

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE MIDDLE DISTRICT OF TENNESSEE
 COLUMBIA DIVISION

3 KATHERINE JOYCE BREWER,)
4 et al.,)
)
5 Plaintiffs,) Nos. 1-88-008 and
) 1-88-0014 through
6 -vs-) 1-88-0368
) Judge Wiseman
7 MONSANTO CORPORATION,)
8 et al.,)
)
)
9 Defendants.)

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11
12 DEPOSITION OF JACK T. GARRETT

13 Taken on behalf of the Plaintiffs
14 December 21, 1988

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18 ORIGINAL

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Parties stipulated to attachment of first and last pages only
of lengthy exhibits.

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10 DEPOSITION OF JACK T. GARRETT produced, sworn
11 and examined on the 21st day of December, 1988,
12 between the hours of eight o'clock in the forenoon
13 and six o'clock in the afternoon of that day, at the
14 Karpowicz Reporting Company Conference Room, 314
15 North Broadway, 11th Floor, in the City of St. Louis,
16 State of Missouri, before Gwen A. Huffman, a
17 Registered Professional Reporter, and Notary Public
18 within and for the County of St. Louis, State of
19 Missouri, in a certain cause now pending in the
20 United States District Court, for the Middle District
21 of Tennessee, Columbia Division, between Katherine
22 Joyce Brewer, et al., Plaintiffs, and Monsanto
23 Corporation, et al., Defendants, taken on behalf of
24 the Plaintiffs.

25 A P P E A R A N C E S

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11 BY: M. Clark Spoden, Esq., . . . For the Defendant
12 Emhart Industries,
13 Inc.

14 IT IS HEREBY STIPULATED AND AGREED by and
15 between Counsel for the Plaintiffs and Counsel for
16 the Defendants, that this deposition may be taken in
17 shorthand by GWEN A. HUFFMAN, a Registered
18 Professional Reporter and Notary Public, and
19 afterwards transcribed into typewriting, and that the
20 signature of the witness is not waived.

21 - - - - -

22 JACK T. GARRETT,
23 of lawful age, being produced, sworn and examined on
24 behalf of the Plaintiffs, deposes and says:

25 DIRECT EXAMINATION

BY MR. CUKER:

Q. Mr. Garrett, my name is Mark Cuker. I
represent a group of workers at the former Waynesboro
plant of P. R. Mallory & Company. And I'm going to
be asking you some questions about your work for

1 Monsanto in the area of PCBs.

2 If at anytime you don't understand any

3 of my questions, will you let me know and I'll

4 rephrase the question? Will you let me know?

5 A. Yes.

6 Q. Okay. Have you testified in any of the

7 PCB litigation involving Monsanto?

8 A. I don't recall. I've been in so God

9 damn many and given so many depositions, I don't

10 recall.

11 Q. You don't recall if it was a PCB?

12 A. Not specifically.

13 Q. When did you retire from Monsanto?

14 A. 1985. December 1st, 1985. Three years

15 ago.

16 Q. What was your position?

17 A. Director of industrial hygiene and

18 health services.

19 Q. How --

20 A. And health information services. I'm

21 sorry.

22 Q. At the corporate level?

23 A. Yes.

24 Q. Were you working in the corporate

25 medical department?

1 A. Yes.

2 Q. How long were you director of industrial
3 hygiene?

4 A. Ten years. Since 1975.

5 Q. Okay. And before 1975, what positions
6 had you held?

7 A. I was manager of industrial hygiene and
8 pollution abatement.

9 Q. -- Was that in the medical department or --

10 A. Yes, in the medical department.

11 Q. What was the difference from that and
12 director of industrial hygiene?

13 A. Well, in Monsanto structure, and this is
14 true of very many companies, since -- in the
15 pollution abatement function, up through the -- in
16 through the '60s and into the early '70s was handled
17 on the state level by the state health department's
18 division or department of sanitary engineering. And
19 because of that, most companies began their pollution
20 control activities in their health departments
21 because that's where it was in the states.

22 In my case, ninety percent of the states
23 of the twenty-six states Monsanto operated in, and I
24 dealt with the health department, a division of the
25 state health department. And it's true to this day.

1 In many, many states, it still is.

2 Q. Did you report to a director of

3 industrial hygiene?

4 A. Yes.

5 Q. And who was that?

6 A. Elmer Wheeler.

7 Q. Elmer Wheeler?

8 A. Elmer Wheeler.

9 Q. How long were you manager of industrial

10 hygiene and pollution control?

11 A. Well, because of the very small

12 department at the time, I didn't even know what my

13 title was half the time, depending on the grade

14 levels. Because we operated as individual

15 professionals that got together periodically to

16 discuss common problems.

17 Q. Let me perhaps rephrase the question.

18 How long were you working as an industrial hygienist

19 at the corporate level?

20 A. From 1953.

21 Q. Through '75?

22 A. Through --

23 Q. Well, through '85?

24 A. Through actually '85, yes.

25 Q. In a capacity of not being chief of the

1 department, be '53 through '75?

2 A. Yes.

3 Q. And how much of that time were you

4 working under Elmer Wheeler?

5 A. All of it.

6 Q. Was he the director of industrial

7 hygiene all of that time?

8 A. He was director of occupational health.

9 They had a different title for him. But, yes, he was

10 my boss and he was the director of industrial

11 hygiene.

12 Q. Was the director of occupational health

13 the same as the director of industrial hygiene?

14 A. What's in a name.

15 Q. That's what -- my point.

16 A. That was his part of the medical setup.

17 Dr. Kelly took care of the medical part.

18 Q. Okay. Was he subordinate to Dr. Kelly?

19 A. Yes.

20 Q. Do you know where Mr. Wheeler is today,

21 other than being in the Carolinas?

22 A. He's in Camden, South Carolina.

23 Q. You know how old he is?

24 A. Seventy-three, seventy-four.

25 Q. Okay.

1 A. He's had two heart operations, so --
2 Q. Was Mr. Wheeler involved in the
3 activities of the American Industrial Hygiene
4 Association?
5 A. He was president of it once.
6 Q. He was the president of it?
7 A. Vice president, president, yeah.
8 Q. You remember when that was?
9 A. I should because I worked my ass off
10 while he was being president of AIHA. It had to have
11 been in the late '60s.
12 MR. CUKER: Off the record.
13 (A discussion was held off the record.)
14 THE WITNESS: He was -- being president
15 of AIHA took up half his time, literally half his
16 time. He had to visit all the local sections,
17 including the ones in Europe.
18 Q. (BY MR. CUKER) Were you active in AIHA?
19 A. Yes.
20 Q. And how were you active in AIHA?
21 A. I was local president and so forth
22 periodically in the local section in St. Louis. I
23 was also the chairman of the membership committee for
24 several years.
25 Q. Did anyone in Monsanto serve on the TLV

1 committees of ACGIH for PCBs?

2 A. They could not have.

3 Q. Why is that?

4 A. ACGIH is an American Conference of
5 Governmental Industrial Hygienists, and an industrial
6 man could not be on those committees.

7 Q. Okay. AIHA did not have TLV committees
8 for PCBs?

9 A. They have, in recent years, have what
10 they call wheel committees, which is very similar,
11 except the wheel committee produces a document that
12 is more extensive than just the TLV.

13 Q. Okay. And recent years being when?

14 A. Well, you -- the wheel committees
15 probably started somewhere in the late '70s or early
16 '80s. I think late '70s. Probably '79. '78, '79.

17 Q. Did Dr. Roush serve on a wheel
18 committee --

19 A. No.

20 Q. -- for PCBs?

21 A. No.

22 Q. Let me show you an exhibit that's
23 already been marked as Roush Exhibit 2. Do you
24 recognize that document?

25 A. Yes.

1 Q. You see your name in the lower left-hand
2 corner of that document?

3 A. Yes.

4 Q. What was your involvement with the
5 preparation of that document?

6 A. I wrote it.

7 Q. You wrote it?

8 A. Yes. Or the original one.

9 Q. What was the original one?

10 A. Well, which date is this? Excuse me a
11 minute.

12 MR. MOORE: '65, I believe.

13 THE WITNESS: I wrote it. They've since
14 modified it several times with different people.

15 Q. (BY MR. CUKER) When was it modified for
16 the first time?

17 A. I have no idea.

18 Q. Were the different people who modified
19 it Monsanto people?

20 A. No, not necessarily.

21 Q. Okay. Do you know -- I understand not
22 necessarily. Do you know of any -- you specifically
23 know if any specific Monsanto people --

24 A. No, I do not know.

25 MR. CUKER: Off the record. On the

1 record.

2 Q. (BY MR. CUKER) You've been deposed a
3 lot of times. You should know that you shouldn't

4 answer my question until I'm done asking it. Okay?

5 Do you know specifically if any Monsanto
6 people were involved with writing revisions of this
7 Roush Exhibit 2, the AIHA guide?

8 A. No.

9 Q. Okay. What was Elmer Wheeler's
10 involvement with this document?

11 A. He and I -- he brought up the material
12 and I wrote it.

13 Q. Okay. Was this doc -- was this sent out
14 to Monsanto customers using PCBs?

15 A. With the documents that Monsanto
16 customers used, yes, it was.

17 Q. I'm sorry, what do you mean by with the
18 documents that they used?

19 A. The sales document and the like, yes, it
20 was.

21 Q. Okay.

22 A. It was one of those documents.

23 Q. Would it have been routinely sent out to
24 the customers using PCBs?

25 A. It would depend on the salesman. But it

1 was given to the -- sales department had copies of
2 it.

3 Q. Okay.

4 A. And I see no reason why they should not
5 have.

6 Q. Okay. Was it sent out through the sales
7 department rather than through the industrial hygiene
8 department?

9 A. Initially, yes.

10 Q. Okay. How frequently did you visit the
11 Krummrich plant?

12 MR. MOORE: What period of time, Mark?

13 Q. (BY MR. CUKER) Yeah, that's fair.
14 Let's say 1969 to 1977.

15 A. I visited Krummrich plant probably many,
16 many times a year during the early period of my
17 employment until we began to grow larger with
18 assignees. Then the Krummrich plant was assigned to
19 another hygienist who reported to me.

20 Q. Okay. '69 to '76, did you have someone
21 reporting to you on the Krummrich plant or were you
22 still going there?

23 A. Part of that time.

24 Q. When would the reporting period have
25 started?

1 A. Sometime in the early '70s, like '70,
2 '71.

3 Q. Okay. After that, how often did you go
4 to the Krummrich plant?

5 A. Oh, probably one or two times a year.

6 Q. Were you familiar with the types of
7 physical examinations performed by the plant
8 physician at the Krummrich plant?

9 A. Yes.

10 Q. Okay. Did he conduct an examination --
11 was part of his examination geared towards
12 determining whether the employees had liver problems?

13 A. He did a full physical, and had they had
14 liver problems over the yearly physicals, they would
15 have been -- it would have developed, or they would
16 have reported it to the dispensary.

17 Q. Did he order any tests to determine if
18 they had liver problems?

19 A. Not --

20 MR. BUSTER: Are you talking --

21 THE WITNESS: Not in the early part of
22 the period when I was there.

23 Q. (BY MR. CUKER) Meaning what?

24 A. When I did very frequent periods.

25 Q. Which would be what?

1 A. Up through 1970.

2 Q. Okay. Do you know what he did, whether
3 he began to order liver tests routinely on these
4 annual physicals after 1970?

5 A. I'm not -- I don't know of my own
6 knowledge, no.

7 Q. Okay. Do you know what an SMA-12 is?

8 A. Yes.

9 Q. Do you recall whether an SMA-12 ever
10 became part of the Monsanto standard annual physical
11 within the corporate medical program?

12 A. You'd have to ask Dr. Kelly. We may
13 have done them on some people. Our physical exam
14 program is based on age, occupation. Periodicity
15 was -- I'm sorry, the periodicity and the extent of
16 the exam, let's be careful, were based on age,
17 location, potential exposure.

18 For example, that was the people in the
19 plants got annual physicals. All research people got
20 annual physicals. People that sat on their duff in
21 the office got them every two or three years,
22 depending on their age. At a certain point in age,
23 everyone got an annual physical.

24 Q. How about extent of the examination, how
25 did that vary?

1 A. Well, it was a complete exam, chest
2 x-ray, full hands-on exam by the physician, blood
3 test, and any special tests that had been specified
4 for that particular gentleman.

5 Q. Okay. Were there any special tests
6 specified for PCB workers?

7 A. No.

8 Q. Now, the question you suggested I ask
9 Dr. Kelly I asked Dr. Roush yesterday about when the
10 SMA-12 became part of the exam, and his
11 recollection -- his testimony I think was something
12 in the -- approximately the mid '70s, like '75 or
13 '76. Does that refresh your recollection as to when
14 it happened?

15 A. You'd have to decide what the SMA-12
16 means and what happened prior to that terminology.

17 Q. Okay.

18 A. In other words, blood examinations for
19 various things were done long before anybody ever
20 used the term SMA-12.

21 Q. I see.

22 A. Or SMA or SMA anything else.

23 Q. So Monsanto may have been doing those
24 without calling them SMA-12s?

25 A. We may have been doing a blood exam. To

1 what extent it was done, I don't know. That's
2 medical business.

3 Q. Okay. Did you consider this document to
4 still be applicable to work place practices in 1976?

5 MR. MOORE: You're talking about
6 Roush 2?

7 MR. CUKER: Yeah.

8 THE WITNESS: Personally?

9 Q. (BY MR. CUKER) Yeah.

10 A. Do I consider it that?

11 Q. No, did you. In 1976 --

12 A. Yes.

13 Q. -- did you consider it to still be
14 applicable?

15 A. Yes.

16 Q. You did?

17 A. Yes.

18 Q. Okay. In 1977? Through the time that
19 Monsanto stopped making PCBs.

20 A. Yes.

21 Q. There's a reference in this document to
22 elevated temperatures, when these materials are
23 subjected to elevated temperatures.

24 A. Yes.

25 Q. You see that? What temperature did that

1 mean?

2 A. It would depend on the circumstances and
3 the equipment involved. If it got to very high

4 temperatures, the material would creep, would creep
5 through joints and stuff like that, if you know what
6 I mean. Oil does at very high temperatures. That's
7 why you get oil drops in your garage and think it's
8 horrible. The fact is it creeps through the joints
9 of even tight joints.

10 At very high temperatures, you could
11 elevate -- you could increase the vapor pressure of
12 the materials irrespective of which one they were,
13 depending on the temperature, to the point at where
14 there was airborne concentrations that would become
15 what I would consider hazardous.

16 Q. What temperature is that that would
17 increase the airborne concentration?

18 A. Depend on the Aroclor.

19 Q. 1242.

20 A. Oh, hell, I don't remember.

21 Q. Okay. By the way, did you consider this
22 also applicable to Aroclor 1016?

23 A. Well, 1016 was a lighter material in
24 respect to its vapor pressure. It would be
25 applicable as it would be to low chlorinated Aroclor,

1 like 1236.

2 Q. Did Monsanto follow --

3 A. Or 1242.

4 Q. I'm sorry, did you say --

5 A. 1236, 1242, the early ones.

6 Q. Would it be considered applicable the
7 same for 1016 --

8 A. Yes.

9 Q. -- as it would be to 1242?

10 A. Yes.

11 Q. Just so I'm understanding, in terms of
12 the part here where it talks about "When these
13 materials are subjected to elevated temperatures, the
14 process either should be completely enclosed or other
15 adequate mechanical exhaust ventilation must be
16 provided," if I understand what you're saying, that
17 is not an absolute temperature like a number, that
18 is -- an elevated temperature is a temperature at
19 which it will seep out of the joint --

20 A. A temperature at which it is possible
21 for it to exceed the standards on its own without
22 being mechanically thrown around or anything.

23 Most Aroclors at room temperature have
24 no vapor pressure. It's so low it does not exceed
25 these. And we did test on these to prove it. It

1 simply does not -- if you sit here, it does not give
2 off enough fumes to register on the analytical
3 equipment available in those days.

4 Q. Did you do any tests to see what kind of
5 fumes are given off at fifty-five degrees centigrade
6 or higher?

7 A. I don't recall.

8 Q. Okay. Or at a hundred degrees
9 centigrade?

10 A. I don't recall. Those probably were
11 done, but I didn't do that and I don't recall.

12 Q. Okay. Did you ever work with a Paul
13 Benignus?

14 A. Yes.

15 Q. In what way did you work with him?

16 A. We went to customers from time to time
17 if Elmer wasn't -- was busy or something.

18 Q. Did he work in industrial hygiene?

19 A. Who?

20 Q. Mr. Benignus.

21 A. No, he was a technical sales
22 representative. The salesmen went in and bit the
23 customer and Benignus came in and bit him again.
24 Benignus knew how to use it, its characteristics,
25 most of the -- of a great deal of experience in

1 manufacture and in containment and that sort of
2 stuff. He was a technical man in the sales
3 department. They're still there.

4 Q. Okay. Let me show you a document that's
5 already been marked Weber 3, Weber Exhibit 3. This
6 is a fairly hefty manual by Mr. Benignus.

7 A. Uh-huh.

8 Q. Do you recall seeing that --

9 A. I've seen it, yeah.

10 Q. Okay.

11 A. I've seen it in the printed form.

12 Q. Was this updated?

13 A. I don't know. I have no idea.

14 Q. This is page ninety-nine of the manual.
15 And I believe at the second full paragraph there is a
16 reference to capacitor impregnation. Do you see
17 that?

18 A. Uh-huh.

19 Q. Did Monsanto ever conduct any tests to
20 see what type of fumes would be released at that
21 capacitor impregnation temperature?

22 A. No, not that I know of.

23 Q. Okay.

24 A. If they did, I didn't have anything to
25 do with it.

1 Q. Do you know what the basis was for
2 Mr. Benignus saying about respirators being used
3 during that interval?

4 A. No, except that Mr. Benignus knew the
5 product and the health possibilities sufficient to be
6 able to make those judgments, I think, in this case,
7 yes.

8 Q. Did you concur in that judgment?

9 A. Yes.

10 Q. And would you have felt the same way in
11 1976?

12 A. Yes. Mr. Benignus and I visited some
13 people. We turned down two customers for use.

14 Q. Which customers did you visit and turn
15 down?

16 A. We turned down one of the -- one of the
17 manufacturers of preformed insulation and a tile
18 manufacturer.

19 Q. These were not capacitor manufacturers?

20 A. No.

21 Q. This was back in the days when they were
22 not selling the enclosed systems?

23 A. This was back in the '60s. Anyway, we
24 were flying in DC-3s.

25 Q. Did you ever visit the P. R. Mallory

1 plant in Waynesboro, Tennessee?

2 A. No.

3 Q. And you visited the --

4 A. I never did anything. Elmer did that.

5 Q. Do you know what the budgetary criteria

6 system was at the Krummrich plant, the PCB operation

7 at the Krummrich plant?

8 A. No, I have no idea. It would have

9 been -- any budgetary system over there would have

10 been budgeted in the personnel department and it

11 would have been covered by the personnel's overall

12 budget since their safety and eventually industrial

13 hygiene services were budgeted and managed under

14 personnel.

15 Q. Okay. Would that include the cost of

16 the protective clothing used?

17 A. No.

18 Q. What was that budgeted under?

19 A. That would be budgeted under the

20 individual divisions.

21 Q. That issued the clothing?

22 A. Yes.

23 Q. Dr. Osland, what would he be budgeted

24 under?

25 A. He would be budgeted under personnel.

1 The cost of personnel was a part of cost of goods.

2 Q. How frequently do they do sampling --
3 sample the air for PCBs at that plant?

4 A. At what period of time?

5 Q. Let's say '69 to '77.

6 A. Probably not very frequently since it
7 was a very cumbersome job.

8 Q. Air sampling?

9 A. Uh-huh.

10 Q. What did they use to sample?

11 A. Used a very complicated system of
12 breaking down the Aroclor to hydrogen chloride,
13 absorb the hydrogen chloride in a fixed base, and
14 then backtracking the base.

15 Q. Okay. Now, Mr. Papageorge testified
16 that after 1970 they went to a system where they used
17 these vessels containing hexane to sample the air for
18 PCBs. Were you familiar with that?

19 A. No. That's the one where you run it up
20 the outside tool container, I presume?

21 Q. I'm sorry, I didn't hear what you said.

22 A. That's the kind that you run the -- a
23 gas, and by adiabatic cooling collect samples, is
24 that what you're talking about?

25 Q. Adiabatic?

1 A. By cooling.

2 Q. Okay. I don't know if that's what I'm
3 talking about or not.

4 A. I don't know what he's talking about
5 either.

6 Q. Okay. He described something with a
7 pump sucking the air through vessels which contained
8 a solvent, and the solvent would capture the
9 contaminant.

10 A. Well, but that's common system. They
11 used what's known as a -- we had a hand pump, and you
12 pumped material through Greenberg Smith impingers or
13 midget impingers, although we preferred the Greenberg
14 Smith impingers. Great big tubes.

15 To ship that equipment would cost you
16 about a hundred and twenty-five percent of a -- of
17 your own personal air ticket, by the way. The whole
18 thing weighed, oh, two or three hundred pounds, all
19 of the equipment with all the Greenberg Smith tubes,
20 the tripod. The pump weighed thirty-eight pounds
21 that we used. And you had -- you brought two cases
22 of tubes, one of bubblers and one --

23 Q. Mr. Garrett, are we talking about what
24 was done in the '70s here?

25 A. We're talking about what was done up to

1 the time of the individual samplers. And the early
2 individual samplers weren't worth a dime.

3 Q. When were the early samplers used?

4 A. Introduced in the '70s. And the early
5 ones failed more frequently than they worked, and we
6 never could get really correct air volume
7 measurements with them.

8 Q. Never?

9 A. We never could.

10 Q. Okay. How long were you trying?

11 A. Well, the first good ones were probably
12 made by DuPont, in our opinion. Sippen made a good
13 one for short-term sampling. Anyone that preceded
14 that, as far as we're concerned, would not maintain
15 the airflows.

16 Q. What do you mean, the pump would run
17 down?

18 A. Well, you're talking about a little tiny
19 plastic pump with a battery, and you're trying to get
20 an eight hour sample.

21 First, most of them wouldn't take an
22 eight hour sample until the midget ones introduced
23 originally by Sippen and followed by DuPont. The big
24 maker of pumps today is DuPont.

25 Q. When was this midget one introduced by

1 DuPont and Sippen?

2 A. In the early '70s. They weren't
3 perfected until -- they became very reliable pumps
4 probably in the early '80s. And by the mid '80s,
5 they were accepted as accurate and they were very
6 accurate and they -- by this time had extensive
7 electronic stuff in it so you could set them or
8 anything, set them for time-lapse, anything. They do
9 anything including milk for you, if you had it set up
10 right.

11 Q. Now, by problem with the pump, do you
12 mean that because the pump was not reliable, you
13 could never be sure of what volume of air had gone
14 through the sample?

15 A. In the early days.

16 Q. And, therefore, the concentration figure
17 would be meaningless?

18 A. That's right, that's why we carried all
19 this heavy gear. We used rotameters for -- good,
20 heavy, balanced rotameters for our air volume
21 measurements. And we read the rotameters on periodic
22 intervals. And the test result looked like a piece
23 of paper with the readings for almost every twenty,
24 thirty minutes to get a decent sample.

25 Q. Did you ever use organic vapor tubes or

1 carbon tubes for sampling of PCBs?

2 A. Oh, my, yes. Later on, when you got
3 the -- when you could produce and integrate a

4 chromatogram for the PCBs in general, we would use
5 the carbon tubes, and where you -- where we could
6 quantitate them accurately, you could get the -- the
7 chromatogram for PCBs using electron capture
8 technique, you can get a chromatogram.

9 But when you could quantitate them
10 accurately, that means tell how much was there
11 accurately, we used the carbon tubes and we used all
12 types of absorptive materials, including carbon, in
13 tubes.

14 Q. When were you doing that?

15 A. From the early '70s through until the
16 time I quit.

17 Q. Okay. Was it --

18 A. All -- every incident of improvement,
19 considering the analytical methods and considering
20 the pumps available.

21 Q. Was there a preference for the vessels
22 with the solvents over the carbon tubes?

23 A. No, no, no, they didn't -- we -- you're
24 not going to carry all that junk around if you could
25 do it with a thing as big as a cigarette package and

1 a pack about as big as an ordinary cough drop package
2 in your pocket. You're not going to carry that three
3 hundred pounds of trash around.

4 I drove my cars to death carrying that
5 around. The airlines wouldn't take some of that.
6 And besides that, the first time I ever detected for
7 PCBs in the air with a so-called chlorinated
8 hydrocarbon detector made by a gentleman in Dayton,
9 Ohio in his own shop, I guess, and it was so
10 delicate, because it had so much glassware connected
11 with it, that if we put it on an airplane in those
12 days, you'd never -- you'd have to go to a glass
13 blower immediately and have it put back together
14 again.

15 So we frequently -- I drove all over
16 this damn country in my personal car to do sampling.
17 And one of the samplers, this thing was about this
18 big, about this long.

19 Q. What are we talking about here, carbon?

20 A. Talking about a sampler for Aroclors.

21 Q. Okay. What kind?

22 A. It was elec -- it was a chlorinated
23 hydrocarbon detector. I don't know who made it. But
24 a lot of the instruments were made those days in what
25 you'd call garage shops.

1 Keep in mind, when I went in -- when I
2 was a member or the chairman of the committee for the
3 national AIHA membership committee, we had a great
4 party and we had five hundred members. There are
5 seven thousand of them now.

6 So a person that wanted to make
7 instruments for this business in those days had
8 little incentive. Today, they have much incentive.
9 Because those --

10 MR. MOORE: You've answered his
11 question.

12 Q. (BY MR. CUKER) Were carbon tubes ever
13 used in series?

14 A. In series?

15 Q. Yeah.

16 A. Depending on what you want to measure.

17 Q. PCBs.

18 A. I don't know why you'd use them in
19 series. If you used the proper air settings and the
20 proper tube, you're going to absorb enough on there
21 to get you a sample that you can quantitate.

22 Q. Do you remember a recommended flow rate
23 for sampling with carbon tubes?

24 A. No, I do not.

25 Q. Did Monsanto keep that information?

1 A. I'm sure we did.

2 Q. Could you recall whether it was less
3 than one liter per minute or one liter per minute?

4 A. It would depend, again, on the size --
5 on the type of pump you have. And if the pump -- and
6 airflow characteristics would depict the kind of tube
7 you used.

8 You could get tubes that would take low
9 airflows and high airflows depending on the amount of
10 carbon or the amount of absorption in the tube. And
11 you can get pumps now that are quite accurate and
12 work a good twenty-four hour --

13 Q. Back in the '70s, I mean.

14 MR. MOORE: What part of the '70s?

15 MR. CUKER: Let's say '73 to '76.

16 MR. BUSTER: What are you asking?

17 THE WITNESS: We'd be carrying a big --
18 load, probably. We'd be carrying the sample with --
19 either the hand pump sampler or the heavy electrical
20 pump with the Greenberg Smith impingers in those
21 days.

22 Q. (BY MR. CUKER) Okay.

23 A. Until we had accurate flow level or
24 accurate devices. The first of these little hang-on
25 pumps came out back in about '69, '70. The first

1 ones were not accurate. I mean you have enough
2 problem with this kind of analyses to have an
3 inaccurate pump. And there is no way of measuring
4 consistently the volume that flowed through.

5 Q. Okay. When --

6 A. There is today.

7 Q. Getting back to let's say the period '73
8 to '77, how would that pump have to be monitored --

9 A. Well, you --

10 Q. -- when it was used?

11 A. In those days, you had very short period
12 pumps. So if you wanted to run an eight hour, we did
13 it with a double pump or a triple pump.

14 Q. Okay. Monsanto did not run eight hours
15 with a single pump?

16 A. Not until we had single pumps that we
17 felt were accurate enough to do it.

18 Q. And when was that?

19 A. Oh, hell, I can't remember the exact
20 date.

21 Q. Well, approximately.

22 A. Sometime during the '70s.

23 Q. Now, I'm just speaking with regard to
24 PCBs now.

25 A. Yes, I'm talking about -- the PCBs are

1 not unusual sampling material. We sampled
2 everything.

3 Q. Would it have been the late '70s?

4 MR. MOORE: He said he didn't remember.

5 MR. CUKER: Okay.

6 THE WITNESS: I really don't remember.

7 You'd have to look up the evolution of the pumps.

8 You can find it in history. Somebody wrote a history

9 of this business, and I'm sure that it would show

10 where the -- when the accuracy was available. It

11 does you very little good to sample if you don't get

12 accurate results. Industrial hygienist's primary job

13 was to go look at the operations.

14 Q. (BY MR. CUKER) What operations?

15 A. Any operation that you happened to be
16 responsible for.

17 Q. You mean the work operation?

18 A. Yes.

19 Q. Okay.

20 A. That's true.

21 Q. Mr. Garrett, have you reviewed any
22 documents in the last week or so relating to a
23 meeting between Monsanto people and Mallory people in
24 1976?

25 A. Yes.

1 Q. Do you have any recollection of that
2 meeting?

3 A. No.

4 Q. Did reviewing those documents refresh
5 your recollection in any way of that meeting?

6 A. No.

7 Q. Do you recall talking to anybody about
8 that meeting up until last week or so?

9 A. No.

10 MR. CUKER: I have no further
11 questions.

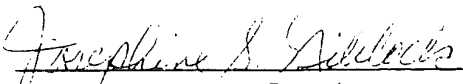
12 MR. BUSTER: We don't have anything.

13 MR. SPODEN: No questions for Emhart.

14 MR. MOORE: Thanks, Jack.

15
16 
17 JACK T. GARRETT

18 Subscribed and sworn to before me on
19 this 13rd day of January, 1989.

20 My commission expires
21 
22 NOTARY PUBLIC
23
24
25

JOSEPHINE S. NIBLOCK
Notary Public - State of Missouri
St. Louis County
My Commission Expires January 15, 1991

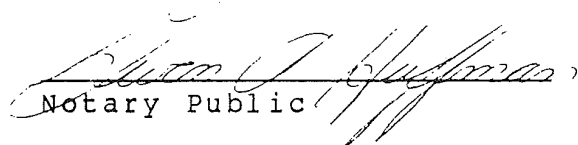
NOTARIAL CERTIFICATE

STATE OF MISSOURI)
COUNTY OF ST. LOUIS)

I, Gwen A. Huffman, a Registered Professional Reporter and Notary Public duly commissioned and qualified in and for the County of St. Louis, State of Missouri, do hereby certify that, pursuant to agreement between Counsel, came before me on the 21st day of December, 1988, at the Karpowicz Reporting Company Conference Room, 314 North Broadway, 11th Floor, St. Louis, Missouri, JACK T. GARRETT, who was by me first duly sworn on his oath to testify to the truth and nothing but the truth of his knowledge touching and concerning the matters in controversy in this cause; that he was thereupon carefully examined upon his oath, and his examination reduced to writing under my supervision; that the deposition is a true record of the testimony given by the witness.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal this 22th day of January, 1989.

My commission will expire January 27th, 1991.


Notary Public

KARPOWICZ REPORTING COMPANY
408 Olive Street, Suite 316
St. Louis, MO 63102

January 11, 1989

Mr. Jack Garrett
429 Geyer Forest
St. Louis, MO 63122

In Re: Katherine Joyce Brewer, et al. vs
Monsanto Corporation, et al.

Dear Mr. Garrett:

This letter, incorporated as the last page of your deposition taken on December 21, 1988, will serve as notice to you that your testimony is now ready for your reading and signing of same.

I would appreciate your contacting my office by calling 314/621-8883 so that arrangements can be made to accomplish this.

This letter is being mailed to you, as you know, by Certified Mail with return receipt requested. If we have not heard from you within thirty days after receiving your return receipt, this testimony will be filed with our indication of this offer of submission to you and your refusal to sign.

I would appreciate hearing from you at your earliest convenience and appreciate your cooperation in this regard.

Sincerely yours,

Gwen A. Huffman, RPR

CERTIFIED MAIL: P 714 737 467

MAILED ON: January 11, 1989

KARPOWICZ REPORTING COMPANY

WATER_PCB-SD0000043455

1 UNITED STATES DISTRICT COURT
2 MIDDLE DISTRICT OF TENNESSEE
COLUMBIA DIVISION

3 KATHERINE JOYCE BREWER,)
et al.,)

4 Plaintiffs,)

5 -vs-)

6 MONSANTO CORPORATION,)
7 et al.,)

8 Defendants.)

Nos. 1-88-008 and
1-88-0014 through
1-88-0368
Judge Wiseman

9 A F F I D A V I T

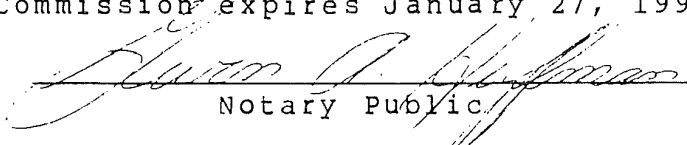
10 I, GWEN A. HUFFMAN, a Registered
11 Professional Reporter and Notary Public within and
12 for the State of Missouri, do hereby certify that
13 under Certified Mail No. P 714 737 467

14 JACK GARRETT

15 was duly notified that his deposition taken in the
16 above matter had been transcribed and could be read
17 and signed; that signed receipt was returned showing
18 signature date of _____

19 That over thirty days have elapsed since the sending
20 of the aforementioned Certified Letter; that there
21 has been no response from this party or counsel; that
22 therefore, said deposition is herewith filed.

23 My Commission expires January 27, 1991.

24 
Notary Public
25

(Page 10)

CORRECTIONS TO DEPOSITION

The Witness, Janet Sawitt, states he wishes to make the following changes in testimony as originally given:

PAGE	LINE	SHOULD READ	REASON
<u>4</u>	<u>8+9</u>	<u>Remove words "God DAMN"</u>	<u>obvious</u>
<u>8</u>	<u>1</u>	<u>Add After "so" AND remove phrase "His health is not very good"</u>	<u>To complete statement</u>
<u>8</u>	<u>9</u>	<u>Remove words "My ASS OFF" AND replace with words "Doubtful"</u>	<u>obvious</u>
<u>8</u>	<u>23</u>	<u>Insert between "THE" AND "Membership" the words "NATIONAL AHA"</u>	<u>To complete statement</u>
<u>9</u>	<u>4</u>	<u>Replace word "AN" with "The"</u>	<u>For accuracy</u>
<u>9</u>	<u>10</u>	<u>Word "Wheel" should be "weel"</u>	<u>For correctness</u>
<u>9</u>	<u>16</u>	<u>Remove First "99"</u>	<u>For correctness</u>
<u>9</u>	<u>17</u>	<u>Word "Wheel" should be "weel"</u>	<u>For correctness</u>
<u>11</u>	<u>13</u>	<u>Remove "Doc --" AND second "WAS THIS"</u>	<u>For correctness</u>
<u>12</u>	<u>17</u>	<u>Insert words "in the Medical"</u>	
12	18	<u>Do not "After word Employment"</u>	<u>For correctness</u>
<u>12</u>	<u>18</u>	<u>Replace word "Assigners" with "Additional Hygienists"</u>	<u>For correctness</u>
<u>13</u>	<u>19</u>	<u>Replace word "not" AND complete statement "I did not order Medical Testing, statement that was the exclusive province of the Medical Doctors"</u>	<u>To complete</u>
<u>13</u>	<u>20, 21, 22</u>	<u>There is something missing or deleted here</u>	<u>Correctness</u>
<u>13</u>	<u>23, 24, 25</u>	<u>There is a missing part or meaning here</u>	<u>Correctness</u>
<u>14</u>	<u>18</u>	<u>Remove words "That was"</u>	<u>For correctness</u>

Janet Sawitt
Signature

CORRECTIONS TO DEPOSITION

The Witness, Frank T. Gault, states he wishes to make the following changes in testimony as originally given:

PAGE	LINE	SHOULD READ	REASON
<u>19</u>	<u>22, 23</u>	{ Word "bit" should be hit IN BOTH CASES }	FOR CORRECTNESS
<u>22</u>	<u>4</u>	{ AFTER "I NEVER DID ANYTHING" ADD THE WORDS "IN CONNECTION WITH MOLLUSK PLANTS" }	FOR CORRECTNESS
<u>22</u>	<u>20</u>	{ "DIVISIONS" SHOULD BE "DEPARTMENTS" }	FOR COMPLETENESS AND CORRECTNESS
<u>22</u>	<u>14</u>	{ "BACK TITRATING" SHOULD BE "BACK-TITRATING" }	FOR CORRECTNESS
<u>24</u>	<u>11</u>	{ AFTER WORDS "KNOWN AS A" ADD "MIDGET IMPINGER THE PUMP" THEN ADD PHRASE "WHICH WAS A HAND PUMP" AND STRIKE WORDS "WE HAD" }	FOR COMPLETENESS AND CORRECTNESS
<u>24</u>	<u>21 & 22</u>	{ STRIKE WORD "HAD" AND FOLLOWING DASH MARKS ALONG WITH THE SECOND "YOU". ON LINE 22 THE SENTENCE WILL BE COMPLETE ON THE ADDITION "OF IMPINGERS" }	FOR COMPLETENESS AND CORRECTNESS
<u>26</u>	<u>6</u>	{ STRIKE "AND THEY" AND FOLLOWING DASH MARKS }	FOR CORRECTNESS
<u>26</u>	<u>7</u>	WORD "AS" SHOULD BE "FOR"	CORRECTNESS
<u>27</u>	<u>5</u>	{ STRIKE " , AND WHERE YOU" AND THE FOLLOWING DASH MARKS }	CORRECTNESS
<u>27</u>	<u>8</u>	{ STRIKE " , YOU CAN GET A CHROMATOGRAM" }	REDUNDANCY
<u>29</u>	<u>4</u>	{ REMOVE WORD "AND" AND REPLACE WITH "WHERE" WORD "ABSORPTION" SHOULD BE "ABSORBANT" }	FOR CORRECTNESS

Frank T. Gault
Signature