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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
BEAUMONT DIVISION

PAUL MAJOR, et ux,)
)
Plaintiffs,)
)
vs.) No. 93-CV-315
)
ALCO STANDARD CORP., et al.,)
)
Defendants.)

IN THE DISTRICT COURT
OF JEFFERSON COUNTY, TEXAS
136TH JUDICIAL DISTRICT

RITA MAE SCHMIDT, et al.,)
)
Plaintiffs,)
)
vs.) No. D-145,280
)
AC&S, INC., et al.,)
)
Defendants.)

Video Deposition of Witness
JACK T. GARRETT
On Behalf of the Plaintiffs

December 16, 1993

Reported by:
JULIE E. STELFOX
Certificate of Merit Reporter

METRO COURT REPORTING, INC.
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*Original exhibits attached to original transcript.

1 VIDEO DEPOSITION OF JACK T. GARRETT,
2 produced, sworn and examined on the part of the
3 Plaintiffs, pursuant to Notice, and pursuant to
4 the following stipulation between the hours of
5 eight o'clock in the forenoon and six o'clock in
6 the afternoon of Thursday, December 16, 1993, at
7 the Stouffer's Concourse Hotel, 9801 Natural
8 Bridge, in the County of St. Louis, State of
9 Missouri, before me,

10 JULIE E. STELFOX
11 Certificate of Merit Reporter
12 of
13 METRO COURT REPORTING, INC.

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17 Legal Images
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18 Lumberton, Texas 77656

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20
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1 s t i p u l a t i o n

2 Before the taking of the within deposition,
3 the parties, by their counsel, stipulate and
4 agree that the same is being taken pursuant to
5 Notice. Counsel further stipulate same may be
6 taken in stenotypy and thereafter typed, signature
7 of the witness being expressly waived by consent
8 of counsel and the witness in his own behalf, and
9 regularly filed in the case.

10 (Plaintiff's Exhibit Number 230112
11 GARR, marked for identification, JS.)

12 JACK T. GARRETT

13 being produced, sworn and examined on behalf of
14 the Plaintiff, deposeth and saith:

15 MS. FLATT: The date is December 16.
16 It is 9:25. We are on the record.

17 THE REPORTER: And if everyone would
18 please identify themselves and who they represent
19 starting with the gentleman on my left.

20 MR. BROWN: Jim Brown, M.H. Detrick
21 Company.

22 MS. JACKSON: Rebecca Jackson, Coltec
23 Industries, Inc. and Garlock, Inc.

24 MR. FOGARTY: Paul Fogerty, Elf
25 Atochem, North American, Inc.

 MR. OLIVER: David Oliver. In the
Major case, it will be Goodyear. In the Schmidt
case, it will be O&I.

1 MR. LeMASTERS: Claude LeMasters,
2 representing ARCO in the Schmidt case.

3 MR. RICHARDSON: Tracy Richardson,
4 representing Mallinckrodt in the Major case.

5 MR. POWERS: Jim Powers, I represent
6 Fibreboard in the Schmidt case.

7 MR. DUBLE: Steve Duble for Shell and
8 Texaco.

9 MR. ELLIS: Joe Ellis representing
10 Monsanto and the witness.

11 MR. ZUCKER: Marty Zucker, Monsanto.

12 MR. HALL: John Hall, Met Life.

13 MR. MUIR: John Muir, Dupont.

14 MR. CORBETT: Jim Corbett, R.T.
15 Vanderbilt in the Major case.

16 MR. GAUDET: Billy Gaudet representing
17 Ferro Corporation in the Major case.

18 MR. VALLANCE: David Vallance
19 representing Alco Standard Corporation in the
20 Major case.

21 MR. POLK: Rustin Polk, representing
22 the Armstrong World Industries, A.P. Green, GAF,
23 Flexitallic, Asbestos Claims Management
24 Corporation, T&N and U.S. Gypsum in the Schmidt
25 case.

1 MS. DODD: Jan Dodd representing the
2 Flint Kote Company in the Schmidt case.

3 MR. HOBSON: I'm Herschel Hobson. I
4 represent the plaintiffs in these cases and in
5 attendance with me is Mr. Joseph Blanks.

6 DIRECT EXAMINATION

7 BY MR. HOBSON:

8 Q. Would you introduce yourself to the
9 group, please, sir.

10 A. My name is Jack T. Garrett, and I'm a
11 retired -- retiree from Monsanto and I'm a
12 consultant at times.

13 Q. Mr. Garrett, my name is Herschel
14 Hobson and I represent some people who've brought
15 a lawsuit.

16 One of the defendants in the case is
17 Monsanto. That's your old employer, so you
18 realize I'm on the other side of this lawsuit from
19 your old employer?

20 A. Yes.

21 MR. OLIVER: Herschel, if I may, you
22 were not serious --

23 MR. HOBSON: I was not. One objection
24 is good for all --

25 MR. OLIVER: Thank you.

1 MR. HOBSON: -- and take the
2 deposition pursuant to Texas Rules of Civil
3 Procedure if that's --

4 MR. ELLIS: Agreed.

5 MR. OLIVER: Agreed.

6 Q. Also ask you, Mr. Garrett, would you
7 like to read and sign your deposition so we have
8 all the little formalities out of the way?

9 A. I haven't seen it yet.

10 Q. Yes, sir. That's -- what happens is
11 this young lady that's taking everything down will
12 put it in a book, send it to you and you can read
13 it and there will be an eratta sheet, and any
14 changes that you would like to make, you have the
15 privilege of writing on the eratta sheet and
16 resubmitting.

17 A. Okay.

18 MR. ELLIS: Why don't we just handle
19 it this way. If you would send his copy of the
20 deposition to me, and I'll arrange having him read
21 and sign the original signature page and return
22 the signature page.

23 A. If you send it to me, he's going to
24 get it anyway.

25 MR. CORBETT: Herschel, if I could

1 ask, as a housekeeping matter, were you planning
2 on splitting up this deposition according to these
3 cases -- your questions in any particular way, one
4 case in the morning, one in the afternoon,
5 anything like that?

6 MR. HOBSON: No. We're going right on
7 through and getting done.

8 MR. CORBETT: Just every other
9 question.

10 MR. HOBSON: Something like that.

11 THE REPORTER: Sir, what is your name?

12 MR. CORBETT: Jim Corbett.

13 THE REPORTER: Okay.

14 MR. GAUDET: One additional matter --

15 THE REPORTER: What is your name, sir?

16 MR. GAUDET: Billy Gaudet,
17 representing Ferro. We wanted to reserve our
18 right to object to the introduction of the video
19 ultimately. By not objecting to it earlier, we
20 wouldn't want it to act as a waiver to our later
21 objection.

22 MR. HOBSON: What's the basis of your
23 objection, sir?

24 MR. GAUDET: I'm reserving my right to
25 object to it. I don't know what it will be until

1 after you finish the -- the video. There may be
2 numerous objections to its introduction.

3 MR. HOBSON: You're not claiming you
4 didn't get notice.

5 MR. GAUDET: No, no.

6 Q. Mr. Garrett, may I have the date that
7 you first began working for Monsanto, please, sir?

8 A. It was 1950, I believe, and I can't --
9 huh. Well, I graduated from the University of
10 Tennessee in -- with my Master's and it had to
11 have been in the end of the summer, so it had to
12 have been either August or September.

13 Q. You've provided me before we started
14 here this morning a copy of a resume which I've
15 now marked as Exhibit Number 230112 G-A-R-R, and
16 would it help you, sir, to look at your resume to
17 get those dates?

18 A. October 1953.

19 Q. October of '53? And may I ask when
20 you left Monsanto's employment, sir, as an
21 employee?

22 A. Thirty-five years after that.

23 Q. So somewhere around 1988?

24 A. It was '88 -- I believe '89, but I'm
25 not absolutely sure. Wait a minute. Let's look

1 again, see if I've got a better memory than my
2 own.

3 Everything but the date I left out.

4 Q. '88 or '89?

5 A. Yes.

6 Q. As I ask you questions, Mr. Garrett, I
7 know that some of the things I'm going to be
8 asking you about happened a long time ago and you
9 may not have a exact recollection of everything or
10 even precise dates, so if you could just give me
11 your best recollection, and if you're estimating,
12 just tell me when you're estimating, I'd
13 appreciate that, sir.

14 A. Okay.

15 Q. How did you get the job with Monsanto?

16 A. Well, when I graduated from the
17 University of Tennessee with my Master's, I had a
18 doctorate set up at the university -- at Oak Ridge
19 to do a doctoral dissertation in rare earth
20 materials with the -- what's known as the nuclear
21 energy for the propulsion of aircraft.

22 Now, that's a misnomer. It's NEPA.

23 All of their unusual research went under that
24 guise, and during the latter part of my Master's
25 degree work, the whole system collapsed.

1 The American first big post war
2 recession hit. The government was withdrawing
3 their support. The two people I worked with out
4 there to get this job headed -- I had my Ph.D.
5 thing agreed upon and everything. They -- I
6 couldn't even find them.

7 One of the -- the University promptly
8 sent him back to his home university, which
9 happened to be the University of Illinois. So I
10 had to go get a job.

11 I was married and had two kids, so I
12 went off on foot. Went over to my father's home
13 in southeast Oklahoma, Durant, and went with him,
14 who was a salesman for fractional horsepower
15 engines, for lawn mower manufacturers.

16 Went with him on -- down on a trip to
17 Houston because I didn't have the money, and I
18 stayed in his hotel room and his employer
19 apparently paid for it, used his car while he
20 spent all day in his -- went around Houston, all
21 the way down to Texas City, interviewed everybody
22 along the line, and -- and Monsanto offered me a
23 job on the spot.

24 Q. And that must have been in October
25 1953, thereabouts?

1 A. That's right.

2 Q. When you walked in the gate, did you
3 have in mind what you wanted to do when you made
4 your application?

5 A. I wanted to do research.

6 Q. Did you get to do research?

7 A. Damn little. An inorganic physical
8 chemist in a primarily organic laboratory is --
9 does all the spare parts work.

10 Q. And that's where you found yourself.

11 A. That's right.

12 Q. Is that what you did then is you
13 started working in the laboratory there at the
14 Texas City plant?

15 A. The research lab for the Texas
16 Division of Monsanto at the time.

17 Q. What kinds of things did they have you
18 doing when you began working at the research lab
19 there?

20 A. I did a lot of explosion limit work,
21 physical chemistry. Mixture work. I finally
22 ended up doing pilot -- a lot of pilot plant work
23 for the processes that were being developed.

24 Q. Is my appreciation that ultimately you
25 got into industrial hygiene with Monsanto, is that

1 right?

2 A. Well, everything I did at the
3 beginning I guess was a mistake. I was ordered by
4 my boss to go out and find out -- I don't know
5 why. I don't have any idea -- but to go out and
6 find out all the materials handled in the plant
7 both as primary raw materials, intermediates,
8 identifiable intermediates and final products, and
9 to write a treatise defining the safety and health
10 problems connected with each one of them.

11 So I wrote a famous research report
12 that had absolutely nothing to do with research,
13 but it was the biggest one they ever had written,
14 I guess, and I -- and I'd research -- reports at
15 the time in Monsanto went to the plant manager or
16 to my boss, the research director for the Texas
17 Division of Monsanto, and copies went to St.
18 Louis, both to the then vice-president of research
19 and to the corporate research file.

20 These research things are all double
21 signed. Every page has to be double signed and
22 all that legal nonsense. And it was on health and
23 safety, and somebody sent a copy to Dr. Kelly, who
24 was the medical director of Monsanto.

25 And he wanted to know who in the hell

1 was interfering in his business, I guess, so he
2 came to Texas City, talked to me along with Elmer
3 Wheeler, who was then director of industrial
4 hygiene or was the corporate industrial hygienist
5 because there was nobody else working for him, and
6 a couple weeks later I got offered a transfer to
7 St. Louis.

8 Q. About how long after you got to
9 Monsanto in Texas City did you start your research
10 report that led to this odyssey?

11 A. Gosh, I don't know. Maybe a year.

12 Q. And about how long did it take you to
13 do the work for the research report?

14 A. I spent most of my time in the library
15 in Houston at the University of Houston library
16 and over at the hospital there, which is now that
17 big hospital center.

18 I think that was the old Baylor
19 Medical -- Baylor Medical School branch, and I
20 spent a good deal in their library.

21 Q. Did you utilize the library down at
22 the University of Texas medical branch in
23 Galveston?

24 A. No, I was over there. I had been in
25 that hospital many times, but -- and had talked to

1 a couple people, but their library was not nearly
2 as extensive at -- in this subject.

3 Now, you're talking toxicology now,
4 not really medicine. Not nearly as good as the
5 University of Houston at that time, and the
6 other -- the university there -- that university
7 center, which is now that big diagnostic center
8 was then, I believe, attached to Baylor, but I'm
9 not sure, and they had the best library.

10 Q. There's a library there now called
11 Jessie Jones Memorial Library.

12 A. That could very be -- very well be it,
13 or the beginning of it.

14 Q. Had you had any training or experience
15 in the area of toxicology before you began this
16 research report?

17 A. I had training in respect to the -- to
18 the methods of keeping yourself reasonably clean
19 and alive in research and at that university,
20 believe it or not, we had university safety people
21 at the University of Tennessee, Knoxville Campus,
22 and the research chemists on research jobs got
23 lectured and given the documents necessary for
24 their -- and the TLVs for their materials that
25 they were handling, and we stuck within that to

1 the degree that we could do that for sampling.

2 TLV means threshold limit value.

3 Q. Did any of your course work that you
4 took as a student before you came to Monsanto
5 teach you about how to do scientific research?

6 A. Yeah, I did a lot of sci- -- I
7 produced the scientific -- researched my report
8 myself.

9 Q. So by the time --

10 A. It was published -- published in the
11 Journal of Physical Chemistry. It's on radiation
12 chemistry, the measure of radioactive materials in
13 layers, the differential effect of layers, the
14 absorption effect of layers themselves.

15 Q. So would it be accurate then, Mr.
16 Garrett, that by the time you got to Monsanto you
17 were well trained and schooled in how to do
18 scientific research, how to use a library, how to
19 find really what was available in the -- in the
20 scientific literature?

21 A. Or do it myself.

22 Q. Yes, sir.

23 A. Keep in mind I did some work on
24 pollution control all along in this same issue,
25 so -- and that way we did it ourself. We went to

1 the State of Texas and with their laboratory
2 facilities and their research biologists set up
3 programs of testing chemicals in expected
4 developments at the Texas City plant.

5 We did the -- the marine toxicology
6 work on a number of them, including a number of
7 cyanide compounds.

8 Q. When you went to the University of
9 Houston, as you described earlier, in doing the
10 work for your research report, would you recount
11 for me as best you can recall how you found that
12 facility from a toxicological research standpoint?

13 A. You track it through chemistry is the
14 way I did it. I was interested in a great many
15 chemicals, and if you track the chemicals back far
16 enough, you will find references to some kind of
17 government documents or other documents and if you
18 can look them up or have them shipped, and we had
19 a great many shipped on loan.

20 We could find out what the threshold
21 limit values were, how they were done, who did the
22 work and so forth. So that was where we did it.

23 I had a great leader there, by the
24 way. Monsanto had a consultant at the University
25 of Houston named Sawin, S-a-w-i-n, known as Hod.

1 I don't know what his first name was.

2 He was a tremendous biologist, and he
3 had knowledge in where you could find a great many
4 things in a university web that I did not know
5 although I had been through the same ruckus at
6 Tennessee.

7 Our laboratory system at Tennessee is
8 much different than the University of Houston's.
9 Our library system in Tennessee was centralized.
10 Theirs was scattered within the individual
11 colleges at that time.

12 Q. Yes, sir. And did you have the
13 feeling that you, in fact, through the University
14 of Houston and over at the Medical Center library
15 that you say could have been associated with
16 Baylor at the time, that you really did have
17 access to pretty much all the literature that you
18 needed?

19 A. Yes. I think I did, and I got put on
20 a bunch of committees that I didn't even know
21 existed by my boss in Texas, and one of them was a
22 Manufacturing Chemists Association committee on
23 pollution, and this was primarily at the time
24 pollution control standards was the -- was the
25 work of the day, if you know what I mean.

1 And I went to a number of those
2 meetings and met some very good and efficient
3 people from Dupont, particularly from Dupont, and
4 from Standard Oil of New Jersey, and they helped
5 me along as well.

6 Here I'm an inorganic physical chemist
7 who didn't even know anybody cared and I'm now
8 beginning to be a toxicologist.

9 Q. In the Houston area when you got there
10 in the early 1950s, did you encounter anyone else
11 other than Dr. Sawin that you told us about who
12 you found to be helpful or knowledgeable in doing
13 this toxicological work?

14 A. There was a guy -- there was a man at
15 Humble then which is then and even now fully a
16 part of Standard of New Jersey but then it was --
17 even then, but it was called Humble & Refining
18 Company.

19 It was headquartered in Houston and
20 whose primary refinery was there. I can't
21 remember his name.

22 Q. What was his --

23 A. He was their -- he was their
24 industrial hygienist.

25 Q. James Hammon?

1 A. Yes, it was Jim Hammon, and he led me
2 through a great deal of the labryinth of where you
3 get and why you get there in this business and
4 where you get the data, because the data on
5 early -- in those days was pretty -- was there but
6 it was -- you had to dig like the devil to find
7 it.

8 It was in reports. Lots of it was in
9 the hands of chemical companies and oil companies,
10 and if you had access through -- and Jim
11 introduced me to that committee of the API which
12 Monsanto later put me on, was the support
13 committee for the American Petroleum Institute.

14 Q. The medical advisory committee?

15 A. Yes, only it was primarily meeting of
16 loudmouth industrial hygiene and toxicology
17 people. We blew the M.D.s out of the place.

18 Q. I take it you mean that in a
19 constructive sense?

20 A. Well, no, they -- believe it or not,
21 they -- we organ- -- they organized a committee
22 that included all of us and then they went to play
23 golf. The doctors always play golf.

24 Q. Left you guys to do the serious work?

25 A. That's right. So we did all the work

1 in connection with toxicology and the work
2 necessary guiding lights toward what kind of work
3 needed to be done to produce adequate controls and
4 this sort of thing and who was doing what and so
5 forth.

6 And some of the research projects
7 later put on by the API was largely due to the
8 toxicology committee or whatever they want to call
9 it. It was the non-medicals anyway.

10 Q. Can you put a time period on that, of
11 course, Mr. Garrett, when you worked with the API,
12 '56?

13 A. I was a member of the API committee
14 probably for fifteen years in the late '50s, had
15 to be into the early '70s. Okay?

16 Q. Yes, sir.

17 A. And the meetings largely enough then
18 were in Chicago. I bet I went to twenty meetings
19 in Chicago, in Chicago or Fort Worth. Why, I
20 don't know. Don't ask me.

21 Q. Were there other people besides Jim
22 Hammon that you recall working with on these
23 activities?

24 A. Oh, yes. The best group that I knew
25 was the -- was the Standard Oil group. That was

1 the -- in New Jersey, and their people in Columbia
2 and Venezuela, which was also a subsidiary of
3 theirs, called Creole Production Company, I
4 believe.

5 And they had a great group down in
6 South America, and we got -- we worked with them
7 along -- now, we, I'm talking about the chemical
8 crowd.

9 This is the Dupont, Monsanto and all
10 the bunch of that group with the oil group, but it
11 really pretty well merged that throughout all the
12 AP -- the committees, including the committees on
13 standards. We probably -- I probably knew all
14 these people personally and a great many of them I
15 had been in their homes. I knew their wives and
16 kids and everything, so it was that kind of
17 relationship.

18 Q. Did you mention that Dupont was also
19 part of this API work?

20 A. Oh, yes.

21 Q. Were there other chemical companies
22 involved with the petroleum industry through the
23 API?

24 A. No. Dupont -- in the API group was a
25 group of people representing -- in my opinion, the

1 most forward and good companies -- represented a
2 group that the chemical industry group represented
3 together in -- with the American Industrial
4 Hygiene Association in their committees on
5 standards, and that group was -- were friends.

6 I was a personal friend of the Dupont
7 man, as a matter of fact. Been in his house.
8 Been in his home.

9 Q. Who was that, sir?

10 A. Oh, God. Don't ask me that question.
11 His name, his name. You'd have to look it up from
12 the records, I guess.

13 Q. Dow Chemical, would that be one of the
14 companies?

15 A. Dow was -- Dow was the best treater in
16 the business in pollution control. Now, keep in
17 mind we're working both sides of this street.
18 Now, this is not true with everybody else, but it
19 was true with a great many people, including
20 Monsanto and Dupe and some of the others. We
21 treated this as a single issue. Dow did not.

22 Dow had a strictly pollution
23 engineering group and a toxicology industrial
24 thinking group. They knew each other. Don't get
25 me wrong. I'm not -- and they frequently went to

1 the same meetings because of the crossing of
2 information and need.

3 But Dow was the people that had done a
4 lot of very difficult treatment studies and they
5 were wide open to anybody in the industry. They
6 taught us a great deal about treatment of organic
7 chemicals in treatment of plants, which we -- some
8 we didn't know. Some we did know.

9 We turned over to them a lot of
10 experience in connection with some products as
11 well.

12 I also had been frequently in their
13 plant in Freeport, Texas.

14 Q. Down in the same area of Texas Union
15 Carbide has a large facility. Did you have any
16 encounters with Union Carbide personnel?

17 A. Carbide is a funny company. Of the
18 big chemicals. They did a lot of work in this
19 area but they did less coordinating with other
20 companies than most big companies.

21 They did by zone. We had a great
22 group in Texas. We had a good group in the
23 Kanawha Valley of West Virginia with Dupont and
24 Monsanto and Carbide and the like, but as a
25 corporate structure, it was difficult to find

1 whoever was supposed to be the boss man of
2 pollution or industrial hygiene in Carbide at the
3 time.

4 They had people, some very, very good
5 people. They attended our API -- or our -- they
6 attended our industrial hygiene meetings, but it
7 wasn't coordinated really.

8 Their companies were separate
9 companies. I guess legally a great deal more
10 separate than Monsanto's divisions were and/or
11 other companies.

12 Q. Now, this work that you were doing
13 with the American Petroleum Institute and I think
14 you said also the Manufacturing Chemists
15 Association, this was -- was this after you
16 transferred to the corporate offices of Monsanto?

17 A. Well, it was during the period -- and
18 I don't know. I went to -- I made an API meeting
19 in Fort Worth before I went up there and was
20 talking with their -- largely with their
21 toxicology people, and now you're talking
22 industrial hygiene, not pollution, okay?

23 Q. How would you be able to tell us the
24 differentiation between industrial hygiene and
25 pollution as you use those terms?

1 A. In some cases you couldn't because
2 some companies grew up. Like Monsanto grew up
3 from Dr. Kelly into the -- into the industrial
4 hygiene pollution and then the pollution thing
5 finally fell over into engineering.

6 Same was true I know, for example,
7 with Dupe because Dupont's people were engineering
8 people and they were from Newark, Delaware.

9 They were not in the main plant. They
10 were down at the engineering offices in Newark,
11 and when I wanted to visit them, I had to go down
12 there to that -- to the Newark operation.

13 In the petroleum companies -- an
14 interesting thought, who was -- their headquarters
15 people, these were the kingpin people in what
16 would be considered the good, good companies, like
17 Standard.

18 Standard Oil of New Jersey had a
19 set-up where their people in New Jersey working
20 out of that New Jersey office and the labs there
21 represented all of their subsidiaries except that
22 many of their subsidiaries, like Humble -- but
23 Humble grew up as a separate company that was
24 owned by them, which is the same thing with their
25 set-up in South America.

1 And so they had the same kind of
2 people there, and how they merged them, I don't
3 know. But we did deal with them very much. They
4 had Dupont -- I mean Standard probably had the
5 best trained young physicians.

6 MR. OLIVER: Objection, nonresponsive.

7 Q. Would you tell us, Mr. Garrett, as
8 best you recall, how it was when you would go to
9 meetings through these organizations or others in
10 exchanging information between companies.

11 Was this something that was done, not
12 done? How --

13 A. It was done wide open. Wide open.
14 We -- I had a letter one time -- and I don't know
15 who it was from -- to tell them anything they want
16 to know because it's a business that has to be
17 done and done right by one of our executives.

18 So we did -- we told them any data
19 they want. I've given them complete research
20 pamphlets connected with that specific toxicology.

21 Q. Did you find that there were some
22 companies that were just as open about Monsanto --
23 as Monsanto was and others at work or how did that
24 work?

25 MR. FOGARTY: Objection, calls for

1 speculation.

2 THE REPORTER: What's your name, sir?

3 MR. FOGARTY: Paul Fogerty.

4 A. We had a group of people we worked
5 with us in detail. I don't remember anybody
6 telling us we didn't -- they wouldn't give us
7 their data or information.

8 Q. Was it your perception at the time
9 that the folks that you have told us that you
10 worked with at these other companies, that these
11 other companies were just as open as Monsanto was
12 in sharing that?

13 A. Yes.

14 Q. You said that this initial research
15 report that you -- that got you into the health
16 and safety, and later I guess pollution even area,
17 your charge was to go out and find all the
18 materials used at the Texas City plant?

19 A. (Nodding head.)

20 Q. Can you tell me how you went about
21 doing that?

22 A. I went from unit to unit and asked
23 them, got their engineer out and had him define
24 and diagram his unit. And where he actually
25 peeked at or sniffed at any of the products, we

1 took them down and checked them, but the report's
2 about -- hundreds of pages long.

3 Q. Did that report have a title to it so
4 that we could identify it?

5 A. God, no, I don't think so. I have no
6 idea what the report title was. I didn't even
7 know that Kelly'd had a copy of the damn thing.

8 You know, you do -- I'm a young
9 chemist doing a job. I'll do the job they tell me
10 to do. I recognize that I was a spare part
11 because I was the inorganic physical chemist in a
12 largely organic laboratory and I got all the
13 oddball jobs, and that was one of them.

14 Q. When you said you used all the -- you
15 inventoried all the materials used at the plant,
16 were these process materials that we're talking
17 about?

18 A. Yes, primarily purchased or modified.
19 If they purchased one product and modified it, we
20 did them both. If there were known analyzed-for
21 contaminants, we did those if we could find it.
22 If we didn't, we did the work ourselves.

23 Q. And what about items that were used,
24 not in actually as raw material to make a product
25 or as a finished product or intermediate, but

1 things like catalysts or filter aids?

2 A. We did three catalysts and we did some
3 of the spents where you get two of them and get
4 them. We did a lot of raw material, or we
5 gathered the data.

6 Now, keep in mind we're gathering data
7 for this thing. You'd be surprised at the number
8 of sources you can tap and surprised I think even
9 more at how even then -- you're talking 1950s
10 now -- even how open they are.

11 We had no trouble, for example, in
12 respect to any of the dusts that we usually
13 handled, asbestos, cement, that sort of stuff.

14 The people that -- they give you what
15 they knew and they'd give you any data they had,
16 and, in fact, they'd give you probably literature
17 resources if those were available.

18 Q. Asbestos was a material that was used
19 at the Texas City plant?

20 A. Yes.

21 Q. You-all use it in chlorine
22 manufacturing?

23 A. We didn't manufacture chlorine at
24 Texas City.

25 Q. You didn't? How did you use asbestos

1 at the plant, as you recall?

2 A. As an insulating material.

3 Q. Oh. But not in manufacturing
4 products?

5 A. No.

6 Q. You say that you were given
7 information freely about things like asbestos
8 dust.

9 A. That's right.

10 Q. What did you get and how did you go
11 about doing it? How did you get to this
12 impression?

13 A. Well, we got -- we got told -- and
14 I'll tell you the truth. I can't tell you who
15 told me -- to look up the TLVs, and the first time
16 I ever saw TLVs was during that setting. I didn't
17 even know they existed.

18 Hell, I'm a darn fool. Come out of
19 the Army and -- with too many kids and needed a
20 job. So I found out that they used asbestos.

21 I got -- looked it up, found out the
22 threshold limit value, and all of those things
23 that we could find a TLV for or that any company
24 had established one for, we used and was in the
25 report.

1 Q. When you say you found out "they" used
2 asbestos, who were you talking about?

3 A. Our maintenance people used it to
4 maintain the pipe equipment.

5 Q. Were you aware that there was asbestos
6 in insulation materials --

7 A. Yes.

8 Q. -- before you came to Texas City?

9 A. Yes.

10 Q. What do you recall learning about
11 asbestos?

12 A. Well, as a matter of fact, we were
13 dealing -- we were making some reactor tubes at
14 the University of Tennessee, and we got lectured
15 on that to use respirators or use it inside of
16 hand glove compartments in a hood.

17 If we were going to do it before --
18 well, we mixed it up in the mud because most
19 research laboratories use a lot of it to cover
20 heat sensitive equipment as a mud.

21 Q. And this occurred even before you went
22 to Monsanto?

23 A. Oh, yes. I used it before. Yes, I
24 did.

25 Q. Do you remember what was told to you

1 when you were at the University of Tennessee about
2 the reasons for handling asbestos this way?

3 A. Don't breathe it.

4 Q. I'm sorry?

5 A. Don't breathe it, or use a mask.

6 "Come to the head of this particular section, the
7 research of engineering section. Go see him, they
8 get you a mask."

9 Q. Is there some point in your career,
10 Mr. Garrett, where you learned about the hazards
11 that were associated with asbestos exposure?

12 A. Well, if you're told to do a research
13 report on the toxicology and hazards and safety
14 features of all the products in a complicated
15 plant, you're going to learn about asbestos and
16 cement dust and catalysts, spent catalyst dust,
17 and about half a dozen other dusts, and we're
18 going to check them out.

19 And the primary test period was the
20 surface toxicology, what was retained on old
21 catalysts. Believe it or not, not much.

22 Second, what was the base catalyst
23 made of? Is it -- was it made of some rock
24 substance or asbestos in pellets, in little half
25 moons -- God, we've seen it in every shape you can

1 imagine -- upon which something is then laid or
2 sprayed or cooked on, which is subsequently the
3 catalyst, which much of the solid catalysts today
4 or in those days were in catalyst beds, and those
5 beds were made up of some kind of rock or base
6 with the material stuck to it somehow.

7 Generally by vapor, and then that
8 constituted the catalyst used.

9 Q. Are you saying that some of the
10 catalysts that you used there at Monsanto, the
11 base material was made with asbestos?

12 A. Some of it had to have been. I don't
13 know. I couldn't tell you that. I've seen so
14 many different kinds that you can shake a stick
15 at.

16 They're made out of cement base. Some
17 of them are made out of -- with asbestos in a
18 blender. They're sort of solid. The stuff is
19 then absorbed to it and that constitutes catalyst,
20 and it's used in beds or trays in a vapor stream.

21 Q. In looking through your -- let me
22 start over. In doing your research report that
23 you told us about at the Monsanto plant there at
24 Texas City and going to the University of Houston
25 and the other libraries, can you still recall some

1 of the sources of information that you found?

2 A. The primary source was the
3 Manufacturing Chemists Associations' hazard data
4 sheets. I later found out that the American
5 Petroleum Institute also had hazard data sheets,
6 but that was too late to help my report, but it
7 wasn't too late to help me find some of the things
8 they used that we did not in the chemical industry
9 normally used.

10 Q. You're talking about the toxicological
11 reviews that the API had?

12 A. Yes, tox reviews of theirs and the
13 chemical safety data sheets that the old MCA had.
14 They still have them today under the Chemical
15 Manufacturers Association, CMA today.

16 Change of name doesn't change the
17 organization much.

18 Q. Do you recall seeing any literature
19 from the Industrial Hygiene Foundation?

20 A. Yes.

21 Q. Is that a source that you would have
22 been able to --

23 A. Well, when I got transferred to St.
24 Louis, and Dr. Kelly, after he came down to look
25 at my report and gave me hell for writing it

1 because I wasn't supposed to be qualified, then he
2 transferred me to St. Louis as an industrial
3 hygienist, which doesn't make a whole lot of
4 sense, but what the hell.

5 I went up there and then I ran into
6 my -- the boss I had there was a certified
7 hygienist named Elmer P. Wheeler. Elmer is now
8 dead.

9 He took me through the system, and I
10 learned about toxic data sheets that were
11 published by a great number of people, including
12 many companies published them as well.

13 And if you stacked them all up, even
14 available then -- this you're talking now in the
15 mid '50s -- it would crunch this table down with
16 the ones that are published by the API, the MCA,
17 and a great number of organizations that are not
18 that very well known, the Organic Chemical
19 Manufacturing Company organization, the drug
20 manufacturing people.

21 There are thousands of them, and then
22 there are all these great ones that are available
23 freely from most companies, and we ended up with
24 piles of the darn things.

25 There was no lack of safety

1 information on individual compounds even in the
2 '50s. It became a great deal more elegant and a
3 great deal more staffed later.

4 MR. OLIVER: Objection, nonresponsive.

5 THE REPORTER: Your name, sir.

6 MR. OLIVER: David Oliver.

7 (Discussion was held off the record.)

8 MR. ELLIS: You can just ignore what
9 they say. They just have to say some things for
10 the record to get it on the record. That's all.

11 MR. BLANKS: They don't really have
12 to.

13 MR. HOBSON: They do it.

14 Q. What he's saying, Mr. Wheeler --

15 A. I forgot to bring my dugidgits. I
16 hate the damn things and so I don't wear them if I
17 don't have to.

18 Q. What he's saying, he's objecting
19 saying that your answer is not responsive to my
20 question. He thinks you're answering something I
21 didn't ask you I guess is what it means but --

22 A. You asked me about data?

23 Q. Yes, sir.

24 MR. BLANKS: I thought you did a good
25 job.

1 A. And it reminded me of literature.

2 MR. OLIVER: Object to the side bar.

3 MR. FOGARTY: Object to the side bar.

4 Q. That's what it means.

5 A. Okay.

6 Q. You were moved from Texas City to
7 Monsanto's corporate headquarters. That's St.
8 Louis, right?

9 A. Yes, sir.

10 Q. And you started working for Mr.
11 Wheeler?

12 A. I started working for Elmer P.
13 Wheeler, yes.

14 Q. And Mr. Wheeler was working for
15 Dr. Kelly?

16 A. Dr. Kelly, yes.

17 Q. Was that the staff?

18 A. That was the staff. In 1954 that was
19 the staff.

20 Q. And would you have any recollection,
21 Mr. Garrett, as to how long Mr. Wheeler had been
22 with Monsanto in his capacities as an industrial
23 hygienist?

24 A. He came to Monsanto right after the
25 war from the Chemical Warfare School. He was a

1 CWS officer. He was actually an artillery officer
2 that came back from Africa and was in -- since he
3 had trained a hygienist and had worked for the
4 north -- for the New Hampshire Health Department,
5 they put him in their hygiene school where part
6 of -- God knows what part of the military he was
7 in, and they had a school and they did a pretty
8 good job.

9 By the way, they also published
10 documents that are way -- they're years old. Some
11 of them are excellent up to the date documents for
12 literature research.

13 Q. "They" being who?

14 A. Being the Army's industrial hygiene
15 laboratories, which I believe was in the CWS,
16 Chemical Warfares set-up in Virginia, and that's
17 where Elmer came back to and Dr. Kelly hired him
18 out of there as soon as the war stopped.

19 Q. Was it your impression, Mr. Garrett,
20 that Mr. Wheeler worked in New Hampshire before
21 the war, after the war, during the war?

22 A. No, before the war. He worked as a
23 hygienist to the degree that they were defined as
24 hygienists in the 1930s. He graduated in
25 chemistry, as I did, from the University of New

1 Hampshire.

2 Q. Would you give us, sir, your best
3 impression of how knowledgeable you felt Mr.
4 Wheeler was when you joined the staff in 1954 as
5 an industrial hygienist?

6 A. He was a very good manager. His
7 knowledge was very deep. He expected me to gather
8 a great deal of knowledge and become knowledgeable
9 in things that he was not in.

10 We had -- we were three people running
11 that show, Dr. Kelly, Mr. Wheeler and myself, and
12 later we got broke up and we had a great big --
13 lots of people and big files. Big files.

14 So he -- he gave me the API meetings
15 to go to. He went to the AIH meetings. We all
16 went to the -- to our credited meetings.

17 I could have gone to the Chemical
18 Society meetings. I'm a member of the ACS, have
19 been for eighty, hundred years, but I did not
20 because they -- until they began to get into -- to
21 have some committee work on occupational health.

22 Q. Were there any other organizations
23 that you found had information to share in
24 industrial hygiene, toxicology area, such as the
25 American Public Health Association?

1 Did you ever go to any of their
2 meetings?

3 A. Yes, I've been to AHS meetings. I
4 would say the states -- this is one -- let's take
5 this -- you people may not like this, but there
6 are some states whose records and files were
7 excellent. Texas was one of them.

8 They had an industrial hygiene group
9 in their health department. I can't remember that
10 man's name. He was a first class man. He showed
11 me their records and their -- and I used them,
12 too, by the way. I went up to Austin and they
13 showed me their records.

14 The State of Missouri wasn't very
15 wealthy in that area.

16 The State of Illinois had excellent
17 facilities and records also in the area of
18 toxicology. Some of these belonged to their
19 university, some belonged to their state health
20 department.

21 And when you work on pollution control
22 and industrial hygiene as did I in those days, you
23 probably run into what's known as the Bureau of
24 Sanitary Engineering of all the various health
25 departments, and that's what I did in Texas. It

1 was true in Illinois.

2 It was true in Iowa; true in
3 California by districts, by zone. Six, I believe,
4 zones in California or areas, they call them.
5 They had individuals for each of these zones.

6 Q. Did you run into Dr. Carl Nau, N-a-u,
7 at Texas?

8 A. Uh-huh, I sure did.

9 Q. That might have been the man you were
10 trying to think of?

11 A. Yeah. Hey, he was a great guy, too.

12 Q. I was asking you about organizations
13 where you might have attended meetings to be able
14 to share information. I asked about the APHA.
15 Any others that come to mind?

16 A. Well, we did it on the ba- -- Dr.
17 Kelly took the medical meetings, and primarily
18 this was the MCA or the CMA's medical meeting, and
19 he despised the American Medical Association for
20 some reason. I can understand why, but -- because
21 I had to go to the meetings to supernume (sic)
22 him, and I can understand that in his -- they were
23 pretty much all out playing golf.

24 I mean the meeting wasn't very -- I
25 mean me and two doctors talked to the guy that was

1 the chairman and he was waiting -- he had his golf
2 clubs around his shoulders.

3 So we -- Dr. Kelly didn't think much
4 of that. I'm not sure he was a golf player
5 anyway, but so I went to some of those meetings to
6 cover him in committee meetings because those
7 people would go astray if you weren't careful.

8 Q. And these were AMA meetings?

9 A. Yes.

10 Q. Was there a part of AMA that dealt
11 with occupational health industrial medicine?

12 A. There's a great -- I'm teasing a lot
13 about it, but it's true. They -- they got almost
14 all the institutional doctors to go to it.

15 None of the people that practiced
16 medicine went to those meetings. The people that
17 practiced medicine in corporations and for
18 insurance company stuff went to those occupational
19 health meetings.

20 It's much better today. They've got
21 some fine committees on just on toxicology and
22 occupational health and the effects of various
23 things, upper respiratory effect.

24 All the individual colleges in surgery
25 and everything probably have toxicology subgroups

1 that work on materials that are -- that impinge on
2 their specific area. So there are plenty of
3 places -- and even then there were plenty of
4 places you could get if you dug enough.

5 Now you could find the base of the
6 information. It was available. You could find
7 who was working on trying to increase or improve
8 that information, and that was -- to put it
9 together was difficult.

10 Today it's together in a vast number
11 of books and documents that contain -- that did
12 what we tried to do as a committee under the MCA.
13 We wrote MCA data sheets, for example.

14 MR. FOGARTY: Objection,
15 nonresponsive.

16 MR. BLANKS: Wait, stop here.

17 A. MCA means Manufacturing Chemists
18 Association, now CMA, and they were one of the
19 groups along with the API who published group
20 documents, short, terse, six, eight pages, some of
21 them. Some of them twenty pages, some of them
22 five pages of the toxicology and hazards involved
23 in handling individual materials.

24 The API did likewise. The Organic
25 Chemical Manufacturing Association did also

1 publish a bunch, and these were largely on die
2 chemicals because they're oddballs and they're
3 also quite toxic because they're largely organic
4 amine compounds.

5 So there are a lot of people -- and
6 these were available, but you had to participate
7 to get ahold of them, so we participated a lot.

8 Q. The impression I'm getting, Mr.
9 Garrett, is that there wasn't a lot of this
10 information out there being spoon fed to people
11 but if you had someone that wanted to find it, you
12 could get it. Is that accurate or not?

13 MR. FOGARTY: Objection, leading.

14 A. If you ask for it within the realm of
15 those materials, you got it readily from the
16 people or they would give you copies of the
17 documents they helped make with one of these
18 organizations.

19 I'll bet between the API and the MCA
20 put out thousands of copies of those things a
21 year, as did almost anybody that made those kind
22 of documents.

23 Now, some of them were pretty tight
24 within their organizational system because that's
25 the only one that knew who they were there.

1 The Organic Chemical Manufacturers
2 Association, which is largely the die merchants,
3 you didn't realize they did a lot of work on a lot
4 of raw chemicals that were used in dies.

5 And that turned out to be chemicals
6 some of us manufactured, so when we found that
7 out, we began to work with them as well, and the
8 document -- the information that had been done in
9 the past was well documented in those -- in those
10 particular issues -- publications that they
11 issued, and everybody had a different name for
12 them.

13 Q. You at Monsanto and working with Mr.
14 Wheeler and Dr. Kelly, I take it in your
15 participation you began to gather together quite
16 an assembly of information.

17 A. We sure did.

18 Q. How did you handle that information
19 there at the company and the volume that you had
20 it to be able to use it?

21 A. We had files full and they had -- we
22 had them -- we filed them by chemical compound
23 name.

24 Q. And this was certainly in the age
25 before computers.

1 A. Yes.

2 Q. Did you have them indexed in some way?

3 A. Yes, we had them indexed by -- by
4 their best chemical name. The chemical -- the
5 American Chemical Society name is what we used.

6 Q. You mentioned American Chemical
7 Society. You've told me you're a chemist and that
8 you're a member of that organization?

9 A. Yes.

10 Q. I take it that Chemical Abstracts
11 something you learned how to use quite early then?

12 A. Yes, yes.

13 Q. And would Chemical Abstracts have been
14 something that you continued to use after you got
15 to Monsanto?

16 A. Oh, yes, sir. That's the best way to
17 peruse a whole flock of chemical data out of the
18 American Chemical ACS documents. In fact, we
19 contributed to -- we were asked usually to
20 contribute a summary to some of the stuff that --

21 Q. For those who might not be familiar
22 with Chemical Abstracts, would you tell us what
23 those were in the '50s.

24 A. Chemical Abstracts is a document
25 published by the American Chemical Society since

1 the turn of the century abstracting all -- their
2 word, not mine -- all of the known reputable
3 chemical literature on a periodic basis.

4 And they do a good job because the
5 Chemical Abstracts come out about ten times a
6 year. I don't think it comes out every month, and
7 it must be a thousand pages in the darn thing now.

8 Q. Were there other abstracting services
9 that you became familiar with that were useful in
10 your work?

11 A. Well, some of the other societies,
12 some of the other people did this, did the
13 abstracting. We saw a lot of company abstracts
14 that they used for their safety and health groups
15 in the handling of materials and in handling
16 chemicals, particularly the very toxic ones.

17 You're talking now stuff that would
18 absorb through the skin and which is the most
19 hazardous thing people handle by far.

20 Q. Can you give us some examples what you
21 mean by those company abstracts?

22 A. Well, we had a bunch of company
23 abstracts. We made them for years. I don't know
24 how many files full of the damn things.

25 A lot of those were those abstracts

1 that we already -- we abstracted a whole bunch of
2 abstracts to get the data, the best raw data that
3 we could find and put together.

4 Q. Would this information that Monsanto
5 put into abstracts, would that be shared with
6 customers of Monsanto?

7 A. If we put it out, it would be shared
8 with anybody that wanted it, including most of the
9 technical agencies. We wrote many of the MCA data
10 sheets for them of Monsanto products that were --
11 that we would consider primary manufacturer at our
12 request or theirs.

13 Q. How would you at Monsanto make it
14 known to the general consuming public that you had
15 this information available and that it could be
16 gotten?

17 A. I never thought we really had to
18 because we got so many requests for it. The
19 plants knew we had it because we had a safety man
20 in every plant and/or a hygienist later on in the
21 day.

22 We had industrial hygienists in the
23 plants and in the divisions of Monsanto, which
24 later became the companies of Monsanto -- same
25 damn thing, different name -- had their own people

1 and we worked then from inside with them in
2 getting data back and forth.

3 There was a blossom time after World
4 War II where there was enormous new compounds
5 discovered and put into use. I don't think -- I
6 think it's a lot easier to track it today than it
7 was then, but we -- we had data in our data files
8 on virtually every compound there had been
9 produced, and I might have -- I might say that
10 most of the other companies that I knew had the
11 same affair, and we traded our own in-company
12 documents.

13 We were told by our own company
14 nothing is secret connected with health and
15 safety. Nothing.

16 MR. OLIVER: Objection, nonresponsive.

17 Q. You mentioned earlier about asbestos
18 and how it was used in catalyst and insulation
19 materials. Was that something that would have
20 been included in your first research report even?

21 A. I suspect it was, but I'm not
22 absolutely sure. We, working in the pilot plant
23 of Monsanto, dealt with asbestos insulation
24 materials and with asbestos muds and the asbestos
25 workers in the plant there.

1 We had a crew called insulators, and
2 they did the insulation work --

3 Q. And that was --

4 A. -- in the pilot plant operations.

5 Q. That was about 1953, '54 time frame
6 you're talking about?

7 A. Yes, some time through there, yes.

8 Q. Did you find that the insulators there
9 at Monsanto were essentially following the same
10 kind of practice that you'd experienced in
11 Tennessee?

12 A. They had been ordered to work on the
13 standard established by the MCA or established by
14 whoever established the standards. I could -- to
15 tell you the truth, I don't know on any one of the
16 individual materials because they had been running
17 around so many times, but the asbestos dust was on
18 the list for the -- of the toxicology materials
19 and from -- put out by the American Industrial
20 Hygiene Association, TLV list, and we always
21 stood -- we always maintained at least that level
22 as our standard.

23 Q. Did you find that the insulators there
24 at Monsanto in the '50s when you first came were
25 wearing respirators like you had been taught at

1 the University of --

2 A. They had respirators. Now, I never
3 saw them insulating, so I don't know if they wore
4 them. They had them and they had them hanging
5 around their neck, okay?

6 Q. Yes, sir. Were the insulators, to
7 your knowledge, were they given protective
8 clothing of any kind or work clothing?

9 A. Well, the company furnished work
10 clothing to everybody.

11 Q. Why would that have been done at
12 Monsanto, if you know, sir?

13 A. What, you mean clothing?

14 Q. Yes, sir.

15 A. Well, there's a lot of reasons. Some
16 of which you may not like. It's the best way to
17 get a man to take a shower.

18 Q. How is that?

19 A. Give him clothes if he does to wear.

20 Q. Sort of a incentive to take a shower,
21 is that what you mean?

22 A. Yes, we've got wet shower houses for
23 all of them. We had some objections that some of
24 them didn't take showers and the enthusiasm for
25 being up in a close, tight place on a hot day with

1 them wasn't too hot, so it encouraged them to take
2 showers and to clean off.

3 And particularly people -- we made
4 lots of people take showers. We made the -- the
5 insulation workers had to.

6 Q. Why is that, sir?

7 A. What?

8 Q. Why would you do that?

9 A. Because they were -- all the dusty
10 operations had to because the dust got inside
11 their clothing. They all had MSA approved dust
12 respirators, but they get it inside. They get it
13 in your hair. I've been in too many places, I
14 know. I didn't get any clothes issued.

15 Q. So you're saying that this was a way
16 of decontaminating the insulators?

17 MR. POWERS: Objection.

18 A. In a way it was a way to encourage
19 them to clean up. We had rules where they had to
20 in some places and particularly true organic
21 manufacturing plants.

22 But it was hard to -- the unions were
23 pretty tough. I don't know why they fought that
24 issue, but they did.

25 Incidentally, some of the unions had

1 some darn good data, too, available to them. I
2 don't know where they got it, but they probably
3 assembled it themselves.

4 I've worked with unions, industrial
5 hygienist, late -- years ago. Not early because
6 they didn't know. They didn't know, but later on
7 I worked with some union people. Good people,
8 too.

9 Q. After you came to St. Louis and got
10 into -- I guess would you call it corporate
11 program?

12 A. Yes.

13 Q. After you got to St. Louis and got
14 into the corporate program and began to see the
15 things that Dr. Kelly and Mr. Wheeler had been
16 doing, would you describe for us what you recall
17 in the '50s about how the Monsanto employees were
18 being followed from an industrial hygienist's
19 standpoint?

20 A. Well, all the plants had a safety
21 director and so many of them had extra people.
22 They had a safety engineer and several so-called
23 inspectors. They had different names for them,
24 but they were their grunts. They did the grunt
25 work.

1 We worked with the inspectors and with
2 the safety directors of each of the plants. We
3 did a survey of each of Monsanto's plants, and we
4 surveyed every individual job classification in a
5 plant.

6 In the East St. Louis plant there's
7 over four hundred job classifications, so our
8 document was about that thick. Covered each job,
9 what they were provided safety and health, what
10 data they had been given, their safety training
11 programs, whether they had company clothing or
12 not, and so forth.

13 And these data were absolutely witched
14 again. Took my hygiene crew damn near a year to
15 get a set of them, and then we were ready to go
16 for another set, and they turned out to be great.

17 Well, the one on two of the plants
18 exceeded one volume, and there were more than one
19 volume. Had every -- now, we were not interested
20 in the production. We were interested in the job
21 classifications and what that job classification
22 required them to be exposed to, what they were
23 provided with, and the data, and a number of times
24 at their safety meetings they mentioned their
25 material and went over the thing again.

1 And I set up a lot of those things,
2 the short and abrupt and dirty explanations for
3 these chemicals.

4 I used to take a bottle of very light
5 oil and show them how much it would take for one
6 of the amine compounds to kill them if they mopped
7 it on their hand.

8 And we did it -- I did it in every
9 plant. I did every one of Monsanto's plants, and
10 there was sixty-one of them at the time in the
11 U.S.

12 By the way, I did all the foreign
13 plants in Britain and in Belgium.

14 MR. FOGARTY: Objection,
15 nonresponsive.

16 Q. In what time period are you talking
17 about?

18 A. Huh?

19 Q. What time period are we talking about?

20 A. '60s, '70s.

21 Q. The --

22 A. By the way, the British had a pretty
23 good deal themselves. The European was a little
24 different. They're so darn competitive. They
25 didn't want anybody to do anything except Belgium.

1 Belgium was worse.

2 The Brits were pretty good. They had
3 also -- they had some darn good technical people
4 in the British company, and particularly in
5 pollution control.

6 Q. Did you ever have any interface with
7 the folks at the British Occupational Hygienist
8 Society?

9 A. Yes, yes. Which, by the way, are good
10 first class people. Don't get me wrong. I'm not
11 arguing about that. I ran into some of the best
12 hygienists in this company working for the States
13 and working for the federal government.

14 Q. The work that you just told us about a
15 few moments ago looking at different jobs in a
16 plant as opposed to I guess the processes
17 themselves, you say you looked at each job.

18 Are you talking about like different
19 operators?

20 A. That's right.

21 Q. Different --

22 A. Class A operators, Class B operator,
23 Class C operator, department 22.

24 Q. And you would profile the exposures of
25 each one of those?

1 A. Absolutely, profiled each one.

2 Q. And would you do the same thing for
3 maintenance workers?

4 A. Yes, we went through the maintenance
5 workers, but here you can't set them up unless
6 they're zoned, and in the bigger plants they'll be
7 zoned.

8 Those guys will live and die in zone
9 3, and if that's true, zone 3 handles some
10 particular materials at zone 3, then they get
11 special type of clothing and/or helmets and/or
12 respirators.

13 Q. When you were first relocated to the
14 corporate headquarters in St. Louis, is that when
15 you first became aware of being able to take air
16 samples and that sort of thing, profile workers
17 exposures?

18 A. No. We knew it in Texas City and did
19 some testing. We didn't have very good equipment.
20 We had to use the old bubblers, dual bubblers and
21 that sort of stuff, which are awfully -- awfully
22 cumbersome things to be handling around a busy
23 chemist manufacturing operation. We did it.

24 Later we began to use the better
25 portable equipment and then we did long term, like

1 full switch -- I'm sorry, full shift. We did all
2 three shifts, by the way, in certain areas.

3 Full shifts had to be done when the
4 hygienists -- a very busy year for the hygienists
5 in Texas City to go around through this processing
6 unit because you're -- although they only
7 manufactured two or three products, they used some
8 very, very, very dangerous intermediates, and they
9 had to go around and test every one of them.

10 And we did it as much as we could
11 every year to see that changes had been made. And
12 those were done probably by the chemist after I
13 left, probably by the hygienists assigned to the
14 plant.

15 Q. So even when you first arrived at
16 Monsanto, Texas City in 1953, air sampling
17 capability already existed there --

18 A. That's right.

19 Q. -- as well?

20 A. They had air sampling equipment there.

21 Q. And that would be for dusts and gasses
22 and both?

23 A. That's right. Primarily for dust and
24 for -- and bubblers, which if you could analyze
25 the results. And those analyses were done

1 elsewhere, not at the plant at the time.

2 Now, I'm sure all the plants can do
3 their own.

4 Q. Once you got to St. Louis, is that
5 when you, yourself first began to do air sampling?

6 A. No, I did some in Texas City, but not
7 much. I did it in St. Louis with the plant safety
8 man. We made him go along. You have to have
9 somebody in the plant tied down to it.

10 When I left, we had, in most of the
11 large plants, had professional industrial
12 hygienists. The plant staff by this time had
13 broken down into three sections and I was the
14 director of industrial hygiene section and had
15 about fifteen employees in the central office, and
16 I had access to a laboratory, and I had what I
17 think was the best sound man in the country and
18 that sort of stuff doing the work.

19 And we did this, we put on shows for
20 the individual plant safety and health people
21 and/or their groups. I did it for the organic
22 division plants many times for their groups that
23 handled this spread of chemical, and we stuck to
24 that spread of chemical.

25 They were making amine compounds at

1 the East St. Louis plant. We did them a job on
2 amine compounds, and we had an awful fewer cases
3 than I think we probably would have had if we
4 hadn't been as alert as we were.

5 We also probably cost Monsanto a
6 million dollars in uniforms.

7 Q. And that was probably a good
8 investment in preventing disease?

9 A. I think you're absolutely correct. It
10 was a good investment, because if you stained that
11 uniform with some of the amines, you could tell it
12 in a minute.

13 Most of them are purple or that darn
14 die in denim will turn the oddist colors you've
15 ever seen. That will give a man a quick trip that
16 he's been doused and then he goes through the
17 scrub and down business whether he likes it or
18 not.

19 So as near as I know, we've, in my
20 tenure, we never lost anybody in the organic
21 operations.

22 Q. What do you remember, Mr. Garrett,
23 about the first air sampling that you did in Texas
24 City?

25 A. Well, it was pretty crude, but the

1 system was crude as it was defined in the
2 literature at the time, and we did -- you did
3 insoluble sampling in water.

4 And it was a damn difficult thing to
5 filter. You had to triple filter, then you had to
6 dry that damn thing out and get rid of that filter
7 material. It's not an easy task.

8 I think the reason we did that was
9 because the results were probably higher than they
10 would have been had you been able to get rid of
11 some of the filter material. We figured that it
12 was higher and, therefore, it was safer.

13 Then the sampling and the analytical
14 procedure began to improve vastly. And in the
15 '50s I believe they probably -- and the '60s, the
16 analytical methods, analytical hardware,
17 analytical reagents, improved enormously so that
18 it got to where we could do these -- we tested
19 squeeze tubes, I'll bet you, by the millions.

20 I've tested those darn -- hundreds of
21 sulfide tubes and some of those things so that we
22 could test them against our sample.

23 If they didn't work, we put out a note
24 through the company, do not use so and so's
25 sampling tubes. They are very good for very

1 excellent reasons because they're quick and their
2 reasonably accurate, and you could save somebody's
3 life that's messing around with something they
4 didn't need to be.

5 MR. FOGARTY: Objection,
6 nonresponsive.

7 Q. The sampling that you first did when
8 you joined Monsanto, some of that was insolubles.
9 You mean by that dust?

10 A. That's right, we collected in water.
11 Collected in water median.

12 Q. What kind of dust samples do you
13 remember doing?

14 A. You could collect almost any dust.
15 One of the biggest problems was separating the
16 dust.

17 In other words, what dust are you
18 talking about, Texas City dust itself,
19 particularly with a bunch of trucks around and two
20 or three days with no rain? The dust -- you've
21 got much dust on the ground from the streets and
22 around.

23 You get a great deal of solid material
24 from the ocean, believe it or not. You don't
25 believe that, but it's true. You'd be surprised.

1 So that you have to separate out of your solid
2 sampling material and make some kind of judgment
3 as to what was the product -- the targeted
4 product. I found that out early.

5 Q. Did you, yourself do --

6 A. Some of it.

7 Q. Did you use a microscope to do your
8 dust count?

9 A. I used a dust counter, which is the
10 old Bausch & Lomb microscope hook-up for dust
11 counting and a plate.

12 Q. Yes, sir.

13 A. We used it as a first step piece of
14 equipment for dust sampling because it gave us a
15 quick fix on what we had. It is not a very good
16 gravimetric sampling system. It will give you a
17 very good idea of your dispersion of particle
18 sizes.

19 Q. This Bausch & Lomb dust counter, would
20 you describe for us how that works and how long it
21 takes to take a sample with it.

22 A. Well, you had a plate -- that you had
23 these plates. It looked like circular straight
24 view plates for microscope, and you took this
25 machine and over a period of time you inspired

1 into the material the atmosphere.

2 Then you took and you had a counting
3 grid in the machine. You never took the plate
4 out. You turn it on and you counted it with a
5 microscope attached to the affair itself and made
6 counts, and there was a method published by Bausch
7 & Lomb for the counts and we used their method of
8 counting.

9 Q. About how long from start to finish
10 would it take someone experienced in this device
11 to actually test it?

12 A. Well, it wouldn't take long to take a
13 sample. It takes some time to do the counting.
14 Now, a first class man could probably do it and
15 count it in fifteen minutes.

16 Q. Pretty much know what's there and
17 types of exposures.

18 A. That's right. Now, he has to clean
19 the plate off if he's going to use it again
20 because he has the stuff on it.

21 We also used the old -- oh God, what
22 is that darn blood counting thing? The blood
23 counting affair for the regular upright microscope
24 is a -- I can't recall what they call it, but you
25 have -- there's a gravical in there that you can

1 count a number of specific spaces and calculate
2 the total dust load in particles and into a
3 certain extent the size.

4 The same was true, by the way, at
5 Bausch & Lomb. You get a fair idea of the size
6 distribution, and when you're coming to
7 inorganic -- to inert dust, you're looking for
8 size because it's the size that gets further down
9 in the system, and if you want stuff that gets
10 into the pulmonary system, you're going down to
11 some small sizes.

12 And this is what we did called dust
13 counting. They're a pain in the neck to do, but
14 it's done -- it's still done to a lot -- to a
15 great extent today by a classification of dust in
16 sizes.

17 Q. Now, the Bausch & Lomb device, that's
18 the device that you had?

19 A. It's long since went out of business,
20 yeah.

21 Q. But you had that in 1953, '54?

22 A. Yes, yes.

23 Q. I take it that there was already
24 someone in Texas City there before you got there
25 that was the safety in this kind of thing?

1 A. Yes, safety director.

2 Q. Who was that? Would you recall, sir?

3 A. Mooney Stallings was the safety
4 director. Mooney Stallings.

5 Now, in this case, keep in mind, that
6 in the early days of the chemical industry, at
7 least in my experience, and this has been in other
8 companies as well, is to get a safety -- there was
9 no safety people to be trained.

10 Nobody trained anybody. Texas A&M
11 didn't start their safety engineering school until
12 way after this. So to get a safety man, it was
13 customary in our industry -- now, this is maybe
14 not true in others -- to take a first class
15 foreman and make him the safety director, and he
16 ran it.

17 We had probably the best safety people
18 we had, some of them were those foremen. We had
19 one in Tennessee. Even the foreman lost his arm
20 in a car accident, and he was such a bright guy
21 they made him one of the deputy safety directors.
22 He graduated when the safety director, head of
23 safety -- he was first class, and his record --
24 our record down there was first class for a plant
25 that manufactured phosphorous from ore was first

1 class.

2 Q. Would you know, Mr. Garrett, how these
3 men that were made safety directors or in lines
4 that led up to be safety directors, how they were
5 trained in areas of health concern?

6 A. They were trained, believe it or not,
7 by the federal government during World War II in
8 the manufacturing burst that occurred, as you can
9 imagine. Those people were trained and they
10 trained a scad of people as safety people.

11 Now, this was the guy like Mooney
12 Stalling, bright guy without a college education
13 that probably became a better safety man than a
14 hell of a lot of people with college degrees
15 because he did it through experience.

16 And a lot of Monsanto's foremen -- and
17 this was not Monsanto only. I know this is from
18 Dallas through Dupont, great many there, their
19 safety people started as foremen in their plants.

20 Good first class alert foremen, and
21 they went into -- then into the management group
22 and became poorer paid than they were when they
23 were in the early group, but that's beside the
24 point.

25 Mooney was a pretty good safety

1 director. He later got a industrial hygienist
2 assigned in there and then they got a trained
3 safety director out of one of the graduate schools
4 that graduated safety director -- safety
5 engineering, and they also had a full time
6 hygienist when the plant was sold.

7 Q. The Monsanto plant in Texas City I
8 guess then at some point in time did get a
9 full-time industrial hygienist?

10 A. Yes, sir.

11 Q. About when was that, sir?

12 A. Oh, gosh, I don't know. I couldn't
13 even -- I might give you the -- I suspect it was
14 in the '60s, late '60s, but, boy, that could be
15 wrong.

16 Q. Before they got a full-time industrial
17 hygienist at Monsanto, Texas City plant, whenever
18 it was --

19 A. They had a full-time engineer there
20 then by that time --

21 Q. If someone --

22 A. -- and a safety director.

23 Q. And those people, the safety director
24 and the engineer, they were doing the industrial
25 hygiene kind of work?

1 A. They were doing the stuff that we in
2 our staff was doing when I first came to St.
3 Louis. We had an excellent staff of people at the
4 Kearny plant in East St. Louis.

5 They had generated them themselves
6 because of lack of corporate involvement in that
7 business until after World War II, and then
8 corporate involvement got in and started helping
9 them and they ended up with professional
10 industrial hygienists -- no, professional safety
11 man and my man assigned to the organic division.

12 The old organic division was over
13 there any time that they needed and that safety
14 director would have him any time he wanted him.

15 Q. I think you told me that there became
16 a time when you started doing plant surveys
17 yourself and going out and doing inspections?

18 A. Well, we had to find out what the hell
19 was going on in the plants. Who would -- what
20 were they doing? How were they doing it? What
21 were they doing it with?

22 Three very, very good questions that
23 you have to ask yourself today, and in today most
24 companies do this on a routine basis.

25 You can go into a plant in Monsanto

1 now and ask one of their supervisors, even an area
2 supervisor can tell you in detail what they do in
3 each of their processes.

4 This wasn't very true -- I can
5 remember one time a man told me in one of our
6 plants you can tell the people working the acid
7 department by the holes in their pants, you know.

8 That may very well be great, but by
9 God, that's not very good industrial hygiene.

10 MR. FOGARTY: Objection,
11 nonresponsive.

12 Q. The occasions when you would go out
13 and do your survey work in the plants, I take it
14 you wrote reports of those visits?

15 A. We went --

16 Q. Wrote reports of those visits, did
17 you?

18 A. Oh, I'm sure, yes, we did, but those
19 reports went into the -- I suspect the fire, but I
20 don't know. Yes, we wrote detail.

21 What we needed was the individual
22 operating units and those processes. That way
23 when we built a plant making the same stuff
24 somewhere else -- and this is where the Europeans
25 got into it because we built plants over there to

1 make products that we made in the U.S. Their
2 enthusiasm for our interference was zero.

3 We couldn't speak to them because they
4 would not, even if they knew English, wouldn't
5 speak to us in English, particularly them damn
6 Belgiums.

7 We shouldn't have fought the Belgiums.
8 We should have fought just with the Germans I
9 guess there.

10 MR. FOGARTY: Objection,
11 nonresponsive.

12 Q. I've had the same experience, Mr.
13 Garrett, with the Belgiums in spades.

14 A. We took them over to Great Britain and
15 had the meeting.

16 Q. I should have thought of that.

17 A. Took them over to London and had the
18 meeting. Oh, we had great luck with the British.
19 We provided them with the information. They did a
20 job of their own.

21 All you had to do with them
22 was to get -- they had some of the best people.
23 They had one of the best pollution engineers I've
24 ever seen working in one of our plants in great
25 Britain.

1 Well, he worked at the plant but he
2 worked for the whole British company. First class
3 man.

4 Q. If I understand what you're saying
5 then, your -- part of your job was to go out and
6 do survey work, learn about things that were
7 either problems or potential problems and then if
8 you built a new process doing the same kinds of
9 things, incorporate engineering controls?

10 A. We tried to do that beforehand, and we
11 got to the point where we had, the last twelve,
12 thirteen years I was at Monsanto, we went to
13 process meetings where we went over the design of
14 every process in Monsanto unit by unit.

15 We objected -- we made the
16 vice-president madder than hell, but we objected
17 anyway, and we stopped that crap of putting an
18 arrow in the air that says "To air" and the one
19 going this way says "To water."

20 What water? "To waste." That's
21 another goody. "To waste." Just arrow. Here's a
22 long process designed with fifty arrows saying "To
23 waste." Where to waste?

24 I mean are they going to go through
25 waste treatment somewhere or are they going to

1 just dump them on the ground or are we going to
2 put it in dumpsters?

3 So we went over that and made them and
4 we had the vice -- the president -- the
5 vice-president of the operating -- executive
6 vice-president on our side, too, by God.

7 They'll approve it when you agree.
8 Show us something. Show us a pollution treatment
9 operation or get off the stick.

10 And so it was a graduate system from
11 the 19- -- World War II return where a lot of
12 safety was generated by the manufacturers of very
13 hazardous materials to people who were not
14 manufacturing that kind of material, started the
15 safety engineering business which graduated then
16 in the '50s from the foreman type person to a
17 graduate trained engineer or hygienist and to
18 today to a staff.

19 And the staff has the right at the
20 plant for process to go to the corporate staff and
21 say, "Hey, help us with this thing and make damn
22 sure that we don't put someone's head in a trap
23 with this," and so the corporate staff joined with
24 the plant staff, and they do anyway because
25 they're working it from the other end of the

1 stick, and they finally get together and decide
2 what's to be done, and it's written out in the
3 construction plans.

4 MR. ELLIS: We've been going about an
5 hour and a half. Can we take --

6 MR. HOBSON: It's up to Mr. Garrett.
7 I'm happy to if he is.

8 MR. ELLIS: Well, I need to go to the
9 restroom so...

10 THE WITNESS: Good. I'm glad you say
11 so.

12 (Temporary recess was held.)

13 MS. FLATT: We're on record.

14 Q. Mr. Garrett, you mentioned the
15 American Industrial Hygiene Association. I take
16 it that you've been a member of that organization
17 for a good number of years?

18 A. Probably thirty-five, forty years,
19 yeah.

20 Q. What kinds of activities have you done
21 with that organization that you can tell us about,
22 sir, in your career?

23 A. I've written a number of papers for
24 their journal. I've reviewed papers for them,
25 like most people that you get on review groups

1 from time to time, and up through the time until I
2 quit and even a couple years afterwards, I went to
3 their national meetings.

4 Q. Were you on any of the committees of
5 the American Industrial Hygiene Association?

6 A. Many of them, and to tell you the
7 truth, there's so many, I don't know whether I
8 could tell you what it represented even.

9 I was on the -- the development
10 committee for a while in an effort to find out who
11 was in hygiene regardless of what they claimed to
12 be or accepted as their fate, and I think they do
13 pretty well today in getting those people in.

14 I've been on the -- one of the review
15 committees for papers. My boss for very many
16 years was president of the IHA and through all of
17 that persequential office system.

18 And when he was president, I had to do
19 his job, too, but I've been involved with them
20 ever since I joined -- went to St. Louis.

21 Q. Do you recognize the publications of
22 the American Industrial Hygiene Association to be
23 authoritative?

24 A. I have run into no -- very few that
25 were not.

1 Q. You're aware of like the Hygienic
2 Guide series that they published?

3 A. Yes, I am.

4 Q. Have you written any of the Hygienic
5 Guides?

6 A. Yeah.

7 Q. I take it you would find those to be
8 authoritative?

9 A. Well, they certainly -- we had a hell
10 of a time getting them approved by Monsanto, but
11 they finally let them go as is. Kelly -- Dr.
12 Kelly got them through actually.

13 We did most of the PCB's and that sort
14 of stuff, but we only made -- not every company
15 did. The stuff they only made or the stuff they
16 were primarily -- not primarily, but well known
17 in, we did that on our products or when we were
18 asked.

19 By the way, we did some for the
20 Organic Manufacturing Association, too, I think,
21 but I'm not sure. I didn't do it. One of my
22 troops did it.

23 Q. Had you had any occasion to work with
24 the American Conference of Governmental Industrial
25 Hygienists, the ACGIH?

1 A. Yes.

2 Q. What have you done with that
3 organization, sir?

4 A. Well, I went to their meetings. I
5 wrote some stuff for their -- some editorials for
6 their journals, for journals they can put things
7 in, and they had a very good handle because they
8 ran the show because they were the primary people
9 that operated the state and federal agencies that
10 set the standards.

11 And ultimately they -- we set them
12 voluntarily for years. Nobody had any -- then
13 suddenly they began to set them as a legal issue,
14 but by that time they'd been washed and cleansed
15 pretty well in respect to what they meant, what
16 they did.

17 I think their standards are probably
18 the best set of standards there are available, and
19 they're pretty much used world wide.

20 Q. The ACGIH threshold limit values, that
21 I take it you find those to be even more current
22 than OSHA's work?

23 A. Well, I guess I have a very different
24 view of OSHA than most. I think the ACGIH
25 represented a group of good professionals doing a

1 good professional job.

2 I cannot say the same about the
3 governmental agency.

4 Q. You still feel that way today?

5 A. Yes, I still do. Don't get me wrong.
6 There are a great many great people in the federal
7 agencies involved in this business, and God knows
8 without some of them we wouldn't have got where we
9 are today in respect to protecting people's lives
10 that work for a living, but they have too many
11 political nit wits get in there, also, and stir
12 around that sort of thing once in a while. They
13 try to stop them.

14 MR. FOGARTY: Objection,
15 nonresponsive.

16 A. I've been in that building in
17 Washington, D.C., many, many times up and down the
18 halls. I was on one of their advisory committees,
19 the Water Advisory Committee, drinking water,
20 Standards Advisory Committee.

21 Q. Did you ever have any input to
22 establishing threshold limit values through the
23 ACGIH TLV committees?

24 A. Yes, we did. We turned over to them
25 any data we had in connection with anything they

1 were working. If you recall some of the
2 processes, they would come out and say we're going
3 to do -- they would show a span of materials they
4 were after, and actually they looked up I guess in
5 the blue book us and every other chemical and
6 petroleum company and found out if they made it,
7 they sent us a note saying we're going to work on
8 the chloro-aromatics.

9 So we said, yes, we'll do it, too, and
10 participate, and we'd participate with them and
11 give them our data and our views. We never gave
12 our data away without a few views. Neither did
13 anybody else.

14 So we -- yes, we participated with
15 them. We participated with them making up some of
16 the standards. We disagreed with some, but not
17 very many, believe it or not. Boy, some of them
18 were tough.

19 Q. The National Institute for
20 Occupational Safety & Health, is that an
21 organization you recognize, sir? NIOSH?

22 A. Yeah.

23 Q. They have come out from time to time
24 with a number of criteria documents, various
25 materials. Are you familiar with those as well?

1 A. Yes. I've seen some of their
2 criteria, which kind of -- blue papers.

3 Q. Did you ever make any comments or
4 contribute to any of the writing of this criteria
5 documents?

6 A. Well, at their request we did some
7 work on organic chemicals that were manufactured
8 in East St. Louis and we diltled with those people
9 for fifteen years.

10 We finally went over there and made a
11 survey of the people that lived over there, and
12 our results didn't jive with their predictions, so
13 they didn't publish our results.

14 MR. FOGARTY: Objection,
15 nonresponsive.

16 Q. From time to time did you have the
17 opportunity to work with customers of Monsanto's
18 regarding Monsanto products and their use?

19 A. Yes, many times.

20 Q. Tell me how that worked, Mr. Garrett,
21 when it came to dealing with your customers.

22 A. Well, if I got a -- we were, as you
23 know, a staff department of the corporate
24 headquarters in St. Louis.

25 Someone in one of the sales groups or

1 product groups, as they were called, generally the
2 sales section, said to Emmet Kelly "We need
3 somebody to go help so and so in a certain
4 procedure connected with handling something
5 Monsanto manufactured."

6 So I got told to go out and help
7 somebody do something, and I did that not as many
8 times as you might -- as you might imagine.

9 We did get a -- we answered an awful
10 lot of letters and we were -- we -- the president
11 of Monsanto told us, "You tell them what you know,
12 period. I don't give a damn if it's good or bad.
13 Tell them what you know."

14 So we did. We never had anybody
15 complain inside Monsanto to us either. So we
16 helped the customers any time.

17 Many of them were states. I had more
18 requests from states about this thing -- these
19 things. We got thus and so in our state. You get
20 involved now in maybe messing around with one of
21 your customers, but we did anyway.

22 Q. The products that you sold at
23 Monsanto, certainly some of those had health
24 effects that they could cause if they were
25 improperly handled or if exposures were excessive,

1 I take it.

2 Did you ever, as a Monsanto employee,
3 go out to customers and sort of precheck them to
4 see if they were capable of handling your
5 materials that were particularly hazardous?

6 A. I went to many, many of them connected
7 with probably die chemicals more than anything
8 else because the die makers are little companies.
9 Primarily small operations.

10 And we talked to them about some of
11 the amine and nitro aromatic compounds we
12 manufactured, and I did this with many of them. I
13 did -- they have an organization, by the way, that
14 I went to twice and talked to them.

15 Anybody that asks for help from
16 Monsanto got it from us, and we did the medical or
17 industrial hygiene sort of stuff, Kelly and I and
18 Emmet and the rest of the doctors and the rest of
19 the hygienists.

20 And about -- when I retired, I had
21 fourteen people working for me, and I had, I
22 suspect, a good 15 percent, maybe even more of
23 that, was done from customer relations, and that
24 was direct.

25 And we weren't out to sell stuff. We

1 were out to sell safety and health because it
2 damaged our product name if somebody turned up
3 purple. And we just weren't going to have it.

4 So, yes, my whole staff probably spent
5 15, 20 percent of their time with customers.

6 Q. Can you recall any circumstances where
7 you would find people who either wanted to buy or
8 were buying Monsanto products and you just said,
9 "These people aren't capable of dealing with it
10 and we're not going to sell to them"?

11 A. Well, we had some people, companies,
12 that were pretty irresponsible in our opinion, and
13 we were very careful.

14 It's difficult to do what you're
15 saying. But it's not only difficult, it's legally
16 difficult, so, yes, we did. We worked with our
17 own law department on some of those at their
18 request or at ours.

19 Q. And actually ceased sales in some
20 instances?

21 A. Indeed we did. They wouldn't let us
22 look at their operation. They had a problem that
23 we knew about. We ceased.

24 Q. Can you give me some idea how far back
25 in time these kinds of activities would have gone

1 at Monsanto?

2 A. I guess Kelly probably would -- was
3 doing that for he and Elmer Wheeler before I came.
4 When I came, we did some -- we did some work
5 with -- we did most -- well, a great portion of
6 our work with customers connected with products
7 and changes they wanted to make in the chemical
8 composition.

9 We didn't want them to stick amine
10 groups on everything and that sort of thing.
11 Arsenides or something like that. PCB's. We
12 wanted a great deal less foolishness.

13 I did a great deal of work with PCB's
14 in tunnels, in transformer manufacturing places,
15 that sort of stuff.

16 Q. So at least by 1954 you had personal
17 knowledge that Monsanto was working with its
18 customers in trying to find problems with
19 customers in some cases --

20 A. When I came up to St. Louis, I quickly
21 found out that the customer in any -- like any
22 other place that's pedaling, was pretty much the
23 king through our professional technical staff that
24 did the selling.

25 Monsanto sales people, I'm sure --

1 most big companies do the same. Most of them are
2 pretty well knowledgeable about the materials
3 they're selling because they're probably chemists
4 or chemical engineers to start with, and we did a
5 lot of work with them.

6 I did a lot of work with people that
7 wanted to make preformed insulation and tunnel
8 people and tunneling in some areas. They wanted
9 some help.

10 We did a lot of work with some of the
11 electrical companies because of the transformers
12 in tunnels. You don't realize -- I mean a lot of
13 people don't. My -- like your wife probably
14 doesn't realize that 90 percent of all the
15 electricity in downtown whatever is in tunnels.

16 In fact, so is the heat. Nobody has a
17 heating plant. They buy steam from some guy way
18 off over the boondocks somewhere that's making
19 steam, and you get into those tunnels and you
20 start getting into crowded conditions, and you get
21 tunnel crews.

22 And I've spoken to the tunnel crews,
23 which, by the way, are separate in most electrical
24 companies. That's a separate gang of people, you
25 know. It may be wierd, but they're pretty good at

1 by the way, I suspect, but we had -- we had to do
2 more training, I suspect, to those contract
3 physicians than most.

4 Kelly did it but he'd bring the
5 hygiene crew along and we'd scare hell out of them
6 or something, so they'd do what we had to do.

7 Q. So the intent was to make sure that
8 these contract physicians that were servicing
9 Monsanto employees, they knew the hazards and knew
10 what to look for?

11 A. Knew so they could diagnose rapidly
12 if -- so we didn't lose somebody in transit.

13 Q. Did you become familiar, Mr. Garrett,
14 with how the Monsanto medical records were
15 basically kept? I'm not talking about in a
16 person's folder, but how in general they were
17 reviewed?

18 A. The physician or the assigned
19 physician at the individual plant and the
20 physician assigned by Kelly if he had -- from his
21 own staff or himself would handle that affair.
22 Now, we talked to the physicians -- and I knew all
23 of them personally, but as far as messing with
24 those medical records, buddy, it was no thanks,
25 because you're diddling with something that Dr.

1 Kelly didn't have allowed.

2 We would look at it from a generalized
3 standpoint. If we got a couple people with us
4 that showed symptoms, okay, but looking up a whole
5 twenty-five or thirty people's medical records was
6 no. Kelly would do it or his physicians, but our
7 hygienists would not or did not.

8 And I was perfectly happy with that
9 when I directed my own group -- when I directed
10 the group.

11 Q. Was there a system within Monsanto
12 that you can tell me about that allowed for you to
13 know how many particular incidents of whatever
14 medical condition occurred and how that -- how was
15 that tracked?

16 A. Well, we got all of that -- Kelly
17 automatically got anything connected with what was
18 considered an associated -- a sickness that you
19 could directly prescribe or ascribe to one of the
20 products we were making or one of the processes we
21 were using.

22 And from that we tracked -- a lot of
23 the work my crew did was on those -- plant would
24 say "We've got problems here. We seem to have two
25 or three guys that -- showing some kind of

1 symptoms connected, our doctor says."

2 My hygiene crew -- I'd send my
3 hygienist assigned to that division to that plant
4 and work with the plant assigned hygienist, find
5 out what the hell was going on, and if they needed
6 one of the physicians, Kelly would send one of his
7 physicians along. Yes, we did.

8 We were never shown their names, and I
9 didn't want to see their names. They marked them
10 out. We did not deal with -- directly with
11 medical records of anybody by name unless it was a
12 terrible mess.

13 Q. Did your job at all involve claims of
14 occupational diseases that might arise by Monsanto
15 employees?

16 A. To a degree. I handled accidents.
17 Always did. Don't know why I got mixed up in that
18 mess, and I've seen some messes. Rail accidents
19 you wouldn't believe and truck accidents, you
20 know, fishing a truck out of the Ohio River loaded
21 with chemicals and drums, hoping to God the drums
22 are still in the damn truck when you pull it out
23 so you don't have to send a diver down to get each
24 one of them individually. We've been there.

25 I've been in wreck sites, probably all

1 over the country, particularly rail wrecks because
2 if our tankers are sitting in that wreck, we've
3 got to know where they are on the wreck and
4 whether they've been bashed or not. If they've
5 been bashed, what the hell is in them and where
6 that drainage is going.

7 And we had -- we tested some darn
8 stuff over in Illinois where a railroad accident
9 had occurred before I ever come on the site. We
10 tested water around there and that soil and found
11 it was there. Sure enough it was there.

12 We had a hell of a mess cleaning that,
13 and it was years after it occurred. So we didn't
14 want that to happen again, and we tracked --
15 everybody in the business did that.

16 I don't suppose -- I met a American
17 industrial -- American cyanide hygienist at a
18 wreck in Atlanta at one time. "What are you doing
19 here?"

20 He said, "I'm trying to find my tank
21 car. You found anything?"

22 I said, "No, I don't think ours are
23 here. I think somebody must have shipped them off
24 on the side somewhere." Well, we go back -- he
25 and I worked it together.

1 So we -- I knew him personally, and he
2 was trying to do the same thing I was. Big mess.

3 We checked the wrecks. We always
4 tracked those wrecks. I'll bet you I've been on
5 some of the funniest airplanes you've ever seen in
6 your life getting to some of the funniest places
7 you ever saw in your life.

8 "There ain't know road there."

9 "Yeah. How do you get there?"

10 "On the train."

11 "How the hell you going to get there
12 on the train if the damn train is wrecked?"

13 "I don't know. Get on the horse."

14 Get down that damn track from
15 Pensicola across to -- they ought to put that
16 thing out of business. Across the Panhandle in
17 Florida. Oh, I think it's on floating on mud, but
18 that's beside the point.

19 MR. ELLIS: Jack, why don't you let
20 him ask another question here. We can get on with
21 something.

22 MR. CORBETT: Objection,
23 nonresponsive.

24 THE REPORTER: Who said that?

25 MR. CORBETT: Me, Jim Corbett.

1 Q. Did you ever get involved in any of
2 the Workers' Compensation claims, Mr. Garrett?

3 A. If it reflected on more than a single
4 claim, if it reflected a trend of any kind, yes,
5 we got involved in it. Tried to find out if it
6 was indeed our problem and, if it was, get it
7 stopped. Get it put back to bed where it
8 belonged.

9 Not very often, oddly enough.

10 Q. But was there a system that you were
11 aware of where the Workers' Compensation claims
12 that involved occupational diseases or claims of
13 occupational diseases were made known to you in
14 the medical department?

15 A. It went to Kelly or it went to Dr.
16 Johnson when he was there and he came to us, and
17 I -- and if it was -- if it was one of my
18 people -- if I had a person assigned directly to
19 that operation, I'd send him because he knew more
20 about it than I did.

21 Oddly enough, there wasn't a lot --
22 well, I don't know. It's hard to say.

23 Q. What about keeping up with people who
24 were long time Monsanto employees and who would
25 retire and then with the passage of time those

1 folks would pass away, would you have access to
2 their death certificates?

3 A. No. We did some and we did some
4 purposely, and we did some in cooperation with
5 NIOSH in East St. Louis and somewhere else. I
6 can't remember the other place.

7 I can't remember, but we would have
8 and did operate with them connected with processes
9 that might have occurred from a individual
10 chemical or an area where there was a number of
11 identified employees because Monsanto's system,
12 like every big company's insurance and so forth
13 system, handles wherever they are.

14 We've tracked some down. I don't know
15 why they all live in Florida and Texas, but they
16 do after they leave. I don't blame them if they
17 lived in Illinois for moving to Florida or Texas,
18 but that's beside the point.

19 Yes, we've helped, but it wasn't -- we
20 got into it probably after everybody else had dug
21 around in the mud, so I don't know. I worked on
22 processes where have you seen any -- an unusual
23 number of thus and so's and we went to the
24 physicians of a community through their medical --
25 local medical association and asked them if they'd

1 help us.

2 We've never had any turn downs. They
3 really -- it really isn't easy to do. You go look
4 at the medical records and the insurance records
5 are, my personal opinion, shouldn't exist, but
6 they do.

7 And what do you do -- what is a person
8 in for if he's got a respiratory disease? And
9 he's eighty-two years old. You know, that sort of
10 thing. I don't know.

11 It may be they are significant and
12 maybe it can be done. We did the big OSHA study
13 twice for -- with them. Nothing ever came of it.

14 We were looking at that -- at really
15 at age and we're looking through the medical
16 records to find out what caused the cessation of
17 age in some of these people and really never came
18 to much of any conclusions.

19 Q. This OSHA project dealt with what,
20 sir?

21 A. What?

22 Q. What did the OSHA project deal with
23 that you said you did twice?

24 A. There were -- really it was NIOSH that
25 was after it.

1 Q. I'm sorry.

2 A. It was do you have -- do you have any
3 residual? And they looked into some magic ball
4 and said that people in certain areas have a
5 tendency to stay in those areas more than they do
6 in most areas.

7 So we -- they'd pick one of our plants
8 and they were working -- they wanted to know about
9 some of the products that are made in the plant
10 anyway, but that particular -- they have to be --
11 they have to be right because that particular
12 area, an awful lot of those people are still
13 alive, still living in that area.

14 I wouldn't think in the retirees from
15 St. Louis -- from Monsanto that retired from the
16 main office, I don't think nearly as many percent
17 wise would have stayed in the St. Louis area, but
18 a lot of those people did over there. It's a very
19 clannish place, I guess. I don't know.

20 Just -- and they wanted some studies
21 done and they -- and we did them, provided the
22 data. Nothing ever came of it, that I ever knew.

23 Q. Would it be accurate --

24 A. But we would have done it if they'd
25 have wanted us to.

1 Q. Would it be accurate to say, Mr.
2 Garrett, that at least from your perspective of
3 seeing things, you learned more about any kinds of
4 disease processes in Monsanto employees that were
5 in the current work force as opposed to anything
6 that would have existed in retirees or people who
7 left Monsanto's employment?

8 A. I don't know. That's a difficult
9 question to answer. I'd probably, from point of
10 view of incident -- of incidences, yes.

11 From a point of view of studies and
12 desire to know whether things are happening, no,
13 we probably looked at it. I didn't. I didn't
14 have access to the medical records either, and
15 Emmet Kelly is one of the toughest guys in the
16 world that don't allow anybody to look at
17 anybody's personal medical file, and I don't blame
18 him.

19 Q. Was there any way for you at Monsanto
20 when you were doing industrial hygiene work to be
21 able to see if there was any correlation between
22 any of the exposures that you were measuring and
23 monitoring and any resultant diseases that might
24 be occurring?

25 A. We did with some of the contract

1 doctors. Kelly did it. He had a bunch of -- he
2 hired doctors, and they were largely contractors
3 in the individual areas, and he had a tic sheet
4 for them.

5 If anything had happened that they
6 thought was unusual, I ended up at the plant
7 trying to find out what the hell it was.

8 But as far as looking at those
9 records, I didn't get a chance to do that. At
10 least with any names on them I didn't.

11 Q. Did you have, after you started doing
12 the profiling and surveying of plants, did you
13 identify certain groups of workers that
14 ultimately, either through Dr. Kelly or others,
15 were given certain kinds of physical examinations
16 because of the kind of work they did?

17 A. We had -- we had those people, yes,
18 and those people were in -- when we checked the
19 plant, we knew when we went in that department X-1
20 or X-2 had a certain screen, physical screen,
21 through the physician, whether he was Monsanto or
22 whether he was contract. Made little difference.
23 He dealt with those records.

24 We did it on PCB's. We did it on
25 amine and nitro -- aromatic workers. We did it on

1 chlorine workers, too. By government asked us to
2 do that.

3 Q. Was there ever a time while you were a
4 Monsanto employee that you did one of these
5 physical screens for people who worked with
6 asbestos?

7 A. Well, asbestos was a product that
8 everybody in every plant had to use because of the
9 insulation problems.

10 As far as I -- and I'm not sure in my
11 own mind, I don't believe we ever had very many
12 catalysts that used asbestos or asbestos form
13 carriers, pallets, if you know what I'm talking
14 about.

15 We sold the pallet, cook it and then
16 use it for cattle. I don't think so. What we did
17 do in these areas was we made sure, and we -- I
18 lectured eight thousand times about the TLV levels
19 and their darn respirators, and they were issued
20 respirators by name and the respirators were
21 periodically cleaned and recartridged even if they
22 had not shown use.

23 It's the only way you can run a
24 respirator program, and it's like helmet programs.
25 We had the same problems there.

1 You know, you go visit a guy in the
2 hospital in some place, he's got a crushed skull,
3 and he's got a perfectly good helmet and, of
4 course, it wasn't on his head, and when the rock
5 hit his helmet, it didn't hurt anybody, which was
6 on the ground, of course, not on his head.

7 So we did some of that. That was
8 largely the safety people, and the safety people
9 got -- their system corporately grew like the
10 industrial hygiene and medical system grew, and we
11 went together frequently in looking at the safety
12 and health aspect of something because it's
13 awfully difficult to separate.

14 Are you doing something here that's
15 making a person be exposed too much? The safety
16 guys, some of their guys could do a lot better job
17 than our hygiens could do in connection with what
18 they did and, therefore, where they interfaced
19 with an individual compound that was hazardous.

20 Q. If I could get you, Mr. Garrett, to do
21 it for me as best you can, if we can kind of go
22 back in time to the mid 1950s after you came to
23 St. Louis and were in the corporate program.

24 What would be the typical thing that
25 you could tell us that you would be telling

1 workers working with asbestos about TLVs and
2 wearing respirators and --

3 A. Respirators, respirators, respirators.
4 Helmets with respirators because the helmet rule
5 Monsanto is absolutely universal and we could
6 enforce that.

7 We could enforce the respirator rule.
8 We also could scare them a bit because it's a
9 scary material. And we lectured. I lectured them
10 on lots of things, including asbestos. I lectured
11 the East St. Louis plant periodically about that
12 and about amine compounds.

13 Q. Can you give us just your best
14 recollection of what you would say about asbestos
15 in the '50s?

16 A. Tell them it's a hazardous material
17 only if you inhale it. "If you inhale it, it
18 becomes a very hazardous material and you will
19 maybe regret it down your life span. It will
20 certainly shorten it if you inhale enough of it.

21 "So the respirator is given to you for
22 that purpose. Wear the damn thing," and it was
23 essentially that, but the safety people in the
24 plants did a good deal better job than I did.

25 They had records and they had -- I

1 don't know where they got some of the films they
2 had, but they had some films that -- Dr. Kelly
3 wouldn't have allowed us to use films showing
4 people that were dying of asbestosis, but some of
5 the plants could get them, and I think I did a
6 pretty good job, you know.

7 We had -- we had asbestos, to my
8 knowledge, in every plant in Monsanto. I watched
9 a bunch of people redoing some valves in our main
10 office, and that was the worst looking mess I ever
11 saw, and we stopped that.

12 We got the contractor in and he either
13 changed his manner or out he went. We'd get
14 another contractor. So I don't know. I've never
15 -- we talked it. It was one of the talking
16 problems.

17 If you were handling problems where
18 you were in the racks changing insulation all the
19 time and we had insulators that were by -- in some
20 of the unions they were individuals that were
21 classified as insulators.

22 In our case in one of the -- I don't
23 know who -- I don't know what union is what in
24 these cases, but we had one called asbestos
25 workers, and then one of them were called

1 insulators, and in the insulator system they used
2 asbestos insulation.

3 We used preform a lot. Later as we
4 came down the tube, we began to use preform
5 because it created less problem of smearing and
6 mudding joints and so forth.

7 And so as far as I know, our plant
8 safety and health people did a first class job of
9 raising cane about asbestos. So did we. It's one
10 of the routine raised cane things.

11 It's like cyanide and Monsanto made
12 enough cyanide or used cyanide. So, yes, we did
13 it.

14 Q. So when you said earlier, respirators,
15 respirators, respirators, how did you mean that?

16 A. Anybody that in any way installed or
17 took out any asbestos for any reason, however
18 small, wore a respirator. They were issued a
19 respirator and they wore it, and they changed it
20 each day.

21 They turned it in even if they did not
22 use it and it was recartridged if that was on a
23 project where they were insulating.

24 Q. Would that be true whether they were
25 called insulators or asbestos workers or anybody

1 else?

2 A. Yes, because in the plant you're
3 looking at a process unit here that's
4 manufacturing aniline compounds.

5 If the insulators are in there
6 insulating, the process people have got to -- that
7 are running the process, have got to have
8 respirators too, and they're issued them and
9 they're issued them from our safety supply people,
10 and that's the way we keep records, the way we've
11 always kept records.

12 Q. How far back in time can you tell us
13 that that was done at Monsanto this way, the
14 wearing the respirators?

15 A. No, I can't. I can tell you that in
16 the last fifteen or twenty years they've been
17 doing it. What happened prior to that, I do not
18 know.

19 All I know is they had them, and in
20 most of the plants where I was at, the respirators
21 were issued so they had a record of it.

22 Q. At Texas City when you were there in
23 the '53-54 time period, was it your experience
24 that asbestos was handled as you've described in
25 Texax City?

1 A. When the two Americans came into my
2 pilot plant to take loose the asbestos, when we
3 checked it, you had to have two insulators come
4 in. I had two electricians disconnect this and
5 pipefitters and so forth.

6 The insulators came in, took off the
7 insulation, they both had respirators. As a
8 matter of fact, one of them told me to go get lost
9 while they took it off.

10 Q. Because you didn't have a respirator
11 to wear?

12 A. Because I didn't have a respirator
13 there, so I got lost.

14 Q. Now, the insulators that were at Texas
15 City that you've described, they were given the
16 clothing and they showered?

17 A. As near as I can tell you, yes, and
18 when it happened -- started and when all of the
19 issues came afoot, I do not know, but they were
20 when I was there, they wore respirators.

21 They came out with their respirators.
22 They came out with gloves and aprons and took
23 my -- the insulation off my pot.

24 Q. Was there a way that you had at the
25 corporate offices in Monsanto in the '50s of

1 keeping track with your monitoring data that you
2 collected?

3 A. We always -- and I don't know. If I
4 did it today, I think I'd do it the same way. We
5 did it by plants and overlaid the plants by
6 product.

7 For example, we made the same product
8 in three plants. We took plants that you would be
9 interested in if you're talking about aniline or
10 chloroanilines or this plant, this plant and this
11 plant, and you go and check their records
12 individually or go to the plants, we frequently
13 did, and looked at their records in their safety
14 department, and frequently the doctor would come
15 along and go to the physician if he was assigned.

16 If he was one of our physicians, which
17 in the bigger plants like Springfield, we had a
18 physician. I'd go talk to the physician and take
19 the poop back to Dr. Kelly or Dr. Johnson or one
20 of the other doctors.

21 Q. You say Springfield was one of the
22 bigger plants?

23 A. Springfield had a physician all the
24 time for the while I was there, and I didn't
25 realize that until the Springfield plant manager

1 introduced me to him.

2 I will have to say he had the most
3 hidden place I ever saw. His dispensary was
4 excellent but it was underground. I don't know.
5 I don't know why. Don't ask me. Go ask the plant
6 manager why.

7 Q. Springfield's located in -- the
8 Springfield plant?

9 A. Springfield, Mass.

10 Q. Springfield, Massachusetts?

11 A. Primarily a polymer plant.

12 Q. I've seen some records that seem to
13 indicate that asbestos was used in making products
14 in Springfield. Are you familiar with that?

15 A. Yes, because we used -- not only that,
16 we used wood meal, if you know what wood meal is.

17 Q. I'm afraid I don't.

18 A. You grind wood up until it's like
19 flower, a wood flower, and what it was used for
20 was the early manufacture of plexi- -- not
21 plexiglass. Oh, the damned -- oh, the most common
22 of all the early --

23 MR. GAUDET: Phenolics.

24 THE WITNESS: What?

25 MR. GAUDET: Phenolics.

1 Q. Plastics?

2 A. Yes.

3 Q. Phenolic resins?

4 A. Yes. And the stuff was used as a
5 reinforcer in phenolics. This, by the way, was
6 made for telephones. We had problems with --
7 terrible problem with that powdered stuff.

8 We had a man fell in that thing one
9 time, working, maintenance man, and they had to
10 empty that whole damn thing out to get him out of
11 there, and he was dead. He died. He suffocated.

12 And we did some safety rack work up
13 there. Ground wood. And I mean it's called wood
14 fiber. It looks like fiber, and the asbestos is
15 also used in that same process for different kinds
16 of plastic.

17 And in the phenolics, what you use as
18 you're reinforcing material is frequently based on
19 what the phenolic is going to be used for, and
20 there's eight million recipes.

21 So sitting outside of the phenolic
22 resin unit at Springfield used to be several large
23 -- these forty feet high tubes filled with the
24 stuff they use to make various types of resin.

25 Now, Monsanto got out of that business

1 a lot and people made their own stuff. We sold in
2 phenolics. We got out of the phenolic business,
3 too, but we sell them plastic monitors and they
4 can make it in -- our technical research people
5 helped them set up.

6 We set up people in business like
7 everybody does. I'm sorry, but let's be honest
8 with ourselves. Gasoline companies set up service
9 stations for people.

10 So the -- yes, we used asbestos there
11 in chop form in the tower and the asbestos workers
12 and the aniline wood workers, both, were required
13 to wear respirators. The guy had a respirator on,
14 by the way, that was in the tower when we dropped
15 him out.

16 Q. The use of asbestos at the
17 Springfield, Massachusetts, plant, is that
18 something that you yourself monitored?

19 A. Yes, I did. I took samples up there
20 on that -- that whole system where they went back
21 through and I'll bet -- we did it until they quit
22 making phenolics there, which was years ago, by
23 the way.

24 Q. Yes, sir.

25 A. I was in a place that made -- one of

1 our customers made equipment to cremate people,
2 and they used a lot of plastic there, too, but
3 that's beside the point. That had nothing to do
4 with this.

5 Q. Have you learned that any of the
6 people at the Springfield, Massachusetts, plant
7 that worked with asbestos have come down with
8 asbestos-related disease?

9 A. I've learned that there -- I have not
10 learned that any have. Now, the best -- you best
11 ask Dr. Kelly that now, but to those -- in those
12 days I never heard of one, but when I first went
13 to Springfield, they had very strong rules and
14 regulations connected with their -- with that
15 operation, and that was before there was really a
16 big organized central health and safety group.

17 Q. That would have been in the mid '50s?

18 A. Yeah.

19 Q. At the Springfield plant that you
20 visited, Mr. Garrett, in the mid '50s, do you
21 recall if there were any other kinds of control
22 techniques being used besides just wearing
23 respirators for asbestos?

24 A. No, they were taking samples.

25 Q. They were?

1 A. Yes. The crank samples, yeah. I
2 remember the hemocytometer we used to use to
3 count. You remember?

4 Q. Yes, sir. Yes, sir.

5 A. Pain in the butt.

6 Q. Were there ventilation systems being
7 used at Springfield?

8 A. Yes. We had -- as you probably know,
9 Monsanto owned half interest in a plant next to
10 the Monsanto plant there.

11 That was half owned by a company -- a
12 big power company in Canada, and that plant, we
13 did work and dealt with the parent company in
14 Toronto, I believe, or Montreal, I guess it was,
15 with the other -- because they were a partner in
16 it. Little bit more -- you'll remember it because
17 it had to be done with the other partner.

18 That is -- and I guess each -- both
19 owned half, and the agreement was that they were
20 power plant operators up in Canada. They owned
21 much of the power out of the falls, and the
22 government bought that out and we had a deal in
23 the contract that if the government bought it out,
24 we could buy out their part of that plant, and we
25 did, and it became part of the Springfield plant.

1 And they had -- they made resin
2 materials there more than just raw material. They
3 actually made certain kinds of resins and a great
4 many specialty resins in that plant.

5 And we -- and we -- they were just
6 like they -- the Monsanto plant, regardless of who
7 owned them.

8 Q. And they were using asbestos as part
9 of the specialty's formulations, too?

10 A. They -- as near as I know. We checked
11 it. I did sampling in that plant at the request
12 of the plant manager. Did much sampling, and we
13 used the old cytometer to count the squares.

14 Q. Can you recall what you generally
15 found? I know the numbers would not come to mind,
16 but did you generally find that exposures were
17 below the threshold limit values, above, near?

18 A. We found -- I tell you the truth, I
19 don't think I ever saw with that method a sample
20 that exceeded the TLV.

21 Now, the TLV shrank during the years
22 as you know, and people began to dodge the use of
23 asbestos in some respects and probably rightly so.

24 I don't argue the asbestos
25 manufacturers here because I'm saying that it's

1 better for them as well as everybody else. If you
2 don't need it, don't use it, and I think probably
3 in the 1950s that began to become the issue, and
4 we didn't -- we -- I don't know that we did any
5 great changes, but wherever we didn't need it, we
6 didn't.

7 We stopped using it in a couple of
8 operations at the East St. Louis plant, but they
9 finally went out of business anyway. So...

10 MR. OLIVER: Objection.

11 Q. So basically that's the application of
12 one of the industrial hygiene principles of
13 substitution?

14 A. Absolutely. Eradication is a very
15 good one, too, if you can get to it. No, it's
16 senseless. I think we probably -- I think the
17 chemical industry by and large has solved more
18 problems by removal and change than any other
19 single issue.

20 "Don't use the damn stuff."

21 "Well, how we going to do it?"

22 "Well, you got research people, tell
23 them to find out how," and oddly enough in very
24 many cases they could find out. There are other
25 materials.

1 We use chopped rag in some of the damn
2 things. In those specialty resins they made in
3 that old plant, the one that we finally bought the
4 other half of when the government of Canada took
5 over the power plants up there, that plant used I
6 don't know what -- God, they used everything from
7 old Maggy's drawers off -- as additives for
8 various small batch operations, and they were very
9 clean and very neat about it, but they -- you ask
10 when are you going to make some kind of fender on
11 some automobile that General Motor's wanted, and
12 this is what they wanted. So who am I to argue
13 with them.

14 Those specialty plants probably were
15 the best knowledgeable plants that we had in
16 connection with respirable dust of any kind, and
17 that plant did a very good job of I think probably
18 -- if you want to know the truth, in Texas I could
19 get most dust sample out over there by the beach
20 than I could anywhere else, but in the plants that
21 we tested dust in -- I tested some for the State
22 of Texas one time, and we were in a dust storm and
23 I said, "You got to be kidding. We ain't going to
24 get anything but dust. What do you want? You're
25 not going to find out anything with the state

1 guy," so we quit, but out in west Texas on the
2 spray berry (sic) trend.

3 No, I think we did -- I think we
4 probably are lucky for two reasons. One, when I
5 came to Monsanto, the knowledge of asbestos was
6 pretty considerable. They had the respirators.

7 To me they should have used
8 respirators in doing other things, too, but they
9 didn't, but the asbestos man come by, he always
10 had a respirator. But some of the other people
11 did not who needed them, too. Not with the same
12 filter. I don't mean that.

13 And that's what we did in the years I
14 was there. We got it to the point where a person
15 was exposed to something, he was either protected
16 or we changed the process.

17 Q. I thought I heard you say something
18 earlier, and tell me if I'm wrong, but that
19 because a TLV was set at a certain level, that,
20 what I think I heard you say, is that that wasn't
21 what you maintained exposures at, if you could get
22 lower, you would.

23 A. We tried the 50 percent. I think a
24 lot of people did that. I think you'll find a lot
25 of practicing industrial hygienists that -- where

1 you could do it.

2 Now, we also had tied up some -- we
3 fenced them off and tied them up so you
4 couldn't -- you couldn't get to them. People
5 couldn't get to them.

6 You could do that today a good deal
7 better than you could with better instruments
8 today. You could get electronic switching gear
9 that will open and close valves better than a man
10 can.

11 That wasn't true in the old days, and
12 so we -- where you could do that, we do it. And I
13 think our safety design people have come a long
14 way in the years.

15 I -- well, hell, we didn't even have
16 any when I first came up to St. Louis, but we do
17 now and we've got a very first class group and I
18 think they do a good job.

19 Q. What would be the rationale that you
20 were using in trying to look at 50 percent of the
21 threshold limit values?

22 A. Well, we would -- it just gave you --
23 all it did was gave them a way to look at their
24 counter thing and say "That's within our standard.
25 It's 50 percent of the TLV," if they wanted to use

1 that.

2 Personally I'd just as soon it be
3 zero, but there's never -- I never saw a zero, so
4 I don't know what anybody's talking about when
5 they say there was no exposure to anything, if
6 it's in the county.

7 And in the chemical plants along the
8 Texas area, you can find anything you want to in
9 the area. I mean, hell, if you have got a good
10 enough sampler or good enough method, you can
11 practically find anything in very, very minute
12 amounts.

13 Q. Was it your philosophy then, Mr.
14 Garrett, what I think I'm hearing you say, is that
15 any exposure that wasn't absolutely necessary, you
16 ought to just not have?

17 A. Absolutely, and/or if there were -- if
18 the hazard was sufficient to justify the
19 manufacturer, then the hazard was sufficient to
20 justify the construction of facilities where less
21 and less exposure could be possible in -- at
22 enclosed operations.

23 When I -- you know, these old four
24 unit chemical manufacturing houses where you've
25 got one unit on each corner of a processing

1 operation where you walk in, everybody's got them.

2 First thing we did was we stripped the
3 concrete down and, boy, you talk about having a
4 hissy, and the hissy was because they'd get cold
5 or get rained on, but why put an envelope over
6 that damn thing to encourage that?

7 If you have an accident and a leak,
8 get the damn building down, so we took more
9 buildings down than you can shake a stick at and
10 caught hell from the plant manager because "It's
11 going to get cold and we're going to have to
12 insulate better and we're going to have to do this
13 and that."

14 But we took a lot of buildings down,
15 and particularly in the old organic processing
16 plants.

17 Q. That was to minimize exposures?

18 A. Well, where you had an accident.
19 Hell, we blew a valve every once in a while, so
20 did everybody else that I know of, and the process
21 to follow that up is one hell of a mess inside.

22 I'll tell you what I saw one time was
23 one where there was a darn flammable leak inside
24 of one of those four unit buildings, and they
25 handled -- well, but the point is if something

1 would have happened and ignited that, it would
2 have blown those other three processes to pieces,
3 too, and my God only knows what's in those
4 processes.

5 So we got them in that plant -- that
6 process got the plant to remove most of the brick
7 and the concrete and support it with steel, and
8 most of them, if you find today in a multipurpose,
9 multiprocess unit operation, petroleum or
10 chemical, you won't find any buildings.

11 Buildings is where the foreman's
12 office is, and where their damn coffee machine is
13 and where their card punching machine is, and
14 where most of the bitching goes on, but the fact
15 is the processes are sitting out in the open in
16 open racks, which is a -- the greatest thing that
17 ever happened in the chemical industry and the
18 petroleum industry.

19 Q. Would you recall, Mr. Garrett, if
20 Monsanto's plants in the '50s when insulating work
21 was going on, if it required the removal of old
22 insulation, if that was done wet or not?

23 A. I saw a whole system being done down
24 at our Chocolate Bayou plant and it was wetted
25 down, but -- as a matter of fact, they had the

1 sprinklers on it. Guy worked in water all over
2 the place.

3 You, in a way, you got me in a trap.
4 I don't know whether I agree with that or not, and
5 I'll tell you the reason. Unless that water is
6 trapped and carefully gotten rid of, you could
7 spread that damn asbestos from here to hell and
8 back and, when it dries, everybody is going to get
9 asbestos.

10 If you take care of it properly, fine,
11 but that means where does that water go? How are
12 you going to trap it when you're messing around
13 with a rack in the middle of the plant?

14 Have you got a ditch dug over here
15 where you're going to trap it? So you can take
16 that stuff out so it doesn't dry on the ground and
17 every truck and every man that walks by it helps
18 generate dust.

19 We had a hell of a mess over that
20 thing. They finally decided that you couldn't do
21 that. So they dry removed it. The last part of
22 that same process at Chocolate Bayou was dry
23 removed.

24 Yeah, you have respirators on, but the
25 majority of it was dry removed. The rest of it

1 was sprayed down and into the gutters, but the
2 point is parts of the racks go over areas that are
3 not well drained. That was my point.

4 MR. OLIVER: Objection, nonresponsive
5 again.

6 MR. BROWN: To that last one?

7 MR. OLIVER: Yes, to the entire
8 response of that last portion as well.

9 A. Goody for his side. I realize I'm
10 giving you a lesson in industrial hygiene that
11 maybe you don't need.

12 Q. No, sir.

13 A. That's my only way to answer the
14 questions.

15 Q. That's exactly what I would hope that
16 you would do. Along that line, you're a certified
17 industrial hygienist, Mr. Garrett?

18 A. Yes.

19 Q. And I would think you consider
20 yourself to be a professional in that area?

21 A. Yeah, I do.

22 Q. And are so recognized by your peers?

23 A. I'm too blunt, but I am not a very
24 good consultant.

25 Q. Well, perhaps that's what makes you a

1 good consultant.

2 A. Well, I told them first it was lousy
3 and they didn't like it. I don't know any other
4 way to tell them it.

5 MR. FOGARTY: Objection.

6 Q. Mr. Garrett, I've got about 12
7 o'clock. Do you want to stop for lunch? Give me
8 a chance to get reorganized again here and see if
9 we can get --

10 A. This time let's take off all the
11 hardware so we don't pull the equipment apart.

12 (Deposition stood in luncheon recess
13 at approximately 12:00 p.m. and resumed at
14 approximately 1:37 p.m.)

15 AFTERNOON SESSION

16 All parties present, by and through
17 counsel and the witness, JACK T. GARRETT, having
18 been previously sworn testifies further, to wit:

19 MS. FLATT: We're on record.

20 (Edward Carstarphen not present at
21 this time.)

22 CONTINUED DIRECT EXAMINATION

23 BY MR. HOBSON:

24 Q. Mr. Garrett, during the luncheon
25 break, I noticed something -- and perhaps we made

1 a mistake this morning. I was looking at your
2 resume, and I'd asked you earlier about when you
3 first went to work at Texas City and you looked on
4 here and you told me October '53, and when I was
5 looking back through your resume, I noticed here,
6 where you had October '53, that's the date that
7 you left Texas City and it shows you starting at
8 Texas City in January 1950 and I wonder if
9 about --

10 A. January '50 is the right date. I'm
11 sorry.

12 Q. That's okay. I might have rushed you
13 through that?

14 A. I must have got the wrong. You know,
15 I saw October of 1953. That's when I went to work
16 in '50. I graduated the University of Tennessee
17 in 1950.

18 Q. And so then it would have been in 1953
19 that you moved to St. Louis?

20 A. To St. Louis, yes.

21 Q. While you were down in Texas City, I
22 wanted to ask you if you might remember any names
23 from that facility. Would you recall a Mr.
24 William F. Woolley, W-o-o-l-l-e-y?

25 A. Name sounds familiar. Woolley. I

1 can't place him.

2 Q. Would you recall a Dorothy Wilson?

3 A. Yes.

4 Q. And how would you have known Dorothy
5 Wilson, sir?

6 A. Oh, the name is familiar. I don't
7 know. I can't place the place. Dorothy Wilson.

8 Q. Were there occupational nurses at the
9 plant?

10 A. She was a nurse. Yes, bless her
11 heart. She was a -- she lanced a couple of dandy
12 boils I had. She was a nurse, uh-huh. I couldn't
13 argue.

14 My wife is the nurse from St. -- from
15 Monsanto -- from here, so I better keep quiet.
16 That Dorothy was -- Dorothy was the nurse, uh-huh.

17 Q. Would you recall a -- it's either
18 Marietta or Marita Pawlik, P-a-w-l-i-k, Pawlik,
19 Powlik?

20 A. No, no, can't recall that.

21 Q. And how about a Douglas Pierce,
22 P-i-e-r-c-e?

23 A. Nope, not readily.

24 Q. Claude Hamilton?

25 A. Hamilton?

1 Q. Yes, sir.

2 A. Boy, that don't tick a big bell, but
3 it rings a bell. What was his --

4 Q. That's all I know about the gentleman,
5 sir.

6 A. How about a Mr. B.D. DeWalt, D-e
7 capital W-a-l-t?

8 A. DeWalt. He was an engineer in the
9 plant, I think.

10 Q. Would you recall any of his
11 activities, any of his duties?

12 A. No, not specifically.

13 Q. What was the safety engineer or safety
14 person's name?

15 A. Mooney --

16 Q. Mooney?

17 A. -- Stalling.

18 Q. Stalling?

19 A. Stallings.

20 Q. Stallings.

21 A. I think it's the plural name, but it
22 doesn't make any difference. It's Stallings or
23 Stalling. S-t-a-l-l-i-n-g, I believe is his name.

24 Q. Do you remember attending the Gulf
25 Coast Regional Conference on industrial health in

1 Houston when you first joined the company?

2 A. I've been to so darn many of them. I
3 think I remember that name of that outfit. I
4 think I gave a paper at one of their meetings, but
5 I don't know where it was. It was a discussion of
6 the toxicology of fish to various kinds of
7 cyanides.

8 Q. Would you recall a Florence Andrews?

9 A. What?

10 Q. Florence Andrews.

11 A. Florence Andrews. No.

12 Q. How about a Mr. Fred L. James,
13 J-a-m-e-s?

14 A. Not good there either.

15 Q. In your work for Monsanto, Mr.
16 Garrett, did you ever have any interface with the
17 ASA, the American Standards Association, later
18 became ANSI, the American National Standards
19 Institute?

20 A. No. I had -- I think we had some
21 dealings with them over a standard connected with
22 tank streaks one time, but I don't remember what
23 it was about.

24 Q. Are you familiar with what ASA
25 standards were?

1 A. Yeah, some of them, I am. We used
2 them as everybody does, I guess.

3 Q. Would you give me your best
4 understanding of how ASA standards were in use in
5 the 1950s?

6 A. They set down standards along with
7 many other standard setting organizations for
8 many, many things that ultimately became safety
9 related but weren't necessarily safety related
10 initially, and that's the strength of materials,
11 bursting strength of equipment, that sort of
12 thing.

13 And I think they set down standards --
14 for example, they would set down an example of how
15 bursting strength of a large tank or the bursting
16 strength of a milk bottle for that matter because
17 both of them can be hazardous, and that has been
18 my -- most standards are ASA standards of one kind
19 or another. A lot of construction standards.

20 Q. Would it be accurate to say that these
21 ASA standards were the standards of good practice
22 for industry at the time?

23 A. Partly, but because industry had many
24 agencies establishing standards. I think they're
25 better now than they used to be. I think there

1 were more people out setting standards in the old
2 days than they were -- the petroleum people set
3 standards for petroleum products and the chemical
4 people for chemical products and I don't know how
5 many -- how -- you mess around with railroad
6 equipment and you find out the railroads set their
7 own standards, if you want to know the truth about
8 the matter.

9 And they had their set of reasons for
10 it. I'm not -- really I'm not trying to in any
11 way derogate them. I'm just saying that there are
12 so many different standard organizations that you
13 meet in construction or in transportation.

14 Look at the standards established for
15 aircraft, for example, for passenger carrying
16 aircraft. The same is true for railroads. I wish
17 somebody'd enforced them, but that's beside -- I
18 chased too many wrecks, I guess.

19 Q. In the case of ASA standards, would
20 those standards be something that Monsanto would
21 have been looking to and relying upon in their
22 work?

23 A. For construction materials probably,
24 but I don't think they'd look forward to ASA to
25 set any kind of health standards. I think there

1 are too many much better equipped and better
2 educated agencies to set those, including some
3 federal and state agencies.

4 Q. Well, for instance, are you familiar
5 with ANSI --

6 A. Yes.

7 Q. -- or ASA standards for respiratory
8 protection?

9 A. Yes, I am now.

10 Q. Was that one of the safety or --

11 A. One of the -- yes, and one of the ones
12 that established the pressure cushions on masks
13 and so forth. Yes, I agree. No. We used the
14 word ANSI. I don't know.

15 Q. Is the ANSI --

16 A. American National Standards.

17 Q. Is the ANSI standard for respiratory
18 protection one that you felt was not a good one
19 for ANSI because it was health related?

20 A. No, not necessarily. No, not
21 necessarily. I -- to tell you the truth, the
22 standard setting associ- -- people that I knew
23 that we did most of the early work with for
24 standards in handling products probably came from
25 manufacturers or from the MCA, the then MCA, now

1 CMA, and the American Petroleum Institute group.

2 I worked with them, too. I was a
3 member of one of their committees, one of their
4 medical committees.

5 I would be more inclined -- now, for
6 strength of materials and stuff like that, the
7 standards established by the health agencies
8 probably took into account any standards that were
9 otherwise required.

10 We used, probably more than anything
11 else, used the TLV list. We put many things on
12 the TLV list, did the work and established them
13 there.

14 And we put some in the CMA's guide
15 books and we put some -- we did some of the work
16 that ultimately led to standards from the
17 Petroleum -- American Petroleum Institute.

18 And their -- they also put out daily
19 sheets. And this is many years ago. They put out
20 daily sheets, chemical safety data sheet, that's
21 what you call them, was put out by the
22 Manufacturing Chemists Association.

23 The API put out a whole series of data
24 sheets on things that were largely petroleum
25 related.

1 The drug people put some out as well.
2 These were raw material drugs. These were not --
3 because they had to put out very detailed ones for
4 approval on drugs that were being used by people.

5 So the agencies involved that we were
6 most involved with, that I've been most involved
7 with, were probably the TLV committee of the
8 MCA -- I mean of the American Industrial Hygiene
9 Association, the MCA committee work that backed up
10 a lot of the chemicals.

11 We established the data for some
12 chemicals that went to the MCA and from the MCA
13 went to -- went to -- ultimately set the standard
14 in the -- for PCBs, for example, and for some of
15 the nitro and amine compounds.

16 So the agencies I'm most frequently --
17 most familiar with were probably the government
18 agencies, and they took their numbers from most of
19 these committees or agencies established by
20 individual manufacturing groups, like the MCA and
21 the API, and there are a lot of others that do
22 these drug people.

23 So that's where most frequently I
24 think most of the standards that are currently
25 used probably came out of a composite of these

1 agencies.

2 Q. Did any of your work, whether it was
3 with these agencies or these organizations that
4 you mentioned about or through Monsanto, did they
5 bring you in contact with any of the insulation
6 manufacturers or their employees?

7 A. Probably, but the trouble is that the
8 particular committee was established for
9 specific -- the specific business and the -- any
10 insulation manufacturers would have been ancillary
11 to the primary business of chemicals or petroleum
12 products.

13 But in any case, their standards were
14 always put forth to the -- to the TLV committee of
15 the American Industrial Hygiene Association.

16 Q. Do you recall meeting any of the
17 employees from the insulation manufacturers?

18 A. Oh, I knew -- I knew a guy who was a
19 member of the American Industrial Hygiene
20 Association, friend of mine, that worked for, oh,
21 the big -- big asbestos manufacturer on the west
22 coast. Well, the one that got sued to death.

23 Q. Well, there have been several.

24 A. I'm sure they were.

25 Q. Fibreboard?

1 A. No.

2 Q. Johns-Manville?

3 A. Johns-Manville. I knew those people,
4 two of their people.

5 Q. Do you recall their names?

6 A. Good Heaven's, no. My recall of
7 incidents is fine. My recall of names is zero.

8 Q. Can you tell me under what
9 circumstances you remember meeting those folks?

10 A. Well, I met them in a meeting
11 somewhere. I think it was -- I think it was
12 probably a AIT meeting on standards somewhere. I
13 don't recall where it was. Probably one of the
14 national meetings.

15 {Some gentleman came in and it was not
16 Zucker.}

17 Q. You've been talking about several
18 organizations and I wanted to try to make sure
19 we're talking about the right one, the same one
20 together.

21 TLVs are levels --

22 A. Threshold limit values.

23 Q. Yes, sir. Those are set by the
24 American Conference of Governmental Industrial
25 Hygienists.

1 A. Governmental Industrial Hygienists,
2 yes.

3 Q. The ACGIH.

4 A. With most of the input from AIHA and
5 their -- and the people that manufactured that
6 material. I've been involved in that many times.

7 Q. Now, when you say you were involved in
8 committees that had to do with TLVs, then the
9 committees you worked with were in the American
10 Industrial Hygiene Association?

11 A. The IHA, that's right.

12 Q. Not the American Conference
13 Governmental Industrial --

14 A. No, but we dealt with them because
15 they were the regulators and we gave them the
16 data. We dug up half the data. They come to us
17 and ask us for data on this and that or something
18 else, particularly some of the oddballs.

19 The AIHA published a little series of
20 booklets or data sheets of their own, and we set
21 the standards for the PCBs and some of the others,
22 gave them the data we had, which was extensive,
23 particularly in our manufacturing data, and -- so
24 we've dealt with all of them, and it turned out to
25 be the standard that was established on the TLV

1 list.

2 Q. You did say earlier I think that
3 you -- I think Monsanto put things on the TLV
4 list, is that right?

5 A. We put -- we were asked frequently
6 where we had -- we were one of the manufacturers
7 of chemical products -- to help develop TLVs with
8 the -- with the TLV committee of the AIHA which
9 dealt with the committee of the association.

10 We said -- we did this on products
11 that we were primary manufacturer of or one of the
12 primary. We did the PCB work because we were the
13 only one that made the PCBs.

14 And incidently, our standards were
15 accepted by the French and Britain -- German
16 manufacturers of it, too, because we had enormous,
17 enormous amounts of information on the data on the
18 exposure to those materials in our own
19 manufacturing operations, and we manufactured them
20 at four different sites.

21 But anyway, we did some of the
22 others. We were asked on -- particularly when
23 they got to setting some of the standards on
24 anilines and the chloroanilines, the
25 nitroanilines, Monsanto's a primary manufacturer

1 of aniline materials or was. I don't know that
2 they still are or not, and we did a lot of work on
3 that because those things are dangerous son of a
4 bucks.

5 MR. FOGARTY: Objection,
6 nonresponsive.

7 A. The chloroanilines were probably the
8 most dangerous material I ever saw manufactured.

9 Q. In that list of materials that you
10 just told me about that involved setting TLVs, is
11 there any one or one group of those that you had
12 particular responsibility for more than any
13 others?

14 A. The PCBs we did. Elmer P. Wheeler and
15 I did the PCBs and wrote the backing for it. You
16 have to write a backing sheet or a backing report
17 detailing where your data came from, how much data
18 you have, what your manufacturing facilities are,
19 where they are and so forth, what regulations you
20 feel are necessary to protect the health of the
21 people and what have you practiced in safe
22 handling, and that's what we did.

23 But in answering all those questions,
24 we frequently got a lot of questions about
25 materials that you were not the primary

1 manufacturer of but you manufactured it and had
2 some data, and we dumped the data into -- any time
3 they asked, we dumped the data for them.

4 One thing I loved about Monsanto, I
5 never got told not to by anybody any time
6 anywhere.

7 Q. Was it so that for PCBs -- which I
8 think you said you had direct responsibility for
9 doing.

10 A. I sure did.

11 Q. Did you at Monsanto come up with a TLV
12 number for PCBs then?

13 A. We came up with a recommendation as to
14 the least -- what we considered the least
15 hazardous level that we had seen in manufacturing
16 practice.

17 The unhappy part of it is we'd never
18 seen any hazard in manufacturing, and we told the
19 committee this, but we also gave them copies of
20 all of our detailed toxicological research work,
21 including long term tests.

22 Q. So you had some animal datas that were
23 sent?

24 A. Oh, yes, we had two year data on that.
25 So we turned it over to -- incidentally, we turned

1 it over to the -- to the OSHA, too.

2 Q. About how many people were involved in
3 manufacturing PCBs over the years?

4 A. Oh, God, five hundred. No, four
5 hundred probably. Wait a minute. One, two,
6 three -- we manufactured PCBs in Anniston,
7 Alabama, in East St. Louis, Illinois, and
8 originally at the plant in Missouri, the old home
9 plant, in small quantities there. The test
10 materials came out of there, but the manufacturing
11 levels were at East St. Louis and in Anniston,
12 Alabama.

13 The Anniston plant was shut down for
14 reasons -- if you saw it, you'd understand why.
15 We had no way of taking care of any waste there at
16 all. We had a hell of a time with it.

17 Now, somebody would build a
18 phosphorous manufacturing plant out in the middle
19 of no place. We had a creek about this wide. We
20 finally ended up owning it and putting tile in and
21 making it a sewer, which we tested, checked and
22 treated, and finally they give up.

23 So we moved. The only plant in the
24 latter years of the manufacturing of PCBs were
25 done in -- at East St. Louis, Illinois, and we had

1 a manufacturing plant in Europe, and I believe
2 that was in Belgium, but I'm not sure.

3 Q. I'm curious to know what kind of logic
4 you used in coming up with your recommendations
5 for TLV for PCBs. How did you do that?

6 A. Well, it was difficult to do. We
7 looked at the toxicology with long term studies
8 with rats and acute studies with several species,
9 rats, rabbits and guinea pigs; although we rarely
10 used guinea pigs. Rats, rabbits, and we had a
11 third -- a third specie. I can't even remember
12 what it was.

13 And we tested from these data -- by
14 the way, it's not very toxic, as you can easily
15 imagine. From these data we calculated based on
16 the most sensitive animal -- and the most
17 sensitive I believe was a rat -- what it would be
18 if we took one-tenth of that and if that -- we
19 felt that would be hazardous.

20 Based on our experience with our
21 maintenance people primarily, we figured that was
22 probably correct. So that's essentially how we
23 set it.

24 Q. In what kinds of programs do you
25 recall having to deal with the maintenance people

1 to observe what kind of medical problems they
2 might have experienced?

3 A. Well, we went through and sampled. We
4 sampled PCBs in those areas. And incidently, we
5 had a hell of a time doing it because we never
6 found very much.

7 The stuff, as you know, unless you're
8 -- it's very hot, is a syrupy material to start
9 with. It's diluted in using it in transformer
10 cases, for example.

11 It's not -- you say the electrical
12 people do this. They don't. They dilute it and
13 there's what's known as transformer fluids are
14 made, and these are mixtures of PCBs, different
15 numbers, different chlorinated types and bland
16 solvents, nonflammable if -- as much as possible
17 because PCBs were not flammable.

18 They were used in places where you
19 were -- it was well to take a little care because
20 they were used in tight places.

21 Q. I take it that in doing the animal
22 toxicology work, that these test animals would be
23 exposed to different doses of the material and
24 then you would look at the animals to see what
25 kind of biological effects were present?

1 A. That is correct. That's correct. The
2 reason we used multiple species is because we
3 wanted to know if there was anything -- we'd never
4 seen a case with our own people. We'd -- the only
5 manufacturer of PCBs and the work in the U.S. was
6 Monsanto.

7 And the only manufacturer in Europe, I
8 believe, was Rhone Poulenc and, oh, Leber Quesin,
9 a German company in Leber Quesin. Made in Leber
10 Quesin. What the hell was the name of the
11 company?

12 But anyway, make -- but we dealt with
13 them, too, by the way. The people from Germany
14 came over to talk to us, and we were over in
15 Europe, talked to them and talked also to -- they
16 had a toxicologist.

17 One of the great toxicologists of the
18 world was a German that worked for Bayer, and we
19 talked to them -- wasn't any sense in talking to
20 the French, as you probably already know, so we
21 talked to Germans.

22 They came over and talked to us,
23 looked at our data, and they felt that our
24 standard was pretty severe. They didn't think
25 anybody would ever exceed it, but they thought it

1 was pretty severe based on the data.

2 But that's the general sense of how it
3 happened.

4 Q. In doing these laboratory animal
5 studies, I take it that the exposure to the animal
6 would be monitored over their exposure time period
7 of years?

8 A. These lifetime studies, yes. There's
9 no -- no basis in acute studies going to help you
10 except it gives you an idea of when to start
11 running, and if you exceed X number of -- you'd
12 have a hell of a time getting that much PCB.

13 It would be like drinking too much
14 Karo syrup. It's very difficult, very --
15 doesn't -- it isn't very volatile.

16 But anyway, we tested it and we worked
17 with the toxicology laboratory. We did not do it
18 ourselves. We never did any of our own toxicology
19 work. We did it with contract labs.

20 Q. Were the animals exposed by having
21 them breathe it or by putting it on their skin?

22 A. We breathed. We both breathed. We
23 pasted it on their skin, the abdomen that had been
24 shaved using a standard transfer to see if it was
25 absorbed through the intact skin and inhale --

1 inhalation.

2 We did everything but duck them in it.
3 I didn't do it. We did it -- had it done by our
4 contract people, and we used the University of
5 Cincinnati a lot. We used two private labs that
6 -- out on the east coast a lot.

7 We had an acute place in St. Louis
8 that did acute work, pret nearly exclusively for
9 us and for Mallinckrodt and maybe a couple of
10 other people.

11 Q. Now, the workers who made PCBs that
12 were Monsanto employees, about what time period
13 would Monsanto have made PCBs?

14 A. From about 1935 to about 1985.

15 Q. And I take it that at least for some
16 of that, about fifty year time period, there would
17 have been no monitoring data to determine
18 exposures to the Monsanto --

19 A. Well, we didn't -- we did monitoring
20 but we didn't get anything, and we did -- we took
21 monitors on the people.

22 In the first place, the process was an
23 enclosed -- tight enclosed process and it required
24 very few people. Actually, the guy that ran it
25 sat in a control room with dials and adjusted the

1 temperatures and the pressures.

2 The only person that ever got any
3 exposure after we cooled it, shut it down,
4 depressurized it, was the people that did the
5 maintenance on it, and it was those people that we
6 tracked more often than anybody else.

7 We never found any problem. We
8 thought you might get a rash and irritation
9 because of the chlorinated contact, but we never
10 did that either, but we never got enough exposure
11 either, I don't suppose.

12 Q. And I take it that these employees
13 that would have been making the PCBs at Monsanto,
14 that included the maintenance workers as well as
15 the operations people?

16 A. If the maintenance workers at the
17 Krummrich plant was assigned by region -- but it
18 isn't fair because they might -- if this regional
19 maintenance group had too many pipefitters, they
20 went over here.

21 So you're talking -- if you went and
22 looked at the standard workers, including fitters
23 and insulators and the whole bunch would be --
24 could be transferred from group to group, but they
25 probably stayed within their own craft shell

1 because this was a -- this was a united chemical
2 workers plant, and they used individual recognized
3 crafts, which we could care less.

4 I don't, you know, an insulator's an
5 insulator whether he's working under what union
6 rules, and these people would frequently be
7 transferred from unit to unit and would be used
8 from this unit to this if this unit was down for
9 maintenance to help it bring it down and make sure
10 it's -- they don't dump all that stuff in the
11 creek because it would do a creek no good.

12 It would separate and you'd have two
13 levels in the creek. The fish may like the top
14 level and they may not like the bottom level. In
15 any case, this is how we did it.

16 The people that worked on it were,
17 oddly enough -- the plant was pretty large, the
18 one at Kearny. The one at Anniston was smaller in
19 output. Pretty much the same.

20 The one at Krummrich was built after
21 the one in Anniston, so it had a few modern
22 conveniences, like flushing toilets maybe, but
23 otherwise the thing -- the people themselves had
24 very little exposure to anything.

25 We tested with standard organic fluid

1 testing materials and found -- I don't think we
2 ever found any or very little. It's not easy to
3 analyze these things, by the way. I'll give you
4 credit for that.

5 It's damn difficult to analyze for
6 very tightly chlorinated compounds. You got to
7 break them down somehow and knock that chlorine
8 out of there so you can test -- you can test a
9 sample for it. So it really is a pretty tough
10 analysis.

11 But as far as we were concerned, based
12 on what we saw in many, many thousand acute tox
13 tests and many, many hundreds of long term tox
14 tests, that's probably the most innocuous material
15 we ever tested.

16 I hate -- I know they'll holler PCBs.
17 Let them holler. They're going to burn this soil
18 out here in St. Louis, sure as God made green
19 apples. They better crank that little dude up
20 pretty high to be able to burn those chlorinated
21 hydrocarbons out of there, but if they want to,
22 fine, it's done because it couldn't possibly hurt
23 anybody.

24 Q. Now, is it your experience or can you
25 tell me, Mr. Garrett, is this how other TLVs have

1 been set historically?

2 A. In most TLV committees, and I've been
3 on a couple of them, you gather any information
4 you can from any kind of literature source, and if
5 you've got a lot of good buddies, you can get a
6 whole lot of them to look in some literature that
7 you don't normally have, particularly medical
8 literature that you don't maybe have access to,
9 particularly foreign medical journals which they
10 don't really have.

11 Most of their stuff is, if it's for
12 safety or health control reasons, it's in the
13 medical journals.

14 If you had somebody that could read
15 French and read French journals regularly
16 or -- we had a man in Europe that did the German
17 journals for us.

18 Get all this junk dumped into the
19 committee, all these pieces and bits of
20 information, and then get a detailed tox study,
21 which we did, detailed long term tox study,
22 lifetime term, and a whole mass of short terms in
23 various types of animals and all of this together,
24 it begins to look like probably it ought to be
25 thus and so, and then you begin haggling and

1 arguing about it, and a bunch of people that are
2 highly skilled and trained in this business -- and
3 these are not hygienists.

4 These are almost exclusively
5 toxicologists that do this, maybe a medical doctor
6 or two thrown in, and they come up with the
7 answer.

8 My personal opinion is they've done
9 one hell of a good job and, by the way, our TLVs
10 are copied by everybody in the world.

11 Q. And the TLVs that ultimately get
12 published by the American Conference of
13 Governmental Industrial Hygienists, those are put
14 forth as levels that it's believed that most
15 workers won't suffer ill effects, not all workers,
16 right?

17 MR. FOGARTY: Objection, leading.

18 A. Well, I don't know. I've never heard
19 of a TLV in no one, and we certainly would never
20 recommend and we recommend -- many -- any TLV that
21 is in the area that even causes a symptom,
22 whatever it is.

23 We don't want that to happen. You
24 don't have to have it happen today with modern
25 equipment.

1 You can't run a backyard chemical
2 plant anymore with a bunch of castoff kettles, and
3 believe me there were a lot of those when I first
4 come into this business. You can't do that.

5 These things are in triple out --
6 triple layered stainless steel containers with
7 everything running through multiple dials and
8 pressure guages, pressure drop guages,
9 concentration guages, and everything you can
10 measure.

11 It just doesn't make any sense to put
12 it out. If you can smell it, there's too much.
13 There's too much.

14 That was the old rule. That old rule
15 had a hell of a lot of sense to it. It had a hell
16 of a lot of sense to it.

17 Q. I'm sorry, I didn't understand. The
18 old rule being what?

19 A. The old rule, it used to be, the old
20 rule was if you can smell it it's too much. Hell,
21 you've heard that for God's sakes. Lord knows we
22 used it enough times in the old days.

23 That is not true. There is a lot of
24 stuff -- I mean that is probably as good as you
25 can get, but you're going to get below that if you

1 do these full tox studies, and we did them not
2 only once but we did them more than once in a
3 multitude of animals. We should have. We got
4 shalalied enough about it.

5 Q. So what you're saying is the old rule
6 was, if you can smell it, it's for sure too much,
7 and --

8 A. Or you could feel it, that's right.
9 That's the old rule and it served fairly well.
10 Not good enough by any stretch.

11 Q. And now as things have progressed, the
12 fact that you can't smell it is not good enough?

13 A. Well, the old rule worked for toxic
14 immediate effects, acute effects. It never would
15 work for the subtle effects of long term exposure,
16 no. And that's the reason we did the long term
17 tests.

18 If our own processes -- any time we
19 manufactured a new chemical that we were going to
20 market for whatever reason, we did the full tests
21 and it's strange there are some we withdrew.

22 We did not think they were -- we
23 thought they were too toxic in some kinds of
24 toxicity that might -- and we withdrew. They
25 weren't that happy a compromise of the materials

1 already on the market.

2 Q. Getting back for a second to TLVs.
3 The TLVs that were in effect in the 1950s and
4 1960s, it's pretty clearly stated, isn't it, that
5 those TLVs were intended to protect most of the
6 workers but not necessarily all the workers?

7 A. Well, I never heard it put that way.
8 I think -- I think in my company I'd have been
9 fired if I'd have used that term at all.

10 Q. How is that, sir?

11 A. Well, the old man wouldn't have it.
12 "You're going to protect all of my workers or you
13 aren't going to protect -- or you're going to
14 go -- we'll find somebody who can or we'll quit
15 making it," and that's the way we worked.

16 You'll find Kelly will tell you that
17 tomorrow, I think.

18 Q. Is that one of the reasons why you
19 weren't satisfied just to meet a TLV, that you
20 wanted 50 percent or even less?

21 A. Well, we didn't even -- that -- you
22 got to give yourself credit. Every safety
23 margin -- look at the number of materials that
24 you've seen through the years in your professional
25 experience that have suddenly become more toxic

1 because of some specific effect on some specific
2 organ that took years to develop, and by that time
3 you're too far into it to help some of them, so we
4 didn't want to do that.

5 We've always been pretty cautious.
6 We, by the way, have our own toxicology groups at
7 Monsanto that supervise all these studies. We do
8 some of the toxic -- the acutes ourselves.

9 We don't any more. We used to. We
10 do -- now, these professional toxicologists do the
11 supervisory work with the people that do the work.

12 Q. If I understood what you were saying
13 there, then because it's known that as more and
14 more work gets done, new effects are discovered,
15 and so the prudent thing to do, even though
16 there's a TLV, is to minimize the exposure as much
17 as you can --

18 A. Absolutely.

19 Q. -- because you never know when the new
20 effects are going to come out?

21 A. That is correct.

22 MR. FOGARTY: Objection, leading, also
23 mischaracterizing his testimony.

24 MR. BLANK: Do you have some problem
25 with leading an adverse witness? I mean is there

1 some wierd rules that you're working under that
2 make that a reasonable objection?

3 MR. FOGARTY: I don't think that this
4 witness is an adverse witness.

5 MR. BLANK: Oh, I forgot we sued
6 Monsanto. Excuse me. It must be a mistake.

7 THE WITNESS: Do you want me to go out
8 while you fight?

9 Q. No, sir. We're just trying to figure
10 out why these unnecessary interruptions seem to be
11 happening.

12 A. Can you possibly hold it off for a
13 minute so that we can have a -- a break to go to
14 the john?

15 Q. Absolutely, sir.

16 A. Okay. Please.

17 MR. OLIVER: I object to the last side
18 mark, too.

19 MR. HOBSON: Which one, the
20 "absolutely, sir"?

21 (Temporary recess was held.)

22 MS. FLATT: We're on record.

23 Q. Mr. Garrett, before our break we were
24 somewhat into a discussion on TLVs, I think. You
25 said that the concept of protecting most workers

1 was something that you didn't think would go over
2 well at Monsanto.

3 MR. FOGARTY: Object to the
4 mischaracterization of the testimony.

5 Q. Well, tell me if that's wrong then.

6 A. That was right. I don't think that if
7 it's possible to determine the end effect, no
8 effect level, that you don't do it.

9 Q. Okay. I'm not sure I understood what
10 you're saying. I don't want somebody else to say
11 I mischaracterized it, so explain to me what you
12 mean by that, please.

13 A. If you can determine the no effect
14 level of the material, whatever it takes, you
15 should do it. That's my opinion.

16 Q. Can you tell me, talking about
17 materials for which there are TLVs, are those no
18 effect levels?

19 A. Many of them are.

20 Q. How about asbestos?

21 A. I don't know. I have nothing to do
22 with setting that standard. It was already on the
23 books when I came around and we abided by it, so I
24 don't really know about that.

25 You might go back and check whoever

1 did it and find out what they did and how they did
2 it.

3 Q. So you just wouldn't know one way or
4 the other --

5 A. No.

6 Q. -- whether asbestos was a no effect
7 level or not?

8 A. It's been set so long and been
9 practiced so many years that I didn't -- we just
10 didn't argue it. We used it and that served us
11 well, as far as I can surmount.

12 Q. Now, you were talking about the use of
13 PCBs and how Monsanto being the only U.S.
14 manufacturer, that you were involved in putting
15 PCBs on a TLV list.

16 Did you feel that at Monsanto that
17 you, in fact, did establish a no effect level for
18 PCBs?

19 A. Based on the years we had manufactured
20 it and the yearly physical exams of the men that
21 worked it for years and years, we think we
22 established a no effect level, yes.

23 Q. And do you feel, Mr. Garrett, that
24 that's the manufacturer's responsibility to find a
25 no effect level if there is one?

1 A. That's an onion I'd just as soon not
2 bite into. I don't know how you mean by that. If
3 a manufacturer does not help establish the
4 standards of the materials that he's manufacturing
5 that are going to expose someone else, I think
6 they should help at least.

7 Q. And how would you advise today in your
8 consulting practice a manufacturer to help set
9 TLVs, find no effect levels?

10 A. Well, if there is enough literature in
11 the tox or medical or industrial hygiene
12 literature to establish -- to show specific finite
13 levels and their effect or no effect on workers,
14 then it should be looked up, and it should be used
15 in a judgment that goes behind all standards.

16 We've judged wrong in some standards.
17 Everybody has. I think you'll find that looking
18 at the records.

19 Then I think whoever manufactured has
20 the responsibility of taking these data and
21 filling in the gaps with his own data and coming
22 up with a summary that says thus and so is the
23 case and that it is, as near as we can determine,
24 a no effect level or whatever you want to
25 determine.

1 Q. And if there are gaps to be filled and
2 the data doesn't exist should the manufacturer
3 attempted to test to fill those gaps?

4 A. Yes, I think so.

5 Q. Are there situations, Mr. Garrett,
6 where it's just not possible to find a no effect
7 level for chemicals or for materials?

8 A. I guess you could say that a material
9 that is inherently a corrosive is probably going
10 to subcutaneously effect the skin of a human being
11 in some ways.

12 Now, your point is well made in that
13 you're talking about where is the end of this
14 affair going to -- where is it going to end up.
15 There are ways of testing the very, very minute
16 effects of corrosives, for example, on skin.

17 Your question is okay. If those
18 exceeding the minute effects, is that the one you
19 want to set for your standard? If it's possible
20 to be set at the level that doesn't effect the
21 standard. Now, that's not always possible. I
22 won't buy that.

23 Q. What about at --

24 A. Let's look at petroleum, for example.
25 Let's look at the ordinary gasoline and what

1 happens to this from the flammability standpoint.
2 I mean you can't -- you've got to do -- a lot of
3 professional judgment has got to go into these
4 standards.

5 It just happens that in the case of
6 the PCBs, we couldn't find any effect at all.

7 Q. In the case of materials that can
8 cause cancer, do you believe it's possible to find
9 a no effect level that will protect everyone?

10 A. Everyone?

11 Q. Yes, sir.

12 A. No. In my -- if this is a -- if this
13 is an active, reactive chemical that can cause
14 cancer, can you get a level that won't cause
15 cancer in anybody in the world?

16 I don't think you could do it by any
17 normal toxicological means and/or any of the
18 mathematical means of calculating the effect based
19 on the positives, negatives and nulls. I don't
20 think you can.

21 So that you've got to -- again, you're
22 back on the judgment base, and everybody that
23 stands on the judgment base is going to get shot
24 at. So I don't know.

25 Q. Do you hold, Mr. Garrett, to the

1 opinion that workers should be told if they're
2 working with materials that can cause cancer?

3 A. You damn right.

4 Q. How long have you felt that way? And
5 I take it you feel that way fairly strongly.

6 A. At the number of lectures I've given
7 to worker groups at Monsanto and to other groups
8 at request, largely somebody requesting through
9 some vice-president of Monsanto, I would say from
10 day one that they should be told.

11 Now, they should have some good -- and
12 this is one of the biggest problems. You brought
13 the best one up that you can bring up, and that's
14 cancer. You've got to preeducate your people as
15 to what these levels mean and what they are.

16 For example, if you can create cancer
17 with one molecule, I don't know how you'd ever
18 prove it.

19 Second, if you can create cancer with
20 levels of way below the level that causes any
21 other discernable effect, I don't know whether you
22 could justify that because I don't think you'd
23 ever develop a cancer enough to do it because in
24 cancer studies you've got to have more than one
25 because you'll have ideopathic stuff occur and,

1 boy, you certainly will in some of them damn
2 beasts that they breed for that.

3 If you stomp on the floor, 11 percent
4 of them drop dead from something anyway, so it's a
5 difficult task. Your question is well asked. I
6 don't know the answer to it.

7 I think that a good set of genuine
8 systemic toxicological studies is the base of all
9 this stuff.

10 When you get through that, you find
11 from a good set of diagnoses of the carcasses of
12 what -- the effect it had. If the beast died,
13 what did he die of? An enlarged liver? A ripped
14 out esophagus or what?

15 And then back off from that situation
16 and find out where the target probably is for that
17 particular material, and you'd be surprised
18 incidently by what the targets are.

19 And then from that point try to
20 evaluate it -- first, evaluate whether it's needed
21 or not. If it isn't needed, don't make it.

22 And believe me, the chemical
23 companies, most of them that I know, have turned
24 down literally thousands of materials that people
25 want them to make. I know we have, Monsanto.

1 Many, many, many times we've turned them down.

2 "Will you make this for us?"

3 "No, you dummy. Make it yourself,
4 because it's going to be highly hazardous, and
5 even the raw materials will cause cancer.

6 "No, we're not going to make it for
7 you. Why should we do it? It would be foolish
8 and would endanger our employees."

9 I don't know whether we really realize
10 how much good, trained employees mean to a
11 manufacturing company, and you frighten one of
12 them in a processing unit and you got beau-coup
13 troubles in that processing unit. You may never
14 meet quality again. You just can't do it.

15 And Monsanto -- and most companies I
16 know that I dealt with deep -- in very great
17 depth, and this would probably be Dupont and Dow
18 and some others, some of the good petroleum
19 companies, Phillips, the Standard Oil groups, and
20 I've dealt with both their -- back when they did
21 have a South American deal, I even dealt with
22 those people.

23 The point I'm trying to make is
24 there's a word called prudent, and, boy, everybody
25 in this business, whether it's safety, industrial

1 hygiene, occupational medicine, toxicology or
2 whatever, it damn sure better understand what is
3 prudent and what it means.

4 Q. What's it mean to you, sir?

5 A. Is it prudent to manufacture? Do you
6 make enough money to pay for the corpses? The
7 answer is no, nobody makes that much money. So
8 that's not prudent. That isn't even smart.

9 Getting down below the smart level, is
10 it prudent to run the risk? Evaluating risk is an
11 exceedingly difficult task unless you've got a
12 hell of a lot of data that shows what happened
13 when something did go wrong, and you almost never
14 have that.

15 I think good prudence in the minds of
16 good, industrial, medical personnel is probably
17 good enough. At least it's been my experience.

18 Now, you can't grab these things out
19 of the air. Boy, they -- and oddly enough, some
20 of the old TLVs probably were grabbed out of the
21 air.

22 They have come -- they have been
23 grabbed out of the air with experience and some of
24 them have played the same game. They have turned
25 out to be prudent standards.

1 Setting standards is my idea of
2 running in a three wheel car. I don't think
3 you're going to get there without at least some
4 accidents. You're going to drag that wheel
5 somewhere. It just isn't possible to do it.

6 You can run down to the -- as low as
7 you can go and you've got to run two years in
8 rats, and then you find out nothing happened or
9 that something did happen. What are you going to
10 do, go back another two years on another? That's
11 the only way to do it unless you're spread and,
12 boy, you don't know.

13 The other thing that fouls you up is
14 the differences in the toxic manifestation at
15 different levels.

16 Hell, at one level it kills you
17 because it blows out your respiratory system, and
18 down here much lower it kills you for something
19 else. We better know that, too. That's also
20 prudence in testing.

21 The other thing is to be prudent is --
22 into the prudent equation requires the how are
23 they going to use it and how are they going to
24 make it?

25 How much personal contact can be had

1 in the manufacturing and can you eliminate that in
2 the proper manufacturing? Comes under the prudent
3 argument.

4 No, I -- when we had anything to say
5 about it, and we had a lot to say about it from
6 time to time -- by the way, we didn't make a whole
7 lot of people happy sometimes either, but if the
8 industrial hygiene or industrial physicianist
9 thinks he's going to make his boss happy all the
10 time, he's crazy. He's not going to function.

11 It's tough to go into a big meeting
12 where we're going to manufacture Alpha Baloney A,
13 and it's going to solve the world's problems, and
14 you walk in and say, "No."

15 Boy, I've done it. I know.

16 "What do you mean?"

17 "Peace."

18 And then we start that scare business.
19 How would you like to have cancer? How many times
20 you been asked that? I wouldn't like to ever have
21 it. Anybody'd be an idiot that would.

22 So the answer is use good data, use
23 prudence, use experience, and believe it or not,
24 sometimes you might be wrong.

25 MR. OLIVER: Objection, nonresponsive.

1 Q. Is it best to --

2 A. What is that babbling going on down
3 there?

4 Q. I think you've identified it, sir.

5 A. Okay.

6 Q. Is it also prudence that, in
7 considering what steps to take, that one should
8 error on the side of caution when possible?

9 MR. FOGARTY: Objection, leading.

10 A. Probably. I think what you need to do
11 is assemble all the data you've got, all the data
12 anybody else has got, and you know as well as I do
13 within the chemical industry or within the
14 petroleum industry you can probably pretty well
15 get the data.

16 I don't think -- we never have held it
17 up from anybody. We've sent bundles -- used to
18 send -- if you had a regular bundle and PCB must
19 have been that thick, and we got questions from
20 Denmark and all over the world.

21 We sent them a bundle and let them put
22 their prudence in motion. There used to be an old
23 statement -- how did it go? In the mind's a
24 prudent man thus and so. Okay.

25 If prudence doesn't play a part in it,

1 I don't think we know from half the things we use
2 now. We've got enormous experience with them. We
3 don't know how much because nobody's ever touched
4 that subject to find out how many hours of work
5 hours have been assembled.

6 We've been doing that to -- in some of
7 the newer chemicals, and the number of working
8 hours that are assembled become immense in a big
9 operation where you've got a big maintenance group
10 and a big production group and a big handling in
11 your handling and packaging group. It's an
12 enormous number of hours. I don't think anybody
13 ever realized that before.

14 We did some at our Chocolate Bayou
15 plant. We were running -- what did we do? How
16 many people get it? How many hours of exposures?
17 Exposures, ran unto the zillions of hours.

18 Did we get anybody hurt? Okay. You
19 go through the medical records. You go through
20 the records of your dispensary. You go see your
21 safety people. You go through your hygiene and
22 occupational medical people if you've got them.

23 And you find out together, no, we've
24 had no problems. We got fourteen million man
25 hours of work in with no problems develop.

1 All right. The equation now is
2 beginning to solve some of the prudence that's
3 needed. Frequently, we can't do that.

4 What are you going to do about that
5 same manufacturing before you started it? There's
6 where the problem comes in. I don't know how to
7 solve it.

8 We did what we thought -- we would put
9 our own sons to manufacture. That's the best
10 standard I've ever known. Would that be where
11 you'd let your own kid do it?

12 Q. If you were assembling the literature
13 on a particular material that already had a TLV
14 established and you found an exposure reported in
15 the published literature that was below the TLV
16 and associated with that exposure there was
17 disease, what would that mean to you?

18 A. If you could -- if you could establish
19 that, in fact, that was true, that the standards
20 should be changed.

21 Q. Would it at least be a red flag to you
22 to pay more attention?

23 A. It would be a red flag to your
24 prudence, it certainly would. But the trouble
25 with that is how many pieces of data have you seen

1 that contain sufficient safeguards to be accurate
2 and honest? I don't know. I'm asking you because
3 I don't know.

4 Q. The prudent thing to do, though, would
5 be at least to pay attention to that and --

6 A. I would think so, yes.

7 Q. -- and further work would be indicated
8 then to establish whether or not that TLV is
9 variable?

10 A. If it's possible or if the further
11 work wouldn't do anything more than duplicate
12 what's already been done because you're talking
13 two years at least and probably more than that if
14 you're looking at exposure to dust.

15 Q. And if you're talking about looking at
16 exposures to human populations, you may be looking
17 at a working lifetime before you know the answer?

18 A. You may also be looking at a
19 population that has a certain level of exposure
20 significantly as -- by simply being alive,
21 particularly in cities.

22 Have you ever done any of these
23 curbside tests?

24 Q. (Nodding head.)

25 A. Oh, boy. You can find anything at the

1 curbside. You've got a product. How did it get
2 there? I haven't the vaguest damn notion how some
3 of them got there.

4 Some complicated organic identifiable
5 chemicals can be obtained on the corner of a busy
6 street corner. How did they get there? I don't
7 know. They're there.

8 It's from the combustion of gasoline
9 at various levels of auto maintenance, various
10 heats of engine, various slides of tires, skidding
11 tires, and all the rest of the crap in the world,
12 including asbestos from fading brake shoes. So I
13 don't know.

14 From the standpoint of intelligent
15 prudent people, you've got to set some kind of
16 method of doing this or quit manufacturing
17 anything.

18 Okay. If you decide not to do that,
19 then you're going to have to make some kind of
20 planned approach to these things and at some point
21 in the data collection time you're going to have
22 to say "The data looks like it's okay, so we'll do
23 it or we won't do it." That's my only way. I
24 don't know any other way to do it.

25 Now, if you find out, as you pointed

1 out, that that selection is not doing the job,
2 then it should be reevaluated, but you better have
3 some damn good substantiated data.

4 Q. Is what you're saying, Mr. Garrett, is
5 it before a professional industrial hygienist
6 ought to think about recommending a TLV be
7 changed, that you have to have very well
8 substantiated data to make the challenge?

9 A. Oh, that depth -- that would be
10 difficult to make a good answer to that. If I
11 were in a -- if I were working with something that
12 would cause end -- untreatable and noncorrectable
13 disablement, I wouldn't use any. You couldn't do
14 it at all.

15 You'd have to use a triple standard.
16 You'd have to use your own judgment, the data you
17 see, your own experience with materials of similar
18 type, and a good deal of trained prudence.

19 Q. So the higher the risk of use of the
20 product and the more likely that outcome can't be
21 reversed, the more careful you have to be in using
22 the product?

23 MR. OLIVER: Objection, leading.

24 Q. Is that right?

25 A. Now, in the -- during the war the

1 government made people manufacture things that
2 were just plain hazardous. I'm sorry, but they
3 were just plain hazardous. I don't know. Was
4 that right? I don't think so, but they did it.

5 We -- they manufactured more gasses
6 that you couldn't -- you can't manufacture without
7 some problems. But like we always said, somebody
8 had to whip them, and with fifteen minutes and
9 another peanut gun, they could have whipped us.

10 Q. In looking at the setting of threshold
11 limit values or permissible exposure levels that
12 you would recommend as a professional industrial
13 hygienist, if we're talking about a material that
14 can cause cancer, would it be prudent that no
15 matter what number is attached to that material,
16 that workers still be told that this can cause
17 cancer?

18 A. If the prudent -- if the material
19 were -- if all the data were plain and
20 unobstructed, unobstructed by normal
21 circumstances, okay? What is the man normally
22 exposed to in his everyday life?

23 You can't stop some exposures. You
24 just can't. It's a part -- unless you stopped us
25 from using automobiles and stop from using

1 airplanes and everything else. You can't.

2 Now, I don't know who went through
3 those prudent exercises, but somebody did. I
4 don't know.

5 I know one thing, that if the stuff --
6 if you've got clean and clear enough data,
7 unobstructed by other effects, unobstructed by
8 other materials, and that justify lowering the
9 TLV, it ought to be lowered.

10 Q. In dealing with asbestos today, is
11 there a no effect level that you can tell us for
12 asbestos-causing cancers?

13 A. There's levels that you cannot get any
14 identifiable results from in animals, but is that
15 what -- is that going to emulate anything else? I
16 don't know.

17 But there are levels starting at zero,
18 if you can find zero, where things don't create
19 problems, and you can actually back into or go up
20 to levels that are harmful -- that knowledgeably
21 are harmful.

22 I think the other problem connected
23 with this material is that a trained person -- it
24 depends on who's going to be using it. I
25 certainly wouldn't put many of the things that we

1 have -- we sell today that have satisfactory limit
2 values, I wouldn't put them into households as
3 such, but in the hands of experienced and trained
4 and prudent people, I don't -- in manufacturing, I
5 don't think there's a problem.

6 Q. In looking --

7 A. So you -- you're really in a bad ball
8 game here. You -- should you stop the manufacture
9 and use of any product, any product, that under
10 any set of circumstances and any test, one test,
11 should you do that?

12 I think you'd be out of business
13 completely. You'd probably be wondering around
14 with a club in your hand.

15 Q. In your career at Monsanto, was there
16 ever a time when you thought or you believed
17 someone at Monsanto had a no effect level for
18 asbestos exposure?

19 A. I never saw any effect, and by the
20 way, we did lung screens on lots of workers. I
21 never saw any effect that I thought asbestos
22 created using threshold limit values, at least in
23 the latter years.

24 I don't -- I haven't seen any in the
25 earlier years when it was higher, but I haven't

1 seen any. Now, that doesn't mean, as it doesn't
2 in the case of our PCBs, doesn't include everybody
3 and under every circumstance, as far as I know. I
4 don't know.

5 No, I think you could -- you could --
6 my problem is are you -- are we going to use this
7 standard for lawsuits or are we going to use this
8 standard for the health of workers in plants that
9 have full medical facilities and so forth?

10 I don't know whether that's even a
11 relevant question or not.

12 Q. But what I'm really trying to find,
13 Mr. Garrett, is was there a time when you felt
14 while you were a Monsanto employee or that you
15 were aware someone else in Monsanto had an
16 established no effect level for asbestos where you
17 could go and say "This is the level for asbestos
18 exposure below which no one will get disease"?

19 A. You know, it's funny. We use the TLV
20 for asbestos and I never had any arguments about
21 it or any arguments with it.

22 No, I don't think it ever created any
23 problems that we know of. Please, believe me,
24 we're a chemical company. We have about sixty,
25 seventy thousand workers.

1 Most of them are exposed to insulation
2 materials of one kind or another because they're
3 close by and you've got wind blowing over
4 insulated material and what there is.

5 We can find asbestos by analysis
6 anywhere. I can find it in your street corner in
7 pretty heavy concentrations if you've got a stop
8 sign there, stop light there.

9 Q. But were you able to convince yourself
10 or to tell others that at this level there will be
11 no effect from asbestos while you're a Monsanto
12 employee?

13 A. I thought that the TLV establishment
14 system was sufficiently armoured with protection
15 that the chances that a person was going to get
16 any problem from that level of asbestos, if you
17 could analyze it, and it was a continuous level, I
18 would -- I don't know.

19 I don't think we've ever seen
20 anything. We've done the same with a lot of other
21 materials that are very toxic. We've set
22 standards on those, and I don't know if we had
23 twenty-four hour exposure.

24 That's the other problem we faced
25 always. If you had twenty-four hour exposure to

1 highly toxic substances, I don't know.

2 Q. So if I hear what you're telling me
3 then, and tell me if it's wrong, Mr. Garrett,
4 you're saying that for asbestos while you were at
5 Monsanto, you believe the threshold limit value as
6 it was then set was the no effect level?

7 A. No, I thought that was the -- a good,
8 safe standard. Now, no effect level is a term
9 that is extremely difficult to define and probably
10 is not ever obtainable in any case, so I would say
11 that I thought it was a safe level for our
12 workers, yes.

13 Q. But you at Monsanto, even as far back
14 as the 1950s, still chose to control asbestos
15 exposures well below the threshold limit value?

16 A. We chose to control them and we didn't
17 really sample that much, but, yes, they were below
18 the threshold limit value because we took care. I
19 think anybody -- we -- but that's nothing.

20 We did the same thing with other
21 levels. Any time we even approached the TLV level
22 in concentration of certain material, we'd press
23 the rush button. We would do it for asbestos.

24 It just -- it's one of these things.
25 You set a standard. I know. We've set some

1 standards and I -- you know, you wonder in your
2 own mind, hey, if you've got the right guy at the
3 right time with the right weaknesses in his organ
4 system that you don't know of and he doesn't
5 either and you feed him this stuff at this level,
6 is it not going to do any harm? I don't know.

7 The answer is we've done the best we
8 know how and we've done it with beasts and it
9 hadn't hurt them, so we don't think it's going to
10 hurt you.

11 And our records have been -- are very
12 excellent following that premise.

13 Q. If you would have been working with a
14 threshold limit value for asbestos of 5 million
15 particles per cubic foot back in the 1950s and
16 would have gone out and done measurements and
17 found say 4.5 million particles per cubic foot --

18 A. I'd start coasting -- I'd tell them to
19 start coasting back, start cutting her back.

20 Q. What do you mean by that?

21 A. Their effect -- their exposure's
22 coming from something. The pipe, it's either
23 going out the pipe or it's going off their tables
24 or somewhere.

25 Put a little more control in. That's

1 getting too close.

2 Q. You would not be content that close
3 to --

4 A. Not when they're approaching the TLV
5 in a material that can cause lung diseases of
6 fatal termination, no. I'm not going to do that.

7 I'd have them raise the stack level or
8 do something immediate or shut the bloody thing
9 down. And that's going to be one hard thing to
10 do.

11 It's difficult. You're talking about
12 useful materials and very, very tight limits where
13 people are exposed in very, very different ways,
14 and we're doing that in everyone.

15 How -- we don't know what people --
16 how people are going to use materials. We give
17 them a TLV that we think is correct. We have no
18 idea how they're going to use it. They may be
19 bathing people up to their necks in the damn
20 stuff. We don't know.

21 Now, how far can you go with a
22 customer -- let me answer you this question. How
23 far can you go with your customers in interfering
24 in their business, because that's what they think
25 it is.

1 Q. Of course, you have the option not to
2 sell to them which you said you've done.

3 A. Of course you do, and you find this
4 out after you make -- you build a big plant to
5 provide a couple of customers and you find out
6 those customers are that way, and what do you do?
7 I don't know.

8 If you can demonstrate there's a
9 reasonable hazard there, I think you should shut
10 the two plants down.

11 The point is, are you looking at
12 twenty-four hour samples? Are you looking at
13 twelve to eight hour samples? Are you looking at
14 what?

15 What about the guy that double shifts?
16 We always run that problem past you. We've had
17 every question you can imagine asked, particularly
18 by the federal people.

19 What happens if the guy is working a
20 double shift? Well, how often does he work a
21 double shift? I don't know, you know. That's a
22 good point.

23 In the manufacture of chlorinated
24 nitrated organic chemicals where you do have a
25 bit of a tendency if you build beyond certain

1 levels of some internal problems, do we shut the
2 damn thing down or what? I don't know.

3 We've never had anybody we thought
4 were hurt -- was hurt. That's a bad -- that's a
5 -- the starting point only in setting examples.
6 Only the starting point.

7 We've been making this stuff for forty
8 years, never hurt anybody. How do they know?
9 Have they looked at the kids in schools? Have
10 they looked at the birth rates? Are they down?
11 Have they looked at the general viability of the
12 fetuses born in their particular area? Heaven's
13 knows.

14 There are a lot of things you can do
15 that TLVs should reflect on and do more and more
16 and more, and I think it's a great idea.

17 We did a survey with OSHA at East St.
18 Louis. We did it in the community. Just the
19 community in the area of several chemical plants,
20 including our big Krummrich plant and they -- we
21 went out and got the birth records and the still
22 birth records and the records showing what
23 occurred to the degree that you could match them.

24 Now, you're talking a hundred thousand
25 people which you're playing games with five

1 hundred of them, and it's difficult to draw any
2 conclusion, but the conclusions that we drew were
3 it was a reasonably healthy community.

4 OSHA themselves told us we can show
5 you a lot unhealthier ones and some healthier
6 ones. So I don't know.

7 My personal opinion is if you can show
8 me that there is a genuine risk in connection with
9 the use of any product at the levels and you know
10 that that -- those exposures are at the levels or
11 below the levels you say they are, then I think
12 they ought to change it.

13 Q. Let me ask you the flip side of that,
14 Mr. Garrett. For the threshold limit value for
15 asbestos that existed in the 1950s and early '60s,
16 do you believe that there should have been the
17 same pure, clear, conclusive data to establish the
18 TLV as you would need to change it?

19 A. Yes.

20 Q. Do you know if, in fact, there was
21 that kind of pure, clear, conclusive data?

22 A. Well, you've got to go back and look
23 at the levels and what they -- the levels are a
24 damn difficult job. You're talking fibers.
25 You're talking bits. You're talking the damndest

1 things to measure there is in God's green earth
2 accurately.

3 I wish they'd do it on gravimetric
4 levels. That's my personal opinion.

5 God, we've -- what kind of -- are you
6 going to measure -- how about this size asbestos
7 particle? Is that one in the count?

8 I'd rather see it in a gravimetric
9 way, I'm sorry. Sure you're going to say, "Well,
10 all you got to do is get -- inhale a rock." Okay.
11 If he inhales a rock, he's probably going to hurt
12 himself anyway.

13 The point I'm trying to make is what
14 is the best and most prudent thing to use to
15 protect the most people and all the people if
16 possible, or quit using the damn stuff. That's my
17 opinion.

18 Q. I take it from your comments then you
19 were certainly personally aware of problems that
20 were inherent in doing these dust counts when it
21 came to asbestos?

22 A. Oh, yes. I've dust counted with that
23 damn Bausch & Lomb contraption. It gives you an
24 answer, invariably wrong, but that's beside the
25 point.

1 It's an answer and you can write it
2 down. And you take the hemacytometer and take a
3 bunch of damn dust into a liquid medium and
4 measure it in there and it conglomerates or
5 associates and you've got a whole flock of crap.

6 It's not easy to do. That's why
7 people in this trade get bald, like you are, and
8 I'm rapidly getting there just trying to figure
9 out what the hell you can do to better, better
10 operate the system for all workers.

11 You don't kid yourself. Chemical
12 workers and people that plaster with this are not
13 the only workers at risk. Everybody's at risk.

14 I think if we got rid of automobiles,
15 we'd get rid of most of the bad things in this
16 country anyway, but I'd have to get rid of my
17 T-bird. What the hell, I don't want to do that.
18 So there you are.

19 I think that when you start out -- and
20 we started out with some of ours, we set the first
21 standards. We did just about as much as we could
22 and we backpeddled. We'll take one-tenth of this
23 and so forth. It's as good a way as I know of to
24 do it even now.

25 You have a material that caused an

1 acute intoxication which upon continuance over a
2 few minutes is going to cause death, that's where
3 you start with.

4 Now, how -- you back off from there.
5 Where do you stop? In any case. I don't give a
6 damn if it causes cancer or causes your toe nails
7 to turn backwards, where do you stop?

8 And in a manufacturing handling
9 operation, they're only there eight hours usually
10 and you hope they get to go into a environment
11 that's a little less hazardous or potentially
12 hazardous, so I don't know. I don't know how to
13 do it.

14 I can say this, we've been doing very
15 well in the American chemical industry with the
16 standards, as we set them, with all their faults.

17 Q. And from time to time when the wrong
18 standard was set and information came to light
19 that there were new biological effects --

20 A. There were recommendations for change,
21 and most of them were changed if that -- if those
22 data could be duplicated.

23 Q. And for someone to know if these
24 biological effects, the new ones, are happening,
25 someone has to be looking, correct?

1 A. Yes, but I think you'll find in most
2 health is one of the most expensive products --
3 most expensive states of mind you can pay for in
4 modern day manufacturing. If you don't believe
5 that, go ask your insurance people.

6 So you're going to do -- you've got to
7 rule out the people who have certain kinds of --
8 let's say you're looking at a respiratory
9 irritant, okay? You've got to rule out people
10 that have got tuberculosis, people that in the war
11 somebody shot one of their lungs out, they only
12 got one pump. Do you do this? Do you know who
13 they are? Do you have any concept of who does
14 have that?

15 Who's a pulmonary cripple in an area
16 where you're looking at pulmonary effect? It's
17 hard. It's hard. And I think the people in the
18 threshold limit committees have done a marvelous
19 job with what they've had to do with and have made
20 the changes necessary through the years where
21 there's a sufficient data to justify them.

22 That's what I think, and God knows, if
23 it weren't true, I don't know how many Monsanto
24 people would be dead right now.

25 Q. What would be your thoughts, Mr.

1 Garrett, about a company that would have some
2 data, be it laboratory animal data or human data,
3 that could possibly contradict a threshold limit
4 value and they not send it in to the committees to
5 be set?

6 A. Produce it.

7 Q. I'm sorry?

8 A. Produce, publish it, and get it in the
9 literature and it will then immediately go into
10 the committees.

11 Q. What would be your impression of a
12 company, instead of doing that, sending it in and
13 publishing it, would hold it back and let people
14 to continue to use a TLV that would have the --
15 that they'd have questions about?

16 MR. OLIVER: Objection, calls for
17 speculation. Incomplete hypothetical.

18 A. I don't know. My enthusiasm for it
19 would be less than zero, but I don't know what you
20 could do about it.

21 If you knew the data, had it -- had it
22 correctly obtained, did it with proper testing and
23 backing, you could publish it yourself, I suppose.
24 You'd probably get shot, but that's beside the
25 point. Many of us are going to get shot one of

1 these days anyway.

2 MR. OLIVER: Objection, nonresponsive.

3 A. All right. We have had first class
4 excellent luck with TLVs, and believe me, we don't
5 just make asbestos. We make -- we had at one time
6 over eleven hundred materials that Monsanto
7 manufactured.

8 God bless them, they quit making a lot
9 of that small crap, had small unit --
10 manufacturing units that made buckets full of
11 stuff for people.

12 Now, I suppose we probably have
13 sixteen or seventeen hundred problems that you
14 would make sure that you were not messing with or
15 that your people were not being exposed to
16 excessive amounts of, or that people with certain
17 kinds of -- of physiological ailments were not
18 messing with.

19 That's another thing that we didn't
20 put into this equation, and that is what do you do
21 with a guy that has a problem -- a liver problem?

22 You can't fire him. You can't do it
23 by law. You hired him, and if you didn't properly
24 test him or physically examine him to start with,
25 you got him on your rolls. What do you do with

1 those kind of people? I don't know. Frankly, I
2 don't know what you do.

3 You try to move them around in the
4 plant. First thing you know they end up as the
5 guard at the gate, and we got some guards at the
6 gate in our company, too.

7 Q. I take it from something you said
8 earlier that you would be critical of someone who
9 said "We've been making this product for forty
10 years and we've never found a problem," if they've
11 never looked to see if there were problems.

12 A. But of course not, because they
13 haven't found a problem. If they haven't looked,
14 they don't know whether there's a problem there or
15 not. They wouldn't know what a problem looked
16 like if it came to them.

17 We do -- a good industrial hygienist
18 is not going to allow that to happen. He's going
19 to say "Hey, we looked. If we don't look, I go
20 somewhere else and look because I'm not going to
21 be a party to this kind of nonsense. I'm not
22 going to be a party to that kind of business."

23 Hell, you might just as well put him
24 in the electric chair and say electricity doesn't
25 hurt him, or better yet, I got a better excuse.

1 He did it himself. He pushed the wrong switch.

2 No thanks.

3 I don't think we have in our -- you're
4 asking my experience base. We've never messed --
5 we've never had any occasion in Monsanto that I
6 know of to criticize the TLV on asbestos, so to
7 talk to you about that, it really is not quite
8 fair.

9 Q. Well -- and I don't want to be unfair
10 with you, Mr. Garrett --

11 A. Oh, I know.

12 Q. -- at all. I was under the
13 impression, though, that at the Springfield
14 Massachusetts, plant that Monsanto had found cases
15 of asbestos disease.

16 Do you know anything about that at
17 all?

18 A. Not to my knowledge. If they have, I
19 do not know. It happened either before me or
20 after me. If they did in -- in the old long term
21 employees, I don't know. I don't know how they
22 would. They haven't handled it for so many years.

23 Q. I understand that Monsanto even went
24 back and did medical evaluations of people who had
25 retired that had worked in that operation.

1 A. We've done that several times. We
2 did -- on many other things. We did when we did
3 the TLV work on -- when we did the work on --
4 that's a customary project.

5 If you've got a company town, and
6 Springfield certainly is a company town, but a
7 better one is East St. Louis, Illinois, or that
8 immediate area, we found that 84 percent of our
9 employees at the East St. Louis plant and the
10 retirees lived within fourteen miles of the plant,
11 I think.

12 And we went back and checked the
13 health of many of those people in connection with
14 the problems on PCBs and on some of the
15 chloroanilines, some of the nitroanilines, we went
16 back and checked their health, and also with their
17 permission, and most of them gave us their
18 permission.

19 We had a few that didn't, and we
20 stirred up a couple of court cases out of it, as
21 you can easily imagine. And we -- we went back
22 and checked with their physician in connection
23 with problems connected with their health.

24 The thing that surprised me is our
25 epidemiological work that OSHA did not like at

1 all. We did all of East St. Louis and all of the
2 manufacturing people separate, and it indicated
3 that without doubt you were healthier if you
4 worked at Monsanto, two or three other big
5 companies, than if you didn't work at all if you
6 lived in that area.

7 Now, these are obviously eschewed data
8 from where you're looking for something and get
9 something for free. Every time you get it, you
10 know damn well it isn't any good, but it's true.

11 The actual data -- because we had
12 very, very detailed health data done over a three
13 year period by OSHA on the people that lived in
14 that area and then we did our employees
15 separately, and they accepted it. It was by their
16 standards.

17 And they came up with that, well, we
18 know people that work always were healthier people
19 that don't work. Well, I think that is probably a
20 truism.

21 Now, a truism is something that's true
22 as long as you believe it. So I don't know.

23 Q. But as far --

24 A. My personal opinion is that in our
25 case we've never had a problem with the TLVs if

1 they were genuinely, genuinely followed.

2 Q. Of course, at Spring --

3 A. We've had some awful problems trying
4 to put -- noise is probably the worst thing that
5 I've ever tried to check out.

6 When you find out how many people
7 shoot guns and shoot skeet and ride around in a
8 motor boat without any -- that sounds like a damn
9 jet taking off by the hour on every weekend
10 fishing, I don't know how you then come back with
11 the records of what noise they encounter in the
12 plant has to do with their total hearing acuity at
13 age sixty or seventy or eighty or whatever.

14 It's difficult to do.

15 Q. But as far as Monsanto going back and
16 looking at any retirees from the Springfield
17 Massachusetts plant for asbestos disease, you
18 really don't know anything about that?

19 A. I'm sure they have it, if someone's
20 said that and produced any data to indicate that.
21 We've gone back and checked the Springfield
22 employees for other things.

23 Q. But you don't know personally about
24 any of the asbestos?

25 A. No, not about anything done for

1 asbestosis -- asbestosis or any evidence of lung
2 engagement -- involvement in that. No.

3 Now, the problem I face I think
4 probably every day and the problem everybody else
5 faces is do you -- what effect does coirritants
6 have on things?

7 And that -- I suppose liquor is the
8 biggest problem with that. What does it do? Does
9 it solubilize materials that are not otherwise
10 soluable or increase the solubility or absorption?
11 Interesting question, isn't it?

12 Q. Yes, sir.

13 A. Do you have any idea how much liquor
14 is drank by the employees of the average Monsanto
15 chemical plant? A hell of a lot. Some of which
16 they make in their own backyard.

17 The point I'm trying to make is I
18 don't know how you can -- how you can say that
19 this is what they got, this is what they're
20 exposed to, because we tested them while they were
21 at work.

22 Q. You say you don't know how you can say
23 that?

24 A. No, I really don't. We do say it.
25 Don't -- I didn't say we didn't say it. I said I

1 don't know how you can say it and be completely
2 honest with yourself.

3 Noise exposure, for example, is a good
4 example. Any dust exposure. Where in the world
5 do you suppose they could not get dust? At home?
6 You got to be kidding.

7 That's my problem. And this is true
8 honestly of a lot of things. There are a lot of
9 other material, believe it or not, that they're
10 exposed to. Caustics, for example, particularly
11 in the wintertime.

12 Q. I guess what I'm hearing you say, Mr.
13 Garrett, is that it's really almost impossible to
14 know what workers are exposed to?

15 A. To positively demonstrate toxicology
16 or any toxic effect on anything except those
17 things that are so unique they will not experience
18 involvement with them in anything except their
19 work, and where can you do that?

20 In the PCBs we were in -- we were home
21 clean because there was no way they were going to
22 have that stuff in their normal every day affair,
23 but when you start messing with dust, we started
24 trying to mess with alcohol. I mean you're
25 kidding yourself.

1 Q. So if you've got these epidemiological
2 studies of workers and they're exposed to dust and
3 they're exposed to things at home and alcohol that
4 they drink and then they -- you look at their
5 health experience, it's just almost impossible to
6 say what anything causes or doesn't cause?

7 A. Unless there's a unique circumstance
8 that recurs physiologically, then you might.

9 Q. Something like mesothelioma asbestos?

10 A. Could be. Certainly mesothelioma
11 would. Asbestosis in itself, I don't know. You
12 can -- that just -- ordinary tracing of the lungs
13 in the picture, I'm not sure you could really
14 prove that's asbestos, but, boy, when you get down
15 to mesothelioma, you're down to a -- pretty close
16 to specific that I know of.

17 I've never seen one. We've seen lung
18 cancer, incidently. All of lung cancer, not
19 necessarily mesothelioma, by any mess of the
20 means. As a matter of fact, the commonest lung
21 cancer is not mesothelioma.

22 Q. Would it be accurate to say, Mr.
23 Garrett, based on your experience as an industrial
24 hygienist, that once you get asbestos fibers into
25 the air that are of the particle size that can be

1 breathed into the lungs, that that asbestos fiber
2 tends to stay airborne?

3 A. In those levels at which we test for
4 as respirable sizes, probably right. Probably
5 very little movement of the air mass would not
6 keep them lofted. That's my personal opinion.

7 Anything -- I don't know. It depends.
8 Anything above certain levels, I suspect would
9 drop eventually and a lot of asbestos will occlude
10 to other materials in the atmosphere and drop out.

11 So will a lot of other fibers, by the
12 way. These fibers like manufacturing silk or
13 manufacturing nylon, yarns and stuff, we have a
14 lot of fiber problems, and we've ventilated --
15 ventilate those machines so that we try to
16 backvent them to get away from the workers' mouth
17 and nose.

18 We have a problem with people shutting
19 them off once in a while. That's a nit-wit to do
20 that. You know, this is a person asking for
21 something that he wouldn't like when he gets it.

22 I don't know. I think the average
23 American worker, average American worker, is
24 probably as healthy as any in the world, and the
25 records show in -- that most of the time at least

1 the TLVs are sufficiently severe for an eight hour
2 day.

3 Now, you work back -- you can always
4 question this because how many people double
5 shift, how many people don't have days working and
6 how many factories are there in little countries
7 where they can work all day and all night, too?

8 Second, where you can always find
9 places where there are materials handled that are
10 not normally handled in commerce that are
11 hazardous that nobody knows about or cares about
12 that can create troubles.

13 I think this is what grew the current
14 OSHA. I think it was grown because of negligence
15 on the part of a few, but I think it was caused.

16 We don't -- it's the most difficult
17 damn thing in the world to mess with a blend of
18 materials, inorganics or organics, don't make any
19 difference.

20 What effect does each of them have?
21 What is the cumulative effect of five different
22 organic ornate compounds, for example? Are they
23 the same?

24 No, they're not the same because
25 they've got different molecular diameters or

1 radii, if you wish. So they can get into places
2 that the others cannot.

3 Some of these compounds are so damn
4 big it's a wonder you can get them in your nose
5 even, so I don't know. You asked a question I
6 don't know how to answer.

7 All I know is that in our own
8 experience, we have worked on the TLV base, and
9 until I -- and we think it's good because we've
10 contributed to the TLVs.

11 We've done a lot of research to make
12 sure that -- that if there's a need for change,
13 that we get the change in. That's where we stand.

14 MR. POWERS: Object to the
15 responsiveness of that answer.

16 A. We've got the peanut gallery growling
17 again, I guess.

18 Q. The threshold limit values experience
19 that you've had with them that you just told me
20 about where you think it's been mostly good, the
21 threshold limit value, though, for asbestos has
22 been one that has been changed because the values
23 that were originally selected didn't improve that?

24 A. We've changed benzene twice that I
25 know of during my own working experience, and by

1 the way, this is probably because of chronic
2 possibility, very limited possibility, of chronic
3 problems.

4 We've changed a great many of the
5 major petroleum fractions. We've changed a lot of
6 those. So it's been a dynamic system. It's not a
7 completely stagnate system.

8 They don't just do -- do this and lay
9 it aside and move it over here. To a certain
10 extent they do. But if you bring up the subject
11 sufficiently with sufficient data and submit it,
12 the TLV committee will go over that data. I can
13 assure you of that.

14 I don't know the answer to all the
15 questions by any stretch. If I did, I would be a
16 soothsayer, I guess.

17 Q. But the asbestos TLV is one that
18 proved by time needed to be changed, correct?

19 A. I don't know. I can't really say
20 that. We have not experienced that, but again,
21 we're not primary asbestos users, so I'd be remiss
22 professionally to even answer that question.

23 Q. Well, you know that the TLV for
24 asbestos has been changed?

25 A. I knew it was changed as was about

1 just can't be afforded.

2 So I would say that if we tested the
3 atmosphere around where they were working -- and,
4 boy, that is difficult to do. You're mostly
5 outside and the wind blows one way or the other
6 way and it's a hell of a mess to do a decent
7 asbest- -- or dust study.

8 Anyway, you'd have to have fifty dust
9 test machines and you'd have to pretty nearly put
10 them around in a ring so that you'd catch the
11 nuances of the wind and its effect on that
12 floating cloud or whatever you got up there.

13 You better be able to separate
14 asbestos from everything else, too, in your
15 testing, which I'm not sure everybody does. So I
16 don't know.

17 No, I don't think you ought to -- if
18 you can demonstrate that asbestos is hazardous to
19 people at levels in a working environment of less
20 than what it is now, then it ought to be submitted
21 to the TLV committees for change.

22 MR. POWERS: Object to responsiveness
23 of that answer.

24 Q. The question, though, Mr. Garrett, is
25 at Monsanto in the 1950s when you were dealing

1 with your insulators and you told them
2 "respirators, respirators, respirators," the
3 reason you did that was because you felt it was
4 prudent to minimize their exposure to asbestos
5 because you knew that it was a dangerous material,
6 correct?

7 A. That's right, and you couldn't test
8 for it because you just simply didn't have the
9 people and the testing equipment.

10 Q. And the methods were questionable
11 anyway and that was the prudent response for you
12 and your people?

13 A. Probably. Probably. Excessive
14 prudence, I suppose, would get you to stop all of
15 it, but -- all TLV because there are probably
16 levels at which they can create problems, but I
17 don't know.

18 All I know is that in our own -- we
19 were primarily organic chemical people. We did a
20 lot of organic chemical work. We did a lot of
21 work on the TLVs in that area.

22 We -- in an ancillary way, we were
23 interested in the materials that we had to use for
24 maintenance of our equipment and to keep it
25 operating.

1 Asbestos was one of those issues. We
2 knew it was a hazard. We tested for it. We found
3 levels pretty close to the then TLV, and we found
4 that upwind work was a good idea and we
5 recommended it, particularly when you're out on
6 the racks taking asbestos out off of old pipe
7 racks.

8 Other than that, we never saw an
9 asbestosis case or anything that we thought
10 approached it.

11 Q. And further step of prudence that you
12 made in the 1950s at Monsanto at Texas City --

13 A. Was put them respirators on.

14 Q. And not only for the insulators but
15 for anybody else who was going to be there when
16 the insulators were doing their work?

17 A. That's right. That's right, including
18 their foreman, who didn't like it worth a damn.

19 Q. And if it was an operator that was
20 going to have to be there while the work was
21 done --

22 A. He wore one, too.

23 Q. Mr. Garrett, I've been reminded of an
24 area I wanted to go into.

25 Can you recall any of the insulation

1 manufacturers for the products that you used at
2 Monsanto ever sending you any information about
3 health hazards that could be connected to their
4 products?

5 A. Yes, Johns-Manville sent us some.

6 MR. POWERS: Object to the question as
7 being vague.

8 A. Now, the asbestos, we ordered
9 insulation materials loose and we got it -- with
10 it got a folder from Johns-Manville.

11 Q. And do you remember what the --

12 A. It was pretty complete as far as what
13 was known at that time about asbestos' hazardous
14 as an insulation toxic, as a ventilation dust. It
15 would cause all kinds of problems including cause
16 you to lose your hair, you know, that sort of
17 stuff and, yes, I saw it.

18 We didn't need it. We already knew
19 it.

20 Q. Is that the only insulation
21 manufacturer that you can recall seeing?

22 A. The only one that I can remember.
23 That was loose stuff that we used to make
24 so-called mud stuff, the bags of it. You've seen
25 it. In fact, Johns-Manville were written all over

1 it, and we used it for patching is primarily what
2 it was used for and to mud over preformed stuff
3 that had just been wired to the stuff.

4 And on a plant like Texas City, which
5 was all liquid, you can imagine the number of
6 miles of pipe they had and all of it was
7 insulated. And so --

8 Q. Sir --

9 A. -- in fifty different sizes.

10 Q. About what time period is your
11 recollection of getting this Johns-Manville
12 material?

13 A. '5- -- oh, Lord, it had to have been
14 '55, '60, or something like that, but I didn't
15 need it. It was already outlined in most of the
16 books in this area.

17 By the way, when I first started in
18 the business, there wasn't any industrial hygiene
19 books. You depended on medical, journal articles,
20 committee work, and your own common sense, I
21 guess, if you had any.

22 Sometimes you don't have a very good
23 temper in this business, but they won't let you
24 kill anybody, though. Boy, some of them needed
25 it.

1 Oh, I saw foremen sometimes that ought
2 to have been hanged. Oh, you know, tobacco
3 dripping out. "I'll have you know it ain't ever
4 hurt me."

5 It's a fine thing to teach young
6 operators. It's too bad you couldn't retire them
7 early just to get them out of the way. It's
8 happened to everyone, you know.

9 And that's another one of the problems
10 that we face.

11 Q. What is your earliest recollection,
12 Mr. Garrett, of when you began to find reports of
13 cancer being related to asbestos exposure?

14 A. I wrote a report one time called
15 Cancer and Chemical Structure. I thought I was
16 doing somebody some good so I decided to do it.
17 It turned out to be about three hundred pages
18 long, and it's been copied and recopied around.

19 I see it every once in a while at
20 Monsanto. I wrote the damn thing twenty-five
21 years ago, and what was known then about cancer
22 and those structures of chemicals and materials of
23 common materials that were available.

24 In a big, multiunit chemical plant it
25 is difficult to tell a operator who's rotating

1 through the many different units all the things
2 that in excessive concentrations would cause
3 cancer because his drinking water is likely to do
4 that if he drinks too much of it. That's very
5 likely why he drinks Wild Cat Whiskey, but that's
6 beside the point.

7 The point I'm trying to make is if
8 you -- you could tell people that primarily were
9 interested in asbestos in their insulating
10 operations, so you're talking about insulators and
11 their immediate supervisors, about asbestos and
12 its hazard as far as cancer is concerned.

13 At the same time in a big chemical
14 plant you've got a dozen other places where you've
15 got to tell someone about excessive exposure to
16 this or that or someone else, or if you overcook
17 your operation, you're going to get thus and so,
18 which will cause cancer, and you've got an awful
19 lot of different problems to address and maintain,
20 and the problem is you're trying to maintain some
21 feeling of control amongst those -- amongst your
22 people.

23 Everybody handles asbestos that's in
24 the insulating business. Those same people are
25 likely -- are liable to be exposed to materials,

1 and I've taken air samples up on the racks near a
2 bunch of exit pipes, a bunch of unit vent pipes,
3 not looking for asbestos but looking for the stuff
4 in the vent pipes. Some of that stuff might be
5 causing the same problem.

6 The other you don't know is synergism
7 amongst chemicals to -- and believe me there are
8 synergistic couples of stuff like asbestos and
9 some chemical material. So you've got a hell of a
10 job.

11 Asbestos, we thought, and to -- and
12 our records show would cause no problems at the
13 TLV, okay?

14 Q. And that was in your plant?

15 A. That's right.

16 Q. In your plant --

17 A. In our plants, as near as I could
18 determine, we did a lot of sampling, and the
19 plants did a great deal of sampling. We took care
20 of asbestos in workers by demanding them to wear
21 protection.

22 Q. Respirators, respirators, respirators?

23 A. Right, respirators, respirators,
24 respirators.

25 Q. And by following that practice you

1 never saw any asbestos-related disease?

2 A. No. What you're asking, a lot of it
3 is conjecture. You're looking at industrial
4 hygiene data and the many, many, many, many gobs
5 of data I've seen from all kinds of things,
6 particularly couplets.

7 We were looking at couplets, one of
8 which was asbestos in those couplets. We never
9 found anything.

10 We did find some in where you could --
11 where other material would cause about the same
12 effect and, therefore, if you had 50 percent of
13 one and 50 percent of another, you had a hundred
14 percent, like chlorinated aromatics, for example.
15 So...

16 Q. Would there be any other products
17 other than the phenolic resins that you told me
18 about earlier that you're aware of that were made
19 by Monsanto that contained asbestos?

20 A. Contained it, no. The years I know,
21 the old -- what the hell was that stuff called?
22 Carbide made it.

23 Q. Bake-A-Lite?

24 A. Bake-A-Lite. The old Bake-A-Lite
25 processes. None of it that I know except that.

1 I've seen reinforcing fibers used, but I've seen a
2 lot of nylon reinforcing fibers, too. So I don't
3 know.

4 I've seen a lot of work done on nylon
5 reinforcing fibers, but it isn't really
6 toxicology. It's more stretch and break. I
7 don't know.

8 All I know is that our experience, a
9 chemical company primarily who manufactured
10 chemicals and at one time petroleum products, we
11 had an oil refinery at Lyon Oil in Arkansas at
12 Monsanto.

13 They used probably more insulating --
14 incidently, I think probably a refinery uses more
15 insulating material than even an organic chemical
16 plant, at least it looked like to me they did.

17 We had no problems. We had -- we had
18 lots of problems. We had no problems with
19 asbestos that I know of in my own experience, in
20 my own time. I knew it was a problem and we
21 certainly used that to prevent it if we could.

22 Q. And by "prevent it," you mean that's
23 the respirators, respirators, respirators? That's
24 coveralls? That's taking showers?

25 A. Every day they got changes of clothes.

1 We went down to shoes and socks, underwear and
2 all. We didn't want it at home.

3 Q. And that was even back in the 1950s?

4 A. That's right. And I will say this,
5 you cannot force a man -- we went through a court
6 suit to find this out. You can't force a man to
7 bathe. Did you know that? You probably already
8 know that.

9 Q. But you went to that extent to try to
10 get people to bathe to reduce the hazard?

11 A. In many cases. We did it for PCBs.
12 We did it for a lot of things, and we tried to
13 scare the hell out of them if that -- that don't
14 do much good.

15 Then Time magazine comes along and
16 writes it up as a hell of a scare affair. Then it
17 scared the hell out of them. I don't understand
18 that but, no, we didn't -- we had -- we did a lot
19 of work on a lot of products.

20 We got to where we were fairly
21 competent at picking the ones that we thought. We
22 tested all. We had regular screen that we tested
23 them in using rats, and anything that occurred in
24 those rats on postmort, we followed up on
25 anything.

1 If that thing blew the kidneys out
2 through the anus, we wanted to know why the hell
3 that happened and we wanted to back off on our
4 standards. That we did. And I think we tested
5 them all.

6 Now, when we got into a product where
7 it was going to be used by other people, then we
8 began to do a very detailed toxicological study
9 using rats, rabbits and so forth and multiple
10 levels of exposure and so forth.

11 Q. In your work that you did with amine
12 compounds, did you ever get into any research or
13 any literature that dealt with the nitrous amines?

14 A. Oh, any time you manufacture amine
15 compounds, you're going to mess with nitrous
16 amines, yes.

17 Q. What is the earliest time period that
18 you can tell me you worked with nitrous amines?

19 A. Oh, gosh, I guess when we first got to
20 messing around with nitrogen chemicals, and that
21 probably was in -- early in my St. Louis career.

22 Q. So mid '50s or so?

23 A. Probably, yes.

24 Q. What was it that, from a toxicologists
25 industrial hygienist's standpoint, that you found

1 for nitrous amines in that -- in that era?

2 A. Well, nitrous amines were extremely
3 acutely toxic. You probably didn't have a chance
4 to test the toxicology over a period of time
5 because if your subject was dead -- so we -- many
6 of the nitrous amines are extremely toxic.

7 They're very reactive. Oh, don't ever
8 mix them with anything, including your shirt tail.
9 They are extremely reactive substances. And if
10 you can get them off clean, you're lucky.

11 It's very difficult to get a nitrous
12 amine, one of the short chain nitrous amines loose
13 as a -- it's a wonder it doesn't grab the glass,
14 you know, that sort of thing. It's a difficult
15 thing to do.

16 We've done -- we did a lot of work on
17 it. We did it at Nitro -- I mean at, yeah, Nitro,
18 West Virginia. We did it at -- in Alabama.

19 We found nitrous amines in practically
20 every amine operation at a certain extent to
21 certain levels in virtually every nitrogen
22 compound. Every amine operation we had, there was
23 some nitrous amines formed.

24 Q. Being a chemist, can you explain that?
25 Why?

1 A. Pretty easily as the degradation of
2 amine compounds and the slight base oxydation of
3 nitrous amines.

4 MR. HALL: Question, could we take a
5 break?

6 Q. Is a break okay with you, Mr. Garrett?

7 A. Certainly.

8 (Temporary recess was held.)

9 (Plaintiff's Exhibit Number 1 marked
10 for identification, JS.)

11 MS. FLATT: We're on record.

12 Q. Mr. Garrett, I went over your resume
13 just a little bit earlier and I've been informed
14 by my associate here that I've gotten the wrong
15 title on here.

16 I should designate it as 230112,
17 capital G-A-R, capital J-A-C, capital T. So with
18 that change for the record, so it's consistent
19 with our numbering scheme that we've been using.

20 Let me ask you, sir, is this a true
21 and correct copy of your resume?

22 A. Yes.

23 Q. All right. I've also asked the court
24 reporter to mark as Exhibit 1 to the deposition
25 the notice for the deposition which calls for

1 certain documents to be brought to the deposition
2 by yourself.

3 Does that look like the list of
4 documents you were asked to bring?

5 A. Yeah.

6 Q. And I understand that you have
7 reviewed that list and the only document that you
8 have that's responsive is your resume, is that
9 right?

10 A. That's right. I don't keep documents.
11 I didn't -- they all belong to the company and they
12 all went back when I quit.

13 Q. Before the break I was asking you some
14 questions about nitrous amines and you were kind
15 enough to go into that with me.

16 A. We --

17 Q. The materials that you called nitrous
18 amines in the 1950s that you said were
19 contaminants of some of the other materials, the
20 amine compounds, you said that those were very
21 acutely toxic, is that right?

22 A. Uh, it's hard to say. It's hard to
23 generalize, as you know, but by and large, nitrous
24 amines are oxidizing agents of some caliber and
25 they consequently are probably toxic by inhalation

1 or by swallowing.

2 I don't know why in the world anybody
3 ever swallowed it, but that's beside the point.

4 Q. The compounds that these nitrous
5 amines were being found in, the aniline materials
6 or the nitrogen materials, were there already
7 concerns about the carcinogenicity, the abilities
8 of materials to cause cancer that were sort of
9 apparent compounds in nitrous amines?

10 A. The only ones we really have worked
11 with in the last twenty years were contaminants in
12 processes where you were pretty roughly treating
13 amine compounds, largely aromatic amines, and for
14 that reason we assumed, and I think probably
15 rightly so, that there were some minor amounts of
16 aromatic nitrous amines in some of those products.

17 It's difficult to analyze for in
18 extremely low concentrations. As near as I know,
19 we decided that the contaminants from these
20 processes were not a very good idea to be eating
21 your lunch on and had issued restrictions in the
22 manufacturing plants on the processes and process
23 wastes.

24 I think I would still do the same.

25 Q. Some of the aromatic amines that

1 you're talking about were known to be carcinogenic
2 at the time, is that right, sir?

3 A. Well, not nearly so much carcinogenic
4 as just plain toxic. You're talking about the
5 nitro -- aromatic nitro amines, aromatic
6 chloroamines, and this group of compounds.

7 And you chemically mash at them a bit,
8 you might -- particularly with a -- with nitric
9 acid, something like that, you'd all end up with a
10 nitrous amine. It will split off on you, and so
11 our interest in nitrous amines -- and it was
12 really -- we have been interested in them
13 toxicologically as a contaminant forever, I guess.

14 Q. It would be fair to say, wouldn't it,
15 though, that at least one of the toxic properties
16 of the aromatic amines that you were concerned
17 about was the ability to cause cancer?

18 MR. FOGARTY: Objection.

19 A. Certainly the suspicion that it might,
20 yeah. Now, whether they were all tested or not,
21 none of ours -- none of the ones I have any
22 knowledge of were tested.

23 But, no, I wouldn't -- they are
24 extremely active materials.

25 Q. And then would it be also true, Mr.

1 Garrett, that you were concerned about the
2 potential ability of these materials to cause
3 cancer that were aromatic nitrous amines as well?

4 A. Well, we were concerned about the
5 general toxicity involved in the handling
6 materials that ultimately developed either from
7 their own self-destruction due to heat or
8 something and in handling nitro and amino
9 aromatics.

10 We handle lots of them. We've handled
11 anilines. We made die anilines. We made the
12 chloroanilines. We made chloronitrobenzenes, and
13 for these reasons we had a fear of nitrous amine
14 formation in our processes.

15 Some of it -- to the best of my
16 ability, I don't know that we ever isolated any of
17 them.

18 Q. But part of the concern that led to
19 these fears was at least in part the ability for
20 these materials to cause cancer in people?

21 MR. FOGARTY: Objection, vague and
22 ambiguous.

23 A. Well, I think it was probably the cost
24 of what the toxicology, in fact, was. Whether you
25 had -- whether you could develop a carcinogenesis

1 from minute quantities or whether you could get
2 the hell blown out of you first with small -- with
3 larger quantities.

4 They're toxic. Most aromatic amine
5 and nitro compounds are toxic in the first place,
6 and with a little help, they'll put you
7 underground pretty quick.

8 And anything that you subsequently
9 make out of them with -- where you still maintain
10 that amine structure, you're liable to have the
11 same problems.

12 So we -- we always were and always
13 were dealing with nitrogen containing aromatic
14 compounds, and the nitrous amines happened to be a
15 by-product.

16 We never -- I don't think we ever made
17 one purposely. We made some, but we didn't make
18 them purposely.

19 To tell you the truth, I don't think
20 it ever was much of a -- I think we probably
21 conked those processes out or didn't make them or
22 something because I don't recall -- I have a
23 pretty fair memory.

24 I don't recall that we ever did
25 anything or ever occasioned any great studies

1 because I don't think we had any reason to.

2 Q. And earlier we talked about prudence
3 in the area of industrial hygiene and toxicology.

4 A. Yeah.

5 Q. Would it be your opinion, sir, that in
6 dealing with nitrous amines, even back in 1950s,
7 that prudence would have said there should be some
8 concern about the ability of these materials to be
9 toxic and in part carcinogenic?

10 A. In the 1950s, probably not, but
11 shortly thereafter, yeah. And the problem -- we
12 tested, of course, we tested some of our
13 materials. Some of which were -- turned out to be
14 carcinogenic, but they were not nitrous amines.

15 We did some straight nitrogen or
16 straight nitrogen containing aromatics that were
17 not nitrous amines.

18 The problem with -- our problem with
19 nitrous amines was that an unwanted by-product
20 build-up in processes using amine compounds in
21 efforts to condense them and otherwise in other
22 chemical reactions, and I think probably anybody
23 would be interested.

24 The materials themselves are pretty
25 toxic as per se, and whether they're carcinogenic

1 or not is an interesting argument. I doubt
2 seriously if -- well, I imagine that a great many
3 of them are, but -- because of they're extreme
4 activity.

5 But we never had any problems with it
6 because they were minute by-products in our
7 processes, and it took some mighty fine analytical
8 chemistry to find them and to characterize them as
9 less than so.

10 I don't think we could ever isolate
11 some of them enough to test them, plus the fact
12 that carcinogenic testing is, boy, is something
13 else. Wow. That is extremely costly, extremely
14 argumentative, the results. I don't know.

15 We made and sold an awful lot of
16 amine -- simple amine compounds, aromatic amine
17 compounds.

18 I don't know -- I don't know that we
19 ever got any comments or compliment -- or requests
20 from customers to test them for carcinogenicity.
21 I don't know whether we ever did ourselves or not.
22 If we did, I didn't know about it.

23 Toxic -- my tox group could have done
24 it. I don't think they did it without our
25 knowledge, but we were -- we would be somewhat

1 suspicious if we were going to manufacture them in
2 any great quantity or if we were going to
3 manufacture anything in the quantity that would
4 produce enough of them as a by-product to be a
5 product hazard.

6 So, yes, we probably suspected that
7 some of them at least, if they were -- if they
8 were electrically imbalanced ones, you probably --
9 it probably would be carcinogenic.

10 Q. The "them" you're talking about are
11 the nitrous amines?

12 A. Uh-huh. No, no, I'm talking about the
13 nitrous amines that would be the result of
14 operations that produced other chemicals.

15 Q. Yes, sir. The contaminant part.

16 A. That's right, as a contaminant part.
17 Again --

18 Q. Now, I take it that shortly after you
19 began your career with Monsanto you would have
20 known that the aromatic amines, particularly a
21 beta naphthylamine, had been identified as a human
22 bladder carcinogen years earlier?

23 A. Yes. Lord knows, we made it --

24 Q. So --

25 A. -- and we knew it caused cancer. I

1 will tell you this, in all the years I was at
2 Monsanto, it was the only proven carcinogen that
3 we ever proved was carcinogen itself per se.

4 Q. Would it be accurate to say, Mr.
5 Garrett, that because of the experience with beta
6 naphthylamine that the toxic --

7 A. We were doubly cautious, yes.

8 Q. Yes.

9 A. We sure were and we canned an awful
10 lot of research projects for a company that
11 was -- one of its primary efforts was in the nitro
12 and amino chemistry and particularly in the nitro
13 and amino aromatic chemistry. To quit messing
14 around with them was amazing, but we did.

15 Q. Would it be your opinion, Mr. Garrett,
16 then that for companies in the 1950s who were
17 interested in nitro and amino compounds and their
18 manufacture, that prudence would have said be
19 cautious of these materials causing cancer?

20 A. Oh, you're stretching it pretty far.
21 We knew that beta naphthylamine -- by the way,
22 this is a naphthylamine, this is not a biphenyl.
23 We were -- we had a great many suspicions about
24 some aromatic groups, some aromatic structures.

25 One of them was where you had an

1 imbalance sufficient to put a nit- -- a very
2 electronegative group like a nitro -- nitro, or
3 nitrousa, for that matter, group or an amine group
4 on the end of a very large gob of carbon material.

5 We had a suspicion that that was
6 indicative of some kind of physiological action on
7 the part of human beings.

8 There have been some tests done that
9 didn't necessarily carry that out, but there have
10 been some tests done that do carry it out. We
11 were prudent and very, very careful.

12 We had, as you know, we brought people
13 for all their life, tested them, that had -- that
14 had been exposed to beta naphthylamine, and we
15 tested those people all their lives. Every one of
16 them until they died. Some are still alive.

17 Q. And that is part of the prudence that
18 you spoke of in dealing with these kinds of
19 materials?

20 A. Absolutely. You had to damn near
21 demonstrate and have the money to do toxicology
22 for it before you demonstrated -- before you came
23 to any of Monsanto management with the idea of
24 producing any of these compounds.

25 Q. So it was almost to the point where it

1 wasn't a matter of --

2 A. Thumbs got to be up. Nobody's going
3 to be working with it. If you don't have it, the
4 money to test it and time, go away --

5 Q. Not going to make it?

6 A. -- and think of something else. Yeah.
7 That damn mess caused us more trouble than -- I
8 swear we wrote more letters and more reports and
9 gave away more research reports than you could
10 shake a stick at over that damn beta naphthylamine
11 thing.

12 Q. Did you ever come in contact with a
13 Dr. Charles Hine, that you can recall?

14 A. Yes, Charlie. Fine man.

15 Q. How did you know him, Mr. Garrett?

16 A. Funny, I can recall the man's name
17 and -- where'd Charlie work at? Damn, I can't. I
18 remember him. I can't draw where he came out at.

19 Q. I'll represent to you that from time
20 to time he went to American Petroleum Institute
21 meetings and had some affiliation with Shell.
22 Does that help you any?

23 A. Yes, it does help me a lot. He was
24 the guy that helped us, in fact, through some of
25 the API meetings, to look at some of these

1 aromatics.

2 See, Monsanto's a primary aromatic
3 producer of aromatic amine and nitro compounds.
4 We produced the dinitro. We produced the diamine,
5 and we were interested.

6 That's all died of natural death
7 because nobody could ever demonstrate that they
8 had enough money to pay for the toxicology that we
9 had to do on beta naphthylamine.

10 Q. If I could, Mr. Garrett, here's a
11 letter or, really, it's a memorandum on Shell
12 Development Company letterhead dated April 28th,
13 1950, and it shows that the author is one C.H.
14 Hine, M.D., consulting toxicologist. Subject is
15 Certain Problems of Environmental Cancer in the
16 Petroleum Industry.

17 This is a document that's been used
18 many times in litigation. I've been involved with
19 it. If somebody wants a copy of it, I'll be glad
20 to let them have it.

21 But I wonder, sir, if I could hand you
22 that and ask you if you've ever seen this
23 memorandum that Dr. Hine is shown to be the author
24 of here?

25 A. Boy, I don't know.

1 Q. It's several pages long.

2 A. Now, Charlie wrote a lot of stuff. He
3 also wrote some -- some parts of books and that
4 sort of stuff in this -- in this racket.

5 He had some beliefs that, well, I
6 don't know whether we've demonstrated them or not.
7 I think he thought the petroleum industry was the
8 dog in all cancer, but I don't know about that.

9 There they are, and that's all of
10 them, their answer seen in its compounds. You
11 mean aniline and its derivatives?

12 MR. FOGARTY: Object, nonresponse.

13 Q. You're looking at the table that's
14 a --

15 A. Yes, "Certain Recognized and Suspected
16 Carcinogenic Agents Encountered in the Oil
17 Industry."

18 THE REPORTER: Sir, could you repeat
19 that?

20 THE WITNESS: Ma'am?

21 THE REPORTER: Whatever you just said,
22 could you repeat that, please?

23 THE WITNESS: The title of this table
24 here is "Certain Recognized and Suspected
25 Carcinogenic Agents Encountered in the Oil

1 Industry Showing the Organs or Systems Chiefly
2 Effected." Okay?

3 Q. As you look down that list, Mr.
4 Garrett, do you see any there that you would
5 disagree with being in that table?

6 A. Yeah, I do, a lot. Charlie was --
7 went a little overboard. I -- the funny thing is
8 a lot of them -- some of them are true and some of
9 them are not true.

10 Q. Okay, sir. Which ones would you agree
11 with?

12 A. Well, benzine itself is, in my
13 opinion, is a lot less a carcinogen than people
14 think it is, and our -- I don't know why anybody
15 would know any more about it than we do because we
16 had handled it by the tons.

17 We're the biggest benzine purchaser in
18 the world at one time according to somebody that
19 told me that.

20 Benzidine I'll buy. Asphalt I don't
21 know because I don't know what they're talking
22 about. Asphalt's like saying goo. I mean goo can
23 be a lot of different things.

24 Aromatic organic chemicals, I don't
25 believe that's true of that because it indites too

1 many materials. Aromatic organic chemicals
2 includes an enormous number of chemicals that have
3 never been demonstrated to be carcinogenic.

4 Anthracene, crude, I don't know there.

5 Aniline and its derivatives, when
6 you're messing with aniline, aniline does not
7 cause cancer. We tested aniline. We know. You
8 can -- some of its near derivative will because,
9 let's be honest with ourselves, beta naphthylamine
10 causes cancer.

11 Creosote, I don't know what creosote
12 is. I don't even know what mineral oil is crude,
13 because mineral oil to an oil people is stuff,
14 virgin oil out of the ground, and mineral oil can
15 contain a whole lot of things.

16 Naphthylamine, that's a dandy. That
17 is surely a carcinogen and certainly the beta
18 isomer.

19 Oil shale, I don't know.

20 Paraffin, I don't know why paraffin
21 would cause skin cancer. I really don't.

22 Pitch, I don't know what pitch is
23 either.

24 Soot, I don't know what soot -- soot
25 can be four thousand compounds on a little carbon

1 spindala. I don't know what spindala even is, and
2 tar, of course, is practically anything.

3 There are some dandies in here, and
4 Charlie knew what he was talking about in some of
5 these things. He suspected these.

6 I don't think there's ever much of
7 proof that some of them were there, the
8 carcinogens of sufficient power to create problems
9 in industry, but there's some here that are
10 dandies.

11 The naphthylamine beta is really a
12 dandy. It causes cancer.

13 Benzidine, some of its close
14 derivatives cause cancer without a doubt.

15 Q. There's a second table there, too, Dr.
16 Hine's letter, or memorandum.

17 A. Oh, he's talking about precancerous
18 lesions and that stuff.

19 Q. Yes, sir. The second page of that
20 table on precancerous lesions, there's one there
21 that shows lungs. Do you see that?

22 A. Bone marrow. Yeah, lungs.
23 Pneumoconiosis and chronic pneumonia.

24 Q. And the causative agents that are
25 listed under lungs?

1 A. It says asbestos arsenic, tar, sock
2 oil, whatever the hell that is, or is that soot
3 oil? I don't know. Mist.

4 Chrome salts, chrome pigments, nickel
5 carbonea. That will do it. Some of them will.
6 Some of them won't. He has gone from pure
7 inorganics to organics that really kind of makes
8 the thing not very useful to anybody except that
9 he has got some of them that are dandies.

10 Q. Do you have any recollection, Mr.
11 Garrett, of Dr. Charles Hine sharing his thoughts
12 about the pneumoconioses and asbestos being
13 precancerous lesions?

14 A. No.

15 Q. As far as you can recall, that never
16 came up at any of the API meetings?

17 A. Not to my -- no, not to my knowledge.
18 To be perfectly honest with you, I never saw
19 Charlie at many of those -- many of those
20 meetings. Well, this may not be true. I knew
21 him.

22 You know, you're asking me to look
23 back thirty-five years and come up with a name of
24 the guy and what his serial number was on his butt
25 or on his tag. I can't even remember my own

1 serial number anymore. I'm glad.

2 Q. That's why I said earlier just your
3 best recollection is the best we can do.

4 A. No. I knew Charlie. I knew he was
5 a -- was a -- did a lot of work in this area. He
6 has in there included all of those known
7 carcinogens, but there's a lot of them in there
8 that are simply not carcinogenic or do they -- how
9 many of them raises the back of -- the hair on the
10 back of my head -- and I'll bet I have as much
11 experience with cancer from chemicals as anybody
12 -- would be the beta naphthylamine derivatives.

13 Where is that group listed again? Can
14 I see it a minute? Just a minute.

15 Aniline, no. Anthracene, uh.
16 Aromatic organic chemicals, my God, that's a
17 million of those. It's not specific enough.

18 Asphalt, which is all a mess of --
19 benzidine, I would be suspicious of many of its
20 derivatives. Benzol derivatives don't mean
21 anything because benzol is a common name, not a
22 chemical name.

23 Chlorinated aliphatic hydrocarbons is
24 bologny. We tested too many of those.

25 Creosote I don't know about because

1 creosote is a goo that's created in the oil
2 refining industries.

3 Mineral oil is crude. I'm not -- I
4 don't believe I'd buy that.

5 Naphthylamine beta is a dandy. It is
6 really a nifty carcinogen in humans.

7 Oil shale, what is the substrate the
8 oil shale is coming out of? He doesn't define
9 that and until you do define that, you haven't got
10 much to go on.

11 Paraffin oil crude, I don't know what
12 that means.

13 Pitch, if he means organic slop, goo,
14 that comes out of a heating chemical materials to
15 make products, pitch and soot, I don't know.

16 Spindle oil, I don't even know what
17 that is.

18 Tar, as -- what's tar? I don't know
19 what tar is.

20 Those I would -- I would buy, the ones
21 that he has -- most of the then known carcinogenic
22 materials fall in his categories, but there's a
23 vast number in there that fall -- that have never
24 been proven and we've tested some that have shown
25 no carcinogenic tendencies, and believe me, we've

1 had big problems with naphthylamines before.

2 Q. Mr. Garrett, if I could, I would like
3 to kind of switch gears with you for a second.

4 A. Okay.

5 Q. Let me ask you some names of some
6 people if I could and see if you might recognize
7 it, and I don't know if this is true, but the
8 affiliation I have for these people is something
9 called Monsanto Research.

10 Is there a separate entity that you
11 know of called Monsanto Research?

12 A. Well, there used to be and I suspect
13 there is still. There used to be a research
14 operation that was for the whole corporation.

15 Then the individual divisions had
16 research as well, and the organization now I think
17 is a little different than that, and changed, but
18 that doesn't make any difference. It still may be
19 true at the time these were done.

20 Q. These names may or may not be
21 associated with that organization, but that's how
22 I have them listed. What -- the first name is
23 William H. Westendorf, W-e-s-t-e-n-d-o-r-f?

24 A. Yeah. We had him for a while.

25 Q. Can you tell us what he did, sir, at

1 Monsanto?

2 A. No, because I don't know. If you're
3 talking about useful work, I don't know.

4 Q. Well --

5 A. From my standpoint.

6 Q. Okay. Can you tell us that he was in
7 Monsanto Research even?

8 A. No, I can't even tell you that. I
9 think he was. You know, I bet you're talking
10 thirty years memory and mine is beginning to fade.
11 I can't hear worth a damn either, but go ahead.

12 Q. Was there a Monsanto Research
13 operation in Pittsburgh at some time that you know
14 of?

15 A. No, not that I know of.

16 Q. The one that you're familiar with was
17 located where, sir? Monsanto?

18 A. All over the country. We had research
19 facilities in the operating divisions. The old
20 plastics divisions operation research center was
21 at Springfield, Mass.

22 The inorganic division's operational
23 research center was originally -- oh, God, where
24 is it? All of it's in St. Louis now.

25 It's all been sucked into St. Louis

1 and put in the labs either at the main office here
2 or the ones out in the county, the two big labs,
3 which is a good idea because it is -- this is bad
4 ideas and good ideas.

5 You don't have people working on
6 individual division work but you do have them
7 working where you can use the specialists
8 throughout the system here that you couldn't use
9 when they were all over Hell's grace.

10 Q. The next name that I have, Mr.
11 Garrett, is Theodore K. Kozuszek, K-o-z-u-s-z-e-k?

12 A. Kozuszek, Ted Kozuszek.

13 Q. Yeah. How did you know Mr. Kozuszek?

14 A. I would just as soon not say.

15 Q. Well --

16 A. Well, just one of those things. I
17 don't think -- I don't recall him that well
18 anyway, and I would be -- I've heard the name,
19 let's put it that way.

20 Q. I'm not inviting any negative
21 connotations at all.

22 A. Oh, I understand that, too. If I knew
23 anything that would help you, I'd say it, but I
24 don't know.

25 Q. Would you recall a Mr. John E.

1 Bradley?

2 A. No, that doesn't mean that he wasn't
3 in Monsanto. I just don't recall him.

4 Q. Yes, sir. How about a Mr. Carl D.
5 Bohl, B-o-h-l?

6 A. He worked for me.

7 Q. He worked for you?

8 A. He worked for me. He was my noise
9 man.

10 Q. Oh, that's the gentleman that you told
11 me about earlier that was the person that was
12 really good at noise work?

13 A. Best man I ever saw in industrial
14 noise, yes.

15 Q. Okay. Is Mr. Bohls still living or
16 working?

17 A. He's out in St. Louis County living
18 out there. He's divorced -- I mean "He's
19 divorced." He's -- he left Monsanto almost at the
20 time I did, quite -- his wife recently died.

21 He's living by himself out in St.
22 Louis County. In fact, I saw him the other day.

23 Q. Would you recall a Mr. Richard H.

24 Burr, B-u-r-r?

25 A. Dick Burr, yeah, I knew him.

1 Q. How did you know him?

2 A. Dick Burr was a -- was a safety man
3 and worked in our -- in one of our safety
4 operations.

5 Q. Was he in manufacturing or at the
6 corporate level or can you say, sir?

7 A. The last time I had track of him, he
8 was in one of the divisions.

9 Q. In which facility, would you recall?

10 A. Oh, I don't know. It would be a
11 number of facilities, but I don't know where
12 exactly he was.

13 Q. Do you remember what division he
14 worked in at Monsanto?

15 A. I would suspect it was the old organic
16 division, but I don't know. I would be hazarding
17 a guess.

18 Q. How about a gentleman named John E.
19 Howell, H-o-w-e double l?

20 A. No.

21 Q. And how about Dr. George J. Levinskus,
22 L-e-v-i-n-s-k-u-s?

23 A. Dr. Levinskus was our toxicology --
24 was the director of toxicology in the medical
25 department.

1 Q. And can you tell me for what time
2 period Dr. Levinskus --

3 A. George came from -- oh, gosh. Had to
4 have been -- when I retired, he had to have been
5 there almost twenty years in St. Louis.

6 Prior to that he worked -- he was a --
7 was working out of a school, one of the
8 universities in Connecticut, I believe.

9 Q. Would you know if he's still with
10 Monsanto?

11 A. He retired from Monsanto. Whether
12 he's still in town or whether he's moved back to
13 the east or whether -- his kids are scattered all
14 over hell. I know that.

15 I don't know. No, I really wouldn't.
16 I'd be hazarding guesses that would be hazarded
17 twice over.

18 Q. Would you recall ever meeting a
19 gentleman named Roy Bonsib, who was with Standard
20 Oil of New Jersey?

21 A. Oh, Roy Bonsib? I wrote two papers
22 with those people. I don't recall that name. I
23 wrote a couple papers with the oil guys, some of
24 the oil guys.

25 What have we got, somebody having a

1 fit?

2 Q. I think it sounds like a shouting
3 match back there behind the doors.

4 MR. BLANKS: Straighten them out,
5 Warriene.

6 Q. Mr. Garrett, let me just hand this
7 across to you. It's the first page of a
8 publication, it's called "Dust Producing
9 Operations in the Production of Petroleum Products
10 and Associated Activities" by Roy S. Bonsib, who
11 is shown to be in 1937 with the Standard Oil
12 Company of New Jersey.

13 Let me just ask you if you've ever
14 seen that cover before that you might recall, sir?

15 I can tell you I got that from Jim
16 Hammond. I don't know if he might have ever given
17 you a copy of it or not.

18 A. I know Jim pretty well. Old Jim and I
19 used to fight the battle between Humble and
20 Monsanto.

21 Q. But you don't recall seeing this
22 report from Mr. Bonsib?

23 A. No, I do not. I do not even recall
24 the name actually. Keep in mind you're looking at
25 a very old memory.

1 Q. Well, this was written in July 1937,
2 too, long before you came into the business.

3 A. That's true. I was still practicing
4 with my stick in the National Guard Armory in
5 Durant, Oklahoma, at the time --

6 Q. Thank goodness.

7 A. -- in an effort to get a dollar and a
8 quarter a week for drilling.

9 Q. I'm glad somebody was doing it.

10 A. Got paid every three months. I needed
11 the dollar and a quarter badly. It got me to
12 spend five years of my life in the military,
13 though.

14 Q. We're looking here, sir, at your
15 resume and I see here one of your listed
16 publications is called "A Review of Exposures to
17 Oil Mist," and you have some co-authors on that?

18 A. Uh-huh.

19 Q. Nathan Van Hendricks?

20 A. Van was with the Standard of Jersey.

21 Q. Yes, sir. George Collings? G.H.
22 Collings?

23 A. Isn't that strange? I wrote a paper
24 with him. I don't remember where he's from. I
25 think he probably was with Standard of Jersey,

1 also, but I'm not absolutely sure of that.

2 Q. And then you've got A.E. Dooley, Allen
3 Dooley?

4 A. God, where did that come from?

5 Q. I believe he was with the Texas
6 company or Texaco.

7 A. Oh, yeah. Al Dooley was our -- was a
8 hygienist, chief hygienist for Texaco, and I knew
9 him very well. He and I -- but the other guy I
10 don't draw up.

11 Q. And then J.B. Rather, Jr. is the other
12 listed co-author. I'm afraid I don't know Mr.
13 Rather.

14 A. Neither do I very well apparently.

15 Q. You authored that paper in the
16 archives of Environmental Health in 1962 with
17 those gentleman, at least according to your resume
18 here.

19 How is it that you came to author that
20 paper with these gentleman? Can you give me a
21 rendition there?

22 A. We were -- we were -- actually, it was
23 Van Hendrick and I had get some information from
24 these guys, is what we wrote the paper with, but
25 we wrote the paper because there was a big hoopus

1 about pits, oil pits, that sort of thing, and what
2 you do with waste oil.

3 And keep in mind you're talking many
4 years ago, so you didn't have some of the modern
5 destructive devices that we have today.

6 Q. Do you ever remember learning, Mr.
7 Garrett, that Allen Dooley published on the
8 subject of asbestos disease --

9 A. No.

10 Q. -- in the 1930's?

11 A. No, I don't doubt that in the
12 slightest.

13 Q. Did you know that Mr. Dooley had been
14 an employee of the State of Pennsylvania at one
15 time before he went to Texaco?

16 A. No, no, but that doesn't surprise me.
17 Most of the early industrial hygiene people came
18 out of state governmental operations, including my
19 initial boss, Elmer Wheeler, was the New Hampshire
20 hygienist prior to World War II, went off as a
21 reserve officer, fought his battle with his
22 anti-aircraft unit in the ETO, came back and was
23 put in the then U.S. Army industrial hygiene
24 laboratory.

25 I didn't know they even had one, but

1 they did and it was over in the -- in the chemical
2 warfare place, and so there were a lot of -- those
3 people came out of -- mostly came out of the
4 states because originally there was no federal
5 government thing.

6 When I came back from the war, there
7 wasn't even any federal laws on pollution or
8 anything else, and we helped to phrase some of
9 them.

10 The states were getting to a point
11 where they were so ragged in their applications
12 and their demands that there was never going to be
13 any interstate commerce unless the government
14 intervened, and they did in about 1960 -- 1955,
15 '56, '57.

16 They didn't bring much to the party,
17 but the fact is they did bring some kind of
18 interstate ability to the party. You know,
19 Pennsylvania had one law and West Virginia had
20 another and, hell, nobody could abide by any of
21 them, so nobody did.

22 Q. Do you recall learning about the
23 Walsh-Heeley Act at any time?

24 A. Yes.

25 Q. Would you know, sir, if, based on your

1 experience, if Monsanto was subject to the
2 Walsh-Heeley Act?

3 A. No, not -- I wouldn't know whether
4 they were subject to it or not.

5 Q. Do you remember any of your work as an
6 industrial hygienist with Monsanto dealing with
7 compliance with the Walsh-Heeley Act?

8 A. No, probably was, but it was in
9 compliance with whatever we were attempting to
10 comply with at the time.

11 Q. Do you recall meeting Dr. Clyde Berry?

12 A. Yes.

13 Q. How is it that you know Dr. Berry?

14 A. Where did I meet him? I have no idea.

15 Q. He's shown as being at the same
16 meeting in Houston in 1951 that you attended.
17 Could you have met him then when he was an
18 employee of Standard of New Jersey?

19 A. Could be. Could be.

20 Q. Do you recall knowing him when he was
21 a Standard of New Jersey employee?

22 A. No, I don't recall him being there. I
23 really don't. But people in this business,
24 highly -- highly skilled separate types of
25 technical people, the oddballs, if you want to

1 ask, have really -- in those days we were
2 oddballs.

3 Nobody knew what the industrial
4 hygienist was, so you didn't tell, you know. You
5 worked for Monsanto. What do you do? I work in
6 their laboratories. What laboratories? Their
7 research laboratories.

8 That's perfectly honest because the
9 laboratories for our toxicology work was in the
10 research laboratories. So we told them -- told
11 the flat truth.

12 You tell them you were an industrial
13 hygienist in those days, their mouth would drop
14 open. "What is that?" You know.

15 That's very much like some of the
16 specialties in medicine are just about as bad.

17 Q. I think Dr. Berry's self-description
18 was a one man molecular film stretched thin and
19 ruptured in places.

20 A. Pretty much so. Some places it was
21 ruptured purposely and in the construction thereof
22 in some it was done accidentally.

23 MR. HOBSON: Mr. Garrett, you've been
24 awfully patient with my questions today and I
25 appreciate it, sir. I'm going to invite these

1 other folks to have any questions, if they don't,
2 we're done. If they do, I might have a few more,
3 but thank you very much, sir.

4 THE WITNESS: Okay. Thank you. We
5 haven't thrown anything at each other.

6 MR. HOBSON: That's a good beginning.

7 THE WITNESS: You didn't stand up,
8 rare up in the air and call me a dirty son of a
9 bitch so I could get mad at you and then you'd
10 have a picture of me doing this, so --

11 MR. ELLIS: Let's see

12 A. -- you could and show it to the damn
13 court in Beaumont, Texas.

14 MR. ELLIS: Let's see if anybody else
15 has got any? Anybody?

16 MR. HOBSON: Mr. Garrett, thank you
17 very much for your patience, sir. You've been
18 very kind.

19 THE WITNESS: Thank you.

20 (Witness excused.)

21 (Witness excused.)

22 (By agreement of all the parties, the
23 signature of the witness is not hereby waived.)

24 *****

25

1 I, Jack T. Garrett, do hereby state that I
2 have read the foregoing questions and answers
3 appearing in this transcript of my deposition Page
4 3 through and including Page 249; that this is a
5 true and accurate (corrected) report of said
6 answers given in response to the questions
7 appearing herein.

8
9 _____
10 Jack T. Garrett

11
12 CERTIFICATE

13 STATE OF MISSOURI)
14) SS
15 COUNTY OF ST. LOUIS)

16 Before me personally appeared Jack T.
17 Garrett to me known to be the person described in
18 and who executed the foregoing instrument and
19 acknowledged to and before me that he executed the
20 said instrument in the capacity and for the
21 purpose therein expressed.

22 WITNESS my hand and official seal this ____
23 day of _____, 1993.

24 _____
25 NOTARY PUBLIC

26 My Commission expires:

NOTARIAL CERTIFICATE

STATE OF MISSOURI)
) SS
CITY AND COUNTY OF ST. LOUIS)

I, JULIE STELFOX, a Certificate of Merit Reporter and Notary Public in and for the State of Missouri do certify that pursuant to the foregoing stipulation, taken at the offices of Stouffer's Concourse Hotel, 9801 Natural Bridge Road, County of St. Louis, State of Missouri,

JACK T. GARRETT

came before me, was by me duly sworn to testify the whole truth of his knowledge of the matters in controversy aforesaid, was examined and his examination then written in stenotypy by me, and afterwards typed, and signed, as hereinbefore set out, on the day in that behalf aforesaid, and said deposition is herewith returned.

I further certify that I am not counsel, attorney, or relative of either party, or clerk or stenographer of either party, or of the attorney of either party, or otherwise interested in the event of this suit.

Given under my hand and notarial seal at my office in the County of St. Louis, State of Missouri, on the ____ day of _____, 1993.

My Commission Expires: May 31, 1997.

Julie E. Stelfox,
Certificate of Merit Reporter and
Notary Public in and for the
State of Missouri