTY
COMPANY, AMERICAN EMPLOYERS
INSURANCE COMPANY, HARTFORD
ACCIDENT & INDEMNITY COMPANY,
INSURANCE COMPANY OF NORTH AMERICA,

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20 **FIRST STATE INSURANCE**
21 **COMPANY, THE HOME INSURANCE**
22 **COMPANY, MICHIGAN MUTUAL**
23 **INSURANCE COMPANY, STONEWALL**
24 **INSURANCE COMPANY, AFFILIATED**
25 **FIRST MORTGAGE INSURANCE COMPANY,**
ALLSTATE INSURANCE
COMPANY OF NEW YORK, JEFFERSON
INSURANCE COMPANY OF NEW
YORK, UNITED STATES FIRE INSURANCE
COMPANY and PURITAN
INSURANCE COMPANY are the Defendants.

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1 **A P P E A R A N C E S**
2 **FOLEY & LARDNER**, 777 East Wisconsin
3 Avenue, Milwaukee, Wisconsin, 53202, by MR.
4 **THOMAS C.**
5 **EWING**, appeared on behalf of the Plaintiff.
6 **SONNENSCHN**, NATH & ROSENTHAL, One
7 Metropolitan Square, Suite 3000, St. Louis, Missouri,
8 20005, by MR. MARK D. RABE appeared on behalf of
9 the
10 Defendant, The Travelers Indemnity Company.
11 **OTJEN, VAN ERT, STANGLE, LIEB & WEIR**,
12 S.C., 700 North Water Street, Suite 800, Milwaukee,
13 Wisconsin, 53202-4206, by MR. MONTE WEISS,
14 appeared on
15 behalf of the Defendants, Hartford Accident &
16 Indemnity
17 Company and First State Insurance Company.
18 **PIETTE & JACOBSON, S.C.**, 1233 North
19 Mayfair Road, Suite 204, Milwaukee, Wisconsin,
20 53226-0577,
by MR. RONALD L. PIETTE, appeared on behalf of
the .
Defendant, The Home Insurance Company.
POPE & JOHN, LTD., 311 South Wacker
Drive, Suite 4200, Chicago, Illinois, 60606, by MS.
KRISTIN A. O'BRIEN, appeared on behalf of the
Defendant,

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21 Affiliated First Mortgage Insurance Company.
22 **SMITH, HELMS, MULLISS & MOORE**, Suite
23 1400, 300 North Greene Street, P.O. Box 21927,
Greensboro,
24 North Carolina, 27420, by MR. GERARD H.
25 **DAVIDSON, JR.**,
appeared on behalf of Monsanto.

1 That said deponent, before examination,
2 was sworn to testify the truth, the whole truth, and
3 nothing but the truth relative to said cause.

4 That the foregoing is a full, true and
5 correct record of all the proceedings had in the matter
6 of
7 the taking of said deposition, as reflected by my original
8 machine shorthand notes taken at said time and place.
9
10
11
12
13
14

15 Notary Public
16 In and for the State of Wisconsin
17
18
19

20 Dated this 4th day of August, 1993,
21 Milwaukee, Wisconsin.
22

23 My commission expires October 16, 1993.
24

Monsanto

ORGANIC CHEMICALS DIVISION

Monsanto Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
Phone: (314) 694-1000

August 27, 1970

Dear Sir:

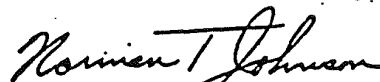
In February we advised you of the newspaper and magazine articles indicating that polychlorinated biphenyls (PCBs) have been discovered at some points in some marine, aquatic and wildlife environments. It was claimed that the PCBs found strongly resembled chlorinated biphenyls containing 54% and 60% chlorine by weight. The quantities detected are said to be in the parts per million and parts per billion categories.

Pydraul F-9 has been formulated with polychlorinated biphenyls. A new formulation has been developed and tested to provide equal or better performance. The new formulation will be designated Pydraul F-9-A. This formulation is completely compatible with the old formulation and does not contain polychlorinated biphenyls.

During the next 90 days, as inventory is depleted in warehouses around the country the new formulations will be shipped to fill your orders.

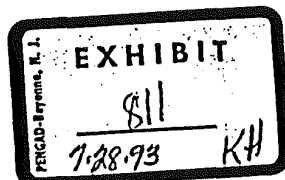
If we can be of further assistance or answer any questions you might have please contact our local representative or me in St. Louis.

Very truly yours,



Norman T. Johnson
Marketing Manager
Industrial Fluids

lb



TP007655