

1 B-126,986
2 RUSSELL ALLEN, ET AL * IN THE DISTRICT COURT OF
3 VS. * JEFFERSON COUNTY, TEXAS
4 AMERICAN PETROFINA, ET AL * 60TH JUDICIAL DISTRICT
5
6 A-134,614
7 FRENCH HICKS, ET AL * IN THE DISTRICT COURT OF
8 VS. * JEFFERSON COUNTY, TEXAS
9 BETHLEHEM STEEL CORP., *
ET AL * 58TH JUDICIAL DISTRICT
10
11 B-141,242
12 ROOSEVELT SCOTT * IN THE DISTRICT COURT OF
13 VS. * JEFFERSON COUNTY, TEXAS
14 AMERICAN OPTICAL CORP., *
ET AL * 60TH JUDICIAL DISTRICT
15
16 A-138,633
17 MARGARET FAULKNER, ET AL * IN THE DISTRICT COURT OF
18 VS. * JEFFERSON COUNTY, TEXAS
19 AKRON CHEMICAL CO., ET AL * 58TH JUDICIAL DISTRICT
20
21 A-136,143
22 KEITH GIBLIN, ET AL * IN THE DISTRICT COURT OF
23 VS. * JEFFERSON COUNTY, TEXAS
24 MOBIL OIL CORPORATION, *
ET AL * 58TH JUDICIAL DISTRICT
25 VIDEO DEPOSITION OF VERALD K. ROWE
TAKEN ON OCTOBER 1, 1992, AND OCTOBER 2, 1992

2 JOSEPH E. BARNARD, ET UX * IN THE DISTRICT COURT OF
3 VS. * JEFFERSON COUNTY, TEXAS
4 ALLIED-SIGNAL, INC., ET AL * 172ND JUDICIAL DISTRICT

5
6 A-140,498

7 JOYCE A. BORNE, ET AL * IN THE DISTRICT COURT OF
8 VS. * JEFFERSON COUNTY, TEXAS
9 ALLIED-SIGNAL, INC., ET AL * 58TH JUDICIAL DISTRICT

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11
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14 VIDEO DEPOSITION OF

15
16 VERALD K. ROWE

17
18
19
20 On October 1, 1992, and October 2, 1992, at
21 approximately 9:00 a.m., the videotaped deposition of
22 Verald K. Rowe, a Witness in the above-styled cause,
23 was taken at the instance of the Plaintiffs at the
24 Sheraton Greenway, 2510 W. Greenway, Phoenix, Arizona,
25 pursuant to Stipulation of Counsel contained herein.

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2 respective client or clients in the cause of action or
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1 S T I P U L A T I O N

2

3 IT IS STIPULATED AND AGREED BY COUNSEL FOR
4 THE PARTIES HERETO:

5 That the deposition of the Witness named
6 herein is taken pursuant to Notice;

7 That the Witness may sign the deposition
8 before any duly authorized and acting Notary Public
9 for the appropriate area in which signature is
10 obtained;

11 That this deposition, or any part thereof,
12 when so taken may be used upon the trial of this cause
13 with the same force and effect as if the Witness were
14 present in court and testifying in person;

15 That all objections, other than those that
16 relate to the form of the question and responsiveness
17 of the answer, are hereby preserved and may be made at
18 the time any testimony herein is sought to be offered
19 upon the trial of this cause, despite no objection
20 having been made at the time the testimony was taken;

21 That the deposition is to be videotaped by
22 Paul Robichau;

23 That Sandra S. Sullivan, a Certified
24 Shorthand Reporter in and for the State of Texas, may
25 act as a Certified Shorthand Reporter in and for the

18

1 State of Arizona for the purposes of swearing the
2 Witness in this deposition;

3 That the original transcript of the
4 deposition, pursuant to Rule 206 of the Texas Rules of
5 Civil Procedure, will be given to Joseph C. Blanks for
6 safekeeping and use at trial. In the event the
7 original deposition is unavailable at the time of
8 trial, an unsigned copy of the transcript may be
9 utilized in lieu thereof.

10

11 * * * * *

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1 (REPORTER'S NOTE: WHEN ASKED BY
2 THE REPORTER TO STATE ANY STIPULATIONS
3 THEY MAY HAVE FOR PURPOSES OF TAKING
4 THE DEPOSITION, COUNSEL STATED AS
5 FOLLOWS:)

6
7 MR. HOBSON: Pursuant to the
8 Rules.

9 And would the witness like to
10 read and sign his deposition?

11 MR. PIERCE: Yes, he would.

12 Additionally, I'd like to make a
13 statement for the record at this time
14 that this witness is not and has never
15 been an officer, managing agent, or
16 director of The Dow Chemical Company
17 nor of any other defendant in this
18 matter; that the witness has not been
19 properly served with any subpoena but
20 is here voluntarily as a fact witness;
21 and, additionally, that the witness
22 does have a hearing problem. He would
23 appreciate it if the questioner would
24 speak up and also speak slowly and try
25 to enunciate carefully when asking your

1 questions. Also, please try to face
Page 17

2 the witness when questioning him. And,
3 additionally, in particular, please,
4 everyone, try to avoid rustling papers
5 because this can interfere with his
6 hearing aids.

7 MR. BLANKS: If you'd kindly
8 identify yourself so we know who you
9 are, sir.

10 MR. PIERCE: I am Stanley Pierce
11 with the law firm Rivkin, Radler &
12 Kremer; and I am V. K. Rowe's attorney.

13 MR. BLANKS: Well, also for the
14 record, Mr. Rowe was not served with a
15 subpoena, although he certainly could
16 have been, at the request of Dow
17 Chemical Company's counsel who assured
18 us that he would appear through their
19 cooperation pursuant to the notice as
20 though he had been served and
21 presumably would also bring with him
22 such documents as were addressed in the
23 subpoena duces tecum that was part of
24 the notice. And our reason for not
25 serving this gentleman was to

21

1 accommodate him and Dow's attorneys.

2 MR. PIERCE: He is present.

3 MR. BLANKS: Very well.

4 And thank you, Mr. Rowe, for

5

6

7

VERALD K. ROWE,

8 having been duly sworn, testified as follows, to-wit:

9 EXAMINATION BY MR. HOBSON:

10 Q. Would you introduce yourself, please, sir.

11 A. My name is Verald Keith Rowe.

12 Q. And where do you reside, please, sir?

13 A. I reside in Sun City, Arizona.

14 Q. I understand it's "Dr. Rowe." I understand
15 that you have an honorary doctorate degree. Is that
16 correct?

17 A. That is correct.

18 Q. Dr. Rowe, I understand that you are a
19 retired employee of The Dow Chemical Company. Is that
20 right?

21 A. Would you please repeat.

22 Q. Yes, sir. I understand that you are a
23 retired employee of The Dow Chemical Company.

24 A. That is correct.

25 Q. Would you tell us, sir, when you began

22

1 working for Dow.

2 A. I began working for Dow the 1st of November,
3 1937.

4 Q. And what was your first job with Dow,
5 please, sir?

6 A. I was classified as a biochemist.

7 Q. What were the duties of a biochemist, the
8 position that you had when you began in 1937 with

9 Dow?

10 A. I was one of the --

11 MR. PIERCE: I would like to

12 object to the form of the question.

13 Are you asking Dr. Rowe what his

14 specific duties are or all biochemists'

15 within Dow at that time?

16 Q. I would like to know what you did,

17 Dr. Rowe. Let me do the question again, please, sir.

18 Would you tell us, Dr. Rowe, what you did as

19 a biochemist when you first joined Dow in 1937.

20 A. I was working mostly with the animals in

21 experimental work that was in progress.

22 Q. In what way, sir?

23 A. Handling, treating.

24 Q. Did you do anything other than handle and

25 treat the animals as a biochemist when you first began

23

1 working in 1937?

2 A. Recorded observations and then pertinent

3 information relative to the work that was to be done.

4 Q. Tell us what you mean by "treated" in regard

5 to these animals.

6 A. Administering various materials to the

7 animals.

8 Q. What group or organization within Dow

9 Chemical Company were you working within in 1937 when

10 you began?

11 A. The biochemical research laboratory.

12 Q. Was the biochemical research laboratory
13 already established when you began working in 1937?

14 A. Yes.

15 Q. Do you have any understanding as to when the
16 biochemical research laboratory at Dow would have been
17 begun - would have started?

18 A. Yes.

19 Q. When is that, sir?

20 A. The first person involved in that was hired
21 in the fall of 1933.

22 Q. Based on your work and your review of
23 records at Dow, do you have some understanding of the
24 history of the biochemical research laboratory from
25 1933 until 1937 when you began?

24

1 MR. PIERCE: Objection to the form
2 of the question.

3 A. Yes.

4 Q. Would you tell me your understanding of who
5 it was that began the biochemical research laboratory
6 at Dow, if you know, and who it was that was involved
7 in the management of that group, sir, from 1933 to
8 1937.

9 MR. PIERCE: Continue the
10 objection.

11 A. Dr. Don D. Irish was the director of the
12 laboratory.

13 Q. Would you know, sir, for how long Dr. Irish
14 was the director of the laboratory?

15 A. I do not know the date he retired from the

16 laboratory.

17 Q. Would you know approximately when he
18 retired?

19 A. It would have been in the neighborhood of
20 1970.

21 Q. Would you know if Dr. Irish is still living?

22 A. He is not.

23 Q. Was Dr. Irish in the same position as
24 director of the laboratory from 1933 until his
25 retirement?

25

1 A. Yes.

2 Q. Do you have an understanding of what
3 Dr. Irish's training was, sir, his educational
4 background?

5 A. He was trained as a biochemist.

6 Q. Would you know where he was trained?

7 A. University of Cincinnati.

8 Q. Did Dr. Irish, to your knowledge, have any
9 assistants in 1937 who helped him in the management of
10 the biochemical research laboratory?

11 A. Yes.

12 Q. Who would those have been, please, sir?

13 A. Dr. Edwin E. Dunn and Dr. Edgar M. Adams.

14 Q. What's your understanding of Dr. Dunn's
15 title in 1937, sir?

16 A. He was assistant director of the laboratory
17 and in charge of microbiological research.

18 Q. And Dr. Adams: would you tell me what you

19 understood his job to be in 1937, please.

20 A. He was in charge of toxicology section.

21 Q. Were there only those two sections in 1937
22 of the biological research laboratory, microbiology
23 and toxicology?

24 A. No.

25 Q. What others existed, please?

26

1 A. There were subsections under Dr. Dunn having
2 to do with preservation of wood and work with
3 development of agricultural chemicals.

4 Q. Any other subsections?

5 A. Not that I recall.

6 Q. Which one of these groups or which groups
7 did you work in, sir, in 1937?

8 A. In the toxicology group.

9 Q. To whom did you report when you began in
10 1937, please?

11 A. Dr. Adams.

12 Q. And then Dr. Adams would have reported to
13 Dr. Irish, is that correct, as you understood it?

14 MR. PIERCE: Objection to the
15 form.

16 Q. I'm sorry. I didn't get your answer, sir.

17 A. Yes.

18 Q. Would you give me some of the details of the
19 kinds of things you were doing in 1937 at the
20 biochemical research laboratory.

21 A. We were studying the toxicology of many
22 materials of interest to the company.

23 Q. Would you give me some examples of those
24 materials, please.

25 MR. PIERCE: This continues

27

1 through - up through 1937?

2 MR. HOBSON: That's right.

3 A. At that time we were working with - with
4 the - with phenols, chlorophenols, methyl bromide. I
5 don't recall what else was going on at that time.
6 Those were major areas.

7 (By Mr. Hobson)

8 Q. What kinds of work activities did you,
9 yourself, have in this 1937-1938 time period shortly
10 after you joined Dow in any action involving phenols?

11 A. We would be administering various phenols to
12 animals.

13 Q. What kind of animals were you using in this
14 time period, please, sir?

15 A. Rats, guinea pigs, rabbits.

16 Q. And would you describe the kind of testing
17 that you were doing with the phenol on rats, guinea
18 pigs, and rabbits, please.

19 A. We were studying the effect of the materials
20 and the amounts that were required to produce whatever
21 effect it did, what that effect was, and by various
22 routes of administration.

23 Q. Would you give me your best recollection of
24 the various routes of administration that you were
25 testing in this 1937 and shortly thereafter time

1 period for these materials on these animals.

2 A. Would you please rephrase that or --

3 Q. Yes, sir. I'd like to know just what it was
4 you were doing with phenol and the rats, the guinea
5 pigs, and the rabbits. How were you doing whatever it
6 was you were doing with this material and these
7 animals?

8 A. We would administer the material by stomach
9 tube - various dosages. We would apply it to the
10 skin, measure rate of absorptions. And with those
11 materials, eye irritation. We did not do any vapor
12 work with those.

13 Q. Did the biochemical research laboratory have
14 the capability of working with vapors and dosing
15 animals with vapors in the 1937 time period when you
16 began with Dow?

17 A. Yes.

18 MR. PIERCE: Objection to the form
19 of the question.

20 Q. What vapors do you recall that you worked
21 with in the biochemical research laboratory within,
22 say, the first two years that you went to work for
23 Dow?

24 MR. PIERCE: Objection to the form
25 of the question.

1 But answer it if it's answerable.

2 A. Methyl bromide.

3 Q. Would you describe what kind of work you did
4 evaluating the vapor of methyl bromide in this 1937
5 and shortly thereafter time period, please.

6 A. We exposed animals to various concentrations
7 for various periods of time.

8 Q. What kinds of time periods would you have
9 been looking at, please?

10 A. Anything from minutes to months.

11 Q. Were you familiar with any other
12 similar-type toxicity testing laboratories existing in
13 the Country in the 1937-1938 time period?

14 A. Yes.

15 Q. Where were some of the other laboratories in
16 that era, to your knowledge?

17 A. There was a laboratory at Mellon Institute.
18 There was work going on at the University of
19 Cincinnati, Saranac Laboratory, laboratories of the
20 U.S. Public Health Service, and Du Pont.

21 Q. Were you familiar with the Mellon
22 Institute's toxicological testing laboratory shortly
23 after you went to work for Dow?

24 A. No.

25 Q. When would you recollect that you learned

30

1 about Mellon Institute's laboratories, if you ever
2 did?

3 A. I couldn't tell you.

4 Q. Thirties? Forties? Fifties?

5 A. The Forties.

6 Q. In the Forties when you learned of Mellon
7 Institute's activities, what did you learn?

8 A. I don't know.

9 Q. Where was it located?

10 A. In Pittsburgh.

11 Q. Was Mellon -- Did you have any understanding
12 of its affiliation or how it got its support?

13 A. Yes.

14 Q. What did you understand, sir?

15 A. It was supported by... I will say Allied.

16 Q. Allied Chemical Company?

17 A. I believe it was Allied.

18 MR. PIERCE: Mr. Hobson, I know
19 we're reserving objections other than
20 to form until trial time; but I must
21 say I don't understand why you are
22 bothering Dr. Rowe with questions about
23 what his understanding is of the
24 affiliation of Mellon in the 1940's.
25 How this could be even vaguely relevant

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1 or likely to lead to information that
2 you can utilize is just beyond me. And
3 I think perhaps if we got to the issues
4 in this matter, we'd all be happier.

5 MR. HOBSON: Well, I believe I'm
6 there.

7 A. I wish to correct that.

Rowe-Verald-K-100192.txt
8 (By Mr. Hobson)
9 Q. Yes, sir?
10 A. I don't -- It was Carbide - Carbide - United
11 Carbide and Carbon at that time.
12 Q. United Carbon and Carbide?
13 A. I believe it was what we used to call as
14 Carbide - Carbon and Carbide.
15 Q. And not Allied?
16 A. I'm not sure.
17 Q. Did you visit the Mellon Institute at any
18 time?
19 A. Yes.
20 Q. What is approximately the earliest time you
21 can remember visiting the Mellon Institute?
22 A. I can't remember.
23 Q. Would it have been in the Forties, likely,
24 you think?
25 MR. PIERCE: Objection to the

32

1 form; asked and answered.
2 A. Probably more likely in the Fifties.
3 Q. What is your earliest understanding, as best
4 you can recollect now, of what kind of work Mellon
5 Institute was doing in the area of toxicology?
6 A. They were doing much the same sort of thing
7 we were. But the first things that, I believe, were
8 they chlorinated aliphatic hydrocarbons.
9 Q. Was there any particular person that you
10 knew of by name at the Mellon Institute once you
11 became familiar with its activities?

12 A. Henry F. Smyth, Dr. Smyth.
13 Q. Can you recall approximately when it was you
14 met Dr. Smyth?
15 A. Probably about 1940.
16 Q. Can you tell me how it was you came to meet
17 Dr. Smyth, please?
18 A. It was at a convention.
19 Q. Would you remember which one?
20 A. The A.I.H.A.
21 Q. And that's the American Industrial Hygiene
22 Association?
23 A. Correct.
24 Q. Do you have a memory in your mind of
25 actually meeting Dr. Smyth at that meeting?

33

1 A. Yes.
2 Q. Tell me what you recall about the
3 circumstances that led up to meeting Dr. Smyth and
4 what you recall from that meeting, please.
5 A. I was introduced to him by Dr. Irish.
6 Q. Anything else you recall?
7 A. No.
8 Q. And was Dr. Smyth at that time already at
9 Mellon Institute, to your recollection?
10 A. Yes.
11 Q. Do you have any understanding of what
12 Dr. Smyth was doing, what his job involved at Mellon
13 Institute?
14 A. He was -- He was the agent in charge of the

15 sponsors' activity in Mellon Institute. He was also
16 associated with the University of Pittsburgh, I
17 believe; but he was a director of that operation.

18 Q. "That operation" being the Mellon Institute?

19 A. Mellon Institute's toxicology program
20 sponsored by Carbide.

21 Q. Was it your impression at the time that you
22 were introduced to Dr. Smyth by Dr. Irish that
23 Dr. Irish previously knew Dr. Smyth?

24 MR. PIERCE: Are you asking his
25 impression 52 years ago when they met?

34

1 MR. HOBSON: Sure.

2 A. Yes.

3 (By Mr. Hobson)

4 Q. Would you recall if Dr. Smyth ever came to
5 Dow's operations?

6 A. Yes.

7 Q. What's the earliest recollection you have of
8 Dr. Smyth coming to any of Dow's operations?

9 A. I don't remember.

10 Q. I take it it would have been sometime after
11 you met Dr. Smyth.

12 A. Yes.

13 Q. Would you have any understanding as to any
14 of the reasons or the purposes of Dr. Smyth's visits
15 to any of Dow's operations?

16 MR. PIERCE: Objection to the form
17 of the question.

18 Are you asking this witness if he
Page 30

19 knows what was in Dr. Smyth's mind?
20 MR. HOBSON: No. I think the
21 question was clear. I'm asking for his
22 understandings.
23 A. Would you please rephrase it or restate it.
24 (By Mr. Hobson)
25 Q. Yes, sir. Would you have any understanding

35

1 as to why Dr. Smyth would have been coming to visit
2 any of Dow's operations?
3 MR. PIERCE: Continue the
4 objection.
5 A. I don't know.
6 Q. Was Dr. Smyth at Dow's operations more than
7 once, as you recall?
8 A. Yes.
9 Q. Could you give me some idea of how many
10 times you recall Dr. Smyth might have visited Dow's
11 operations?
12 A. Several times.
13 Q. And can you give me a time period at all of
14 when these visits - these several visits - of
15 Dr. Smyth's would have occurred?
16 A. It would have been during the Forties and
17 Fifties.
18 Q. Can you tell me any of the people that
19 Dr. Smyth would have been meeting at - when he visited
20 Dow's facilities?
21 MR. PIERCE: Objection to the form

22 of the question.

23 A. Well, he would have met with Dr. Irish,
24 Dr. Adams, with me; but I don't know that it was all
25 the time or every time.

36

1 Q. Do you recall what the reason or what kind
2 of business was being transacted when Dr. Smyth would
3 come and meet with you at Dow?

4 A. I can't say for sure, no.

5 Q. You just don't remember any at all at this
6 point in time?

7 A. (Shaking head negatively) The only thing
8 that I remember on that was there was some discussions
9 with respect to the chlorinated aliphatics and the
10 work that was going on in both places.

11 Q. Was it your understanding that there was
12 some coordination between Dow's work and Mellon's work
13 on this group of chemicals?

14 A. None whatsoever.

15 Q. You were merely exchanging information about
16 what each facility was doing?

17 A. Yes.

18 Q. Do you recall, Dr. Rowe, visiting the
19 University of Cincinnati's toxicology testing
20 facilities?

21 A. Yes.

22 Q. What is your earliest recognition -- What is
23 your earliest memory of the time that you visited the
24 University of Cincinnati's toxicity testing
25 facilities?

1 A. It would have been in the late Forties or
2 early Fifties.

3 Q. Was there someone at the University of
4 Cincinnati's facilities that you dealt with there,
5 that you recall?

6 A. Yes.

7 Q. Who was the person or persons at that
8 location?

9 A. Dr. Kehoe.

10 Q. How is it that you came to know Dr. Kehoe?

11 A. I was introduced to him by Dr. Irish.

12 Q. And would you recall the circumstances of
13 you meeting Dr. Kehoe?

14 A. I believe it was at his laboratory.

15 Q. There in Cincinnati?

16 A. Yes.

17 Q. And did Dr. Irish and you then travel to the
18 University of Cincinnati?

19 A. Yes.

20 Q. What do you recall about the capabilities
21 for toxicity testing at the University of Cincinnati
22 in this early time period when you first met
23 Dr. Kehoe?

24 MR. PIERCE: Objection to the form
25 of the question. It's vague and

1 overbroad.

2 But go ahead and answer.

3 A. We were concerned or interested in how they
4 were handling materials that - particularly vapors
5 which were flammable. And they had been doing some
6 work on something or other. I don't remember what.

7 Q. Was the University of Cincinnati doing work
8 under contract for Dow?

9 A. No.

10 Q. What is it that led to this visit? Why was
11 this interest on the part of you and Dr. Irish in
12 the - these flammable vapors?

13 A. We were interested in seeing how or what
14 kind of chambers and how they had constructed their
15 chambers to avoid having internal explosions.

16 Q. Was it that you were considering doing some
17 work at Dow and wanted to utilize any design
18 advantages that Dr. Kehoe's group might have had?

19 A. Yes.

20 Q. Did you have -- Do you now have any
21 understanding as to when the toxicity program -
22 toxicity testing program - at the University of
23 Cincinnati began?

24 A. I do not.

25 Q. What was your impression of Dr. Kehoe as a

39

1 scientist when you met him and after you visited with
2 him over the years?

3 A. I had great respect for him.

4 Q. Was there anyone else at the University of
5 Cincinnati that you came to know over the years
6 besides Dr. Kehoe?

7 A. Dr. Deichmann.

8 Q. And could you spell that for me, please,
9 sir?

10 A. D-e-i-c-h-m-a-n-n.

11 Q. And would you tell me your understanding of
12 what Dr. Deichmann's position was at the University of
13 Cincinnati.

14 A. I do not know.

15 Q. Was Dr. Deichmann always at the University
16 of Cincinnati when you knew him?

17 A. No.

18 Q. Where did he go after or before he was at
19 the University of Cincinnati?

20 A. He was at Miami after that. Whether he was
21 somewhere else in between, I don't know.

22 Q. Would you recall Dr. Deichmann's first name?

23 A. William.

24 Q. Anyone else at the University of Cincinnati
25 you recall?

40

1 A. I don't recall.

2 Q. Did Dow utilize outside laboratories for
3 contract work in the area of toxicology at any of the
4 time you were an employee of Dow?

5 A. Yes.

6 Q. Going back as early in time as you can,
7 would you tell me who you recall being utilized by Dow

8 for contract toxicity testing.

9 A. We used Dr. Kligman, Dr. Clauder for work on
10 skin sensitization.

11 Q. And those are two different people, Kligman
12 and Clauder?

13 A. They were -- They were both, I believe, with
14 the University of Pennsylvania.

15 Q. And what time period would you be referring
16 to, Dr. Rowe?

17 A. It would have been in the Fifties.

18 Q. And what kind of work do you recall being
19 done at the University of Pennsylvania?

20 A. Pharmacological work.

21 Q. What kinds of materials?

22 MR. PIERCE: Objection to the form
23 of the question.

24 A. I don't recall specifics. Lots of materials
25 that we were interested in and that - where we

41

1 anticipated extensive skin contact as a result of
2 their use or handling.

3 Q. Did any of the work at the University of
4 Pennsylvania, to your knowledge, involve any human
5 experimentation?

6 A. Yes.

7 Q. Would you give me your understanding or
8 recollection of what that was, please.

9 A. Oh, it was skin irritation, skin fatiguing
10 experimentation.

11 Q. Were you, yourself, directly involved in
12 that work at the University of Pennsylvania as far as
13 overseeing it or helping design the projects?

14 A. Yes.

15 Q. What was your role?

16 A. I acted as the Dow contact person.

17 MR. PIERCE: Are we going to get
18 into any relevant questions today,
19 anything to do with asbestos which is
20 my understanding of what this is
21 about?

22 MR. HOBSON: I think these are
23 relevant questions.

24 MR. PIERCE: I'll let it go a
25 while longer.

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1 MR. HOBSON: I'm sorry. I forgot
2 where we were. Did we have a question
3 or an answer; or where were we,
4 Madam Reporter?

5 THE REPORTER: "QUESTION: What
6 was your role?

7 ANSWER: I acted as the Dow
8 contact person."

9

10 (By Mr. Hobson)

11 Q. When you say that, "the Dow contact person,"
12 how do you mean that, Dr. Rowe?

13 A. I really don't know what you mean.

14 Q. What would have been your day-to-day

15 involvement with the people at the University of
16 Pennsylvania? What would you have been doing?

17 A. I did not have day-to-day contact with them.

18 Q. How often would the contact have been?

19 A. The beginning and end of a particular study.

20 Q. What would you have been doing in the
21 beginning of a study?

22 MR. PIERCE: Objection to the
23 form. Indications are that many
24 compounds are involved, many studies.
25 This question is really unanswerable,

43

1 unintelligible.

2 But do the best you can under
3 those circumstances, if you can.

4 A. We merely submitted materials to the
5 laboratory and asked for an evaluation of their
6 potential to cause skin fatiguing or skin irritation
7 or skin sensitization.

8 Q. Would you have been involved in designing
9 the protocol that was going to be used at the
10 University of Pennsylvania?

11 MR. PIERCE: Objection to the
12 form.

13 A. In some instances, perhaps.

14 Q. Would you, yourself, have done that, sir?

15 A. Yes, with the approval of medical
16 department.

17 Q. Whose medical department?

18 A. Our medical department.
19 Q. "Ours" being Dow?
20 A. Yes.
21 Q. And then you say you would have had
22 involvement at the end of the study. What involvement
23 would that have been, sir?
24 A. I would receive the report.
25 Q. Was there any other group at the University

44

1 of Pennsylvania that you recall Dow did contract
2 toxicity testing with?
3 A. No.
4 Q. What other contract laboratories, if any,
5 did Dow work with over the years while you were a Dow
6 employee?
7 A. We worked with the University of Rochester
8 toxicology program, University of California,
9 Industrial Biotest Laboratories, Hazleton
10 Laboratories, Food and Drug Research laboratory.
11 That's all I can recall.
12 Q. Would you have done any work with the
13 University of Rochester in the Forties and Fifties?
14 A. I don't remember the dates.
15 Q. What about the University of California,
16 would you have done any work with the University of
17 California in the Forties and Fifties?
18 A. I don't know.
19 Q. I'd like to come back to the University of
20 Cincinnati, if I could, for a moment, Dr. Rowe.
21 You told me that you knew Dr. Kehoe and

22 Dr. Deichmann.

23 Do you recall any other names of people at
24 the University of Cincinnati?

25 MR. PIERCE: Objection to the

45

1 form; asked and answered.

2 A. I don't recall.

3 Q. Would you recall a Dr. F. F. Heyroth? I
4 don't know if I'm saying it right. H-e-y-r-o-t-h.

5 A. Yes. I do.

6 Q. Was he at the University of Cincinnati?

7 A. I don't remember.

8 Q. How is it that you recall or what
9 recollection do you have of Dr. Heyroth or Hayroth?

10 A. I have very little recollection. I know the
11 name. I remember meeting him, but I have never had
12 any associations otherwise.

13 Q. What about Dr. A. W. Horton? Could be
14 Westley Horton, I believe.

15 A. I don't -- I don't know him.

16 Q. E. J. Largent? L-a-r-g-e-n-t.

17 A. Yes.

18 Q. What do you recall of Dr. Largent?

19 A. Nothing specific.

20 Q. Would you recall that he was at the
21 University of Cincinnati?

22 A. I don't remember.

23 Q. How about Dr. J. J. either "Phar" or
24 "Phair," P-h-a-i-r?

25 A. I do not know him.

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1 Q. Raymond Suskind? Dr. Suskind?

2 A. Yes.

3 Q. Was he at the University of Cincinnati, or
4 would you know?

5 A. Yes. He was.

6 Q. Did you know Dr. Suskind?

7 A. Casually.

8 Q. Can you recall how you met Dr. Suskind?

9 A. No.

10 Q. Do you have any recollection of what
11 activities Dr. Suskind carried on during his
12 professional career?

13 A. Dr. Suskind was involved in epidemiological
14 study of persons exposed at the nitro plant for
15 2,4,5-T and as - we were interested in that sort of
16 thing and had contact with Dr. Suskind.

17 Q. Can you give me the approximate time period
18 for that work, please, sir?

19 A. No.

20 Q. Not even a decade?

21 A. Late Fifties, early Sixties, somewhere along
22 that line.

23 Q. You said "the nitro plant"?

24 A. I believe that was the nitro division of
25 nitro Virginia plant for - at Monsanto.

47

1 Q. At the University of Rochester, do you
2 remember any of the individuals you dealt with there
3 when it came to toxicity testing?

4 A. Dr. Hodge. Another person whose name
5 escapes me.

6 Q. Would you recall Dr. Hodge's first name,
7 sir?

8 A. Harold.

9 MR. PIERCE: Is the purpose of
10 this deposition to go through every
11 name that Dr. Rowe knows in his long
12 and esteemed career in toxicology?

13 MR. HOBSON: Well, the purpose of
14 the deposition is to do discovery. I
15 don't think we'll get to every person
16 that he knows; but certainly the ones
17 that I'm interested in I hope we will.

18 MR. PIERCE: Well, you're
19 certainly trying to get to every person
20 he knows.

21 MR. HOBSON: I suspect Dr. Rowe
22 knows a lot more people than we'll have
23 time to get to in two days.

24 (By Mr. Hobson)

25 Q. Would you recall Dr. Kligman's first name at

1 the University of Pennsylvania, sir?

2 A. I heard people call him "Al." Whether it
3 was "Alfred" or what, I don't know.

4 Q. You said Dr. Clauder there, as well. Would
5 you recall how that's spelled, sir?

6 A. C-l-a-u-d-e-r.

7 Q. And would you recall his first name?

8 A. Joseph.

9 Q. Nelson?

10 A. Joseph.

11 Q. Joseph. I'm sorry. Would you recall what
12 kind of work was being done at the University of
13 Rochester for Dow Chemical Company?

14 A. I'm not sure.

15 Q. Can you give me an approximate time frame
16 for the work at the University of Rochester that Dow
17 had conducted there?

18 A. No.

19 Q. Would it have been prior to World War II?

20 A. No.

21 Q. You said that Dow did utilize the services
22 of the University of California for contract
23 toxicological work; is that right?

24 A. Yes.

25 Q. Was that the University of California at

49

1 San Francisco?

2 A. Yes.

3 Q. I know you've published with Dr. Charles
4 Hines. Is that one of the people you worked with
5 there?

6 A. Yes.

7 Q. Who else at the University of California,
8 San Francisco, do you recall that was involved in that
9 work for Dow?
10 A. I don't know.
11 Q. Was there someone else and you just don't
12 recall?
13 A. I don't know.
14 Q. Did you personally know Dr. Hines?
15 A. Yes.
16 Q. All right. I guess it's "Hine."
17 A. Hine.
18 Q. Do you recall how you met Dr. Hine?
19 A. Yes.
20 Q. How is that, sir?
21 A. When Dr. Hine was setting up his toxicology
22 laboratory, he visited our laboratory to see what we
23 had and how we were operating. That's the first time
24 that I recollect meeting Dr. Hine.
25 Q. Could you give me an approximate time frame

50

1 for that visit from Dr. Hine?
2 A. Probably in the Fifties. Early Fifties,
3 perhaps.
4 Q. Do you recall the name "Dr. Mayo Soley,"
5 Soley, S-o-l-e-y?
6 A. No.
7 Q. Is it accurate, sir, that the work that Dow
8 would have done with Dr. Hine at the University of
9 California at San Francisco would have been after
10 Dr. Hine came to visit your facilities?

11 A. Yes.

12 Q. For approximately what time period did you
13 work with Dr. Hine, sir?

14 A. I don't remember.

15 Q. Would it have been over the course of a
16 number of years?

17 A. Yes.

18 Q. Can you give us your impression of
19 Dr. Hine's ability as a toxicologist?

20 MR. PIERCE: Objection to the form
21 of the question.

22 A. I always thought of him as a very competent
23 person.

24 Q. You and he coauthored a scientific treatise,
25 correct?

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1 A. Yes.

2 Q. Did you and he have any disputes about the
3 content of the scientific treatise that would call
4 into question his judgment as a toxicologist?

5 MR. PIERCE: Objection to the form
6 of the question.

7 I don't understand. Are you
8 asking him whether there was a language
9 distinction between them as any authors
10 would on any paper? That question is
11 completely vague and unanswerable.

12 But give it your best.

13 A. I don't recall.

14 Q. You don't recall that there was any dispute?

15 A. (Shaking head negatively)

16 Q. Correct?

17 A. I don't recall any dispute.

18 Q. You told us earlier, I think, Dr. Rowe, that
19 you were aware of activities at Saranac Laboratory; is
20 that right?

21 MR. PIERCE: Objection to the
22 form.

23 The witness never testified to any
24 such thing, Mr. Hobson.

25 MR. HOBSON: Well, then he can

52

1 tell me I'm wrong.

2 MR. PIERCE: I don't want you
3 putting words into the mouth of the
4 witness. Please ask a question that's
5 appropriate.

6 A. Would you repeat the question, please.
7 (By Mr. Hobson)

8 Q. Yes, sir. I asked you earlier in the
9 deposition about were you aware that there were
10 toxicity testing activities going on around the
11 Country. And as I recall, it was about the time you
12 began at Dow. And I think one of the places you
13 mentioned to me was Saranac Labs. Is that correct?

14 A. (Nodding affirmatively)

15 MR. PIERCE: Objection to the form
16 and objection to the characterization
17 completely improper of the witness'

18 prior testimony.

19 Q. Was that a "yes," Dr. Rowe?

20 A. I was aware of Saranac Laboratory, yes.

21 Q. Would you tell me, sir, what awareness you
22 had of Saranac Laboratory in this time period of the
23 late Thirties?

24 A. I don't know what the dates were; but I was
25 aware, as almost anyone in the field was aware, that

53

1 they were the outstanding laboratory for the
2 evaluation of particulates.

3 Q. And did you know Dr. Gardner, Dr. Leroy
4 Gardner?

5 A. I did not.

6 Q. Did you know any of the personnel at Saranac
7 Lake throughout your career?

8 A. I knew Vorwald that was - who was there
9 later.

10 Q. Do you recall how you met Dr. Vorwald?

11 A. No, I don't.

12 Q. Did you ever visit Saranac Laboratory?

13 A. Yes.

14 Q. Can you recall approximately when that was,
15 sir?

16 A. No, I can't.

17 Q. I take it it was after the War, though?

18 MR. PIERCE: Objection to the
19 form.

20 Q. World War II?

21 A. I think so.
22 Q. Was it after Dr. Vorwald became the director
23 of that laboratory?
24 A. I can't recall.
25 Q. Would you give me your recollection of what

54

1 you recall seeing when you visited Saranac.
2 MR. PIERCE: Objection to the form
3 of the question.
4 A. I observed their inhalation chambers. That
5 was our prime purpose, seeing what kind of chambers
6 they had to study particulates.
7 Q. Did Dow have the ability to do toxicity
8 testing involving exposures to particulates?
9 A. Not -- Not appreciably, no.
10 Q. Did Dow, while you were an employee, develop
11 that ability at any time?
12 A. No.
13 Q. Did you at Dow consider developing
14 inhalation toxicity testing ability for particulates?
15 MR. PIERCE: Objection to the form
16 of the question.
17 A. I think we did.
18 Q. Can you remember about when that was going
19 on, sir?
20 A. Probably in the early Fifties.
21 Q. Why was this being considered, if you know,
22 sir, at Dow?
23 A. We were wondering whether we should try to
24 design it into a laboratory to do that.

25 Q. Was this a project that you were involved

55

1 with, yourself, Dr. Rowe?

2 A. I don't understand your question now.

3 Q. Did you, yourself, get involved in the
4 consideration as to whether or not Dow would develop
5 the ability to do toxicity testing for the inhalation
6 of particulates?

7 A. Yes.

8 Q. What was your perception of why you would
9 want to consider it - consider having this ability?

10 A. Well, from time to time we had materials
11 that people were exposed to that were particulates.

12 Q. Can you recall, sir, what the reasoning was
13 that the decision was made not to incorporate
14 inhalation toxicity testing abilities for particulates
15 into Dow's activities?

16 A. Yes.

17 Q. What was that, please?

18 A. The facilities are - to handle this properly
19 are quite complicated, somewhat beyond our own
20 capabilities, expensive. And inasmuch as there were
21 facilities that could handle anything that we might
22 want, we felt it was a nonjustifiable expense.

23 Q. Do you mean by that, sir, that there were
24 contract laboratories that had the capacity to do the
25 work that you could employ, --

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1 MR. PIERCE: Objection.

2 Q. -- was available?

3 MR. PIERCE: Objection to the
4 form.

5 A. We felt we could employ Saranac
6 laboratories, if we wished.

7 Q. Was it your impression at the time that
8 Saranac Laboratories had the capacity to do whatever
9 toxicity testing you at Dow would need for the
10 foreseeable future?

11 MR. PIERCE: At what time are we
12 now talking about?

13 MR. HOBSON: In the early Fifties
14 when Dow was considering developing
15 inhalation toxicity capability for
16 particulates.

17 A. We felt that they were capable.
18 (By Mr. Hobson)

19 Q. Do you recall when you visited Saranac or
20 when you investigated the work at Saranac that there
21 was capacity to do toxicity testing that was not being
22 utilized?

23 MR. PIERCE: Objection to the form
24 of the question, the characterization
25 of the witness' previous statement.

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1 Go ahead.

2 A. I don't remember.

3 Q. Was this consideration by Dow about whether
4 to do - develop the ability to do inhalation of
5 particulates in-house or to use contractors something
6 that you did alone or did you work with someone else
7 in this consideration?

8 A. No.

9 Q. You worked -- You did it alone?

10 A. We had no contact with anyone else.

11 Q. No, sir. I mean within Dow. Was it a
12 committee, or did you act alone?

13 A. Oh, no. Dr. Irish was very much involved.
14 I was -- I was just accompanying him.

15 Q. Would you recall if there was any
16 correspondence within the company about this
17 consideration of developing particulate inhalation
18 testing ability?

19 A. No.

20 Q. Just don't recall one way or the other?

21 A. I don't -- I don't know.

22 Q. Was it your usual practice when you visited
23 another facility to write some sort of a trip report
24 or memorandum to file or to report to your
25 supervisors?

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1 MR. PIERCE: Objection to the form
2 of the question.

3 A. I wouldn't -- No, not necessarily.

4 Q. Might or might not?

5 A. Yes.

6 Q. You mentioned that when you first got to Dow

7 or shortly thereafter, you recognized that Du Pont had
8 toxicity testing capabilities; is that right?

9 A. Yes.

10 Q. Can you recall if you ever visited any of
11 Du Pont's laboratories?

12 A. Yes.

13 Q. What would be your earliest recollection of
14 visiting a Du Pont laboratory facility?

15 A. I can't tell you. I don't know.

16 Q. Do you think it was before World War II?

17 A. I don't know.

18 Q. What facilities of Du Pont do you remember
19 visiting?

20 A. We visited Haskell Laboratory.

21 Q. You say "we." Do you recall that it was
22 someone other than yourself who also made these visits
23 to Du Pont?

24 A. Dr. Irish.

25 Q. Did you visit any facility for Du Pont other

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1 than Haskell Laboratories, that you recall?

2 A. I don't -- No.

3 Q. Can you give me some idea of about how many
4 times you visited Haskell Laboratories while you were
5 a Dow employee?

6 A. One time.

7 Q. Once. Do you recall who any of the people
8 were at Haskell Laboratories that you would have met
9 with?

10 A. Yes.
11 Q. Who would that be, please?
12 A. Dr. John Zapp.
13 Q. Anyone else?
14 A. Yes. Lester Clayton. Another whose name
15 escapes me.
16 Q. What -- Do you have a specific recollection
17 of visiting Haskell Laboratory this one occasion?
18 A. Would you restate that, please.
19 Q. Yes, sir. Do you have a picture in your
20 mind's eye of the visit to Haskell Laboratories that
21 you made?
22 A. Vaguely.
23 Q. What do you recall seeing at Haskell
24 Laboratories? What's your impression of what you
25 recall from that visit?

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1 A. We were primarily interested in their method
2 of testing blood pressure on animals.
3 Q. Did you tour their facilities?
4 A. I don't recollect. I would presume that we
5 walked through.
6 Q. While you were a Dow employee, Dr. Rowe, do
7 you remember visiting any other corporate toxicity
8 testing laboratories?
9 A. Yes.
10 Q. Who else's would you recall having visited,
11 please?
12 A. Carbide's.
13 Q. And where would that have been located, sir?

14 A. The Bushey Run.

15 Q. And would you recall about when that would
16 have been?

17 A. No.

18 Q. Did you ever visit Chevron's toxicity
19 testing laboratory in the San Francisco area?

20 A. No.

21 Q. When you were working with Dr. Hine at the
22 University of California, San Francisco, were you
23 aware that he also did work for Shell Oil Company?

24 A. No. I didn't know what he -- I did not know
25 anything about his other work.

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1 Q. Have you ever had any meetings with anyone
2 from Shell concerning toxicology?

3 MR. PIERCE: Objection to the form
4 of the question.

5 You mean in all his conferences
6 over 52 years was there anybody there
7 that - in the audience from Shell? I
8 mean just -- Why don't you be more
9 specific in the question so that the
10 witness can really deal with it.

11 Q. Can you help me out there, Dr. Rowe?

12 A. I knew Norman White, Dr. White.

13 Q. How is it that you came to know Dr. White
14 from Shell?

15 A. We were in school together.

16 Q. And that was at Iowa?

17 A. Yes.
18 Q. And were you also there with Dr. Berry,
19 Clyde Berry?
20 A. No. I don't believe Clyde was there then.
21 Q. You know Dr. Berry, though?
22 A. Yes.
23 Q. Have you had professional association with
24 Dr. Berry over the years?
25 A. Yes. I guess so.

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1 Q. Is that more just from your professional
2 association work, or did you have contact with
3 Dr. Berry directly associated with your work at The
4 Dow Chemical Company?
5 A. I don't recollect that - any of that.
6 Q. Mostly just general professional-type work?
7 A. Yes.
8 Q. Did Dr. White ever have any work, to your
9 knowledge, that directly was for or under contract to
10 Dow Chemical Company?
11 A. I don't recall.
12 Q. Did you have any professional...

13 THE WITNESS: (Conferring
14 privately with Mr. Pierce)

15 MR. PIERCE: If you get tired --

16 MR. BLANKS: Ready to take a --

17 MR. HOBSON: And, Doctor, let me
18 say that if at any time you need to
19 take a break for any reason, you speak
20 up and I'll be kind enough to stop my

21 questioning.
22 THE WITNESS: Okay. Thank you.
23 MR. BLANKS: Don't wait for the
24 lawyers to ask for it. It's your call,
25 sir.

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1 MR. HOBSON: That's right.
2 (AT THIS TIME A BRIEF RECESS WAS
3 TAKEN, AND THE PROCEEDINGS THEREAFTER
4 RESUMED AS FOLLOWS:)
5 (By Mr. Hobson)
6 Q. Now, Dr. Rowe, I think you said that you
7 began working in the Dow biochemical research
8 laboratory in 1937. Would you be kind enough to tell
9 me who else you recall other than the directors that
10 you've named was also working there at that time.
11 A. Dr. Howard Spencer. Fred Meyer.
12 Q. I'm sorry. I didn't hear you.
13 A. Fred Meyer. All you're considering is
14 professional people?
15 Q. Yes, sir. The professionals.
16 A. Okay. I don't remember the others.
17 Q. You told us about Dr. Edwin Dunn, one of the
18 assistant directors. Would you know if Dr. Dunn is
19 still living?
20 A. No, he is not.
21 Q. Dr. Adams: is he still living?
22 A. He is not.
23 Q. Is Dr. Spencer living?

24 A. Yes.

25 Q. Would you know Dr. Spencer's whereabouts?

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1 A. Yes.

2 Q. Where does he live, sir?

3 A. Sun City.

4 Q. Ah. A neighbor?

5 A. No.

6 Q. Do you see Dr. Spencer from time to time?

7 A. Yes.

8 Q. Is his health good?

9 A. No.

10 Q. Would you know, sir, one way or the other if
11 he has a serious illness? Is it life-threatening;
12 would you know?

13 A. Well, if cancer is threatening, it is.

14 Q. I'm sorry to hear that. Mr. Meyer: is he
15 still living?

16 A. I don't know.

17 Q. But those are the people that you recall,
18 the professionals who were there in 1937?

19 A. (No response)

20 Q. Would you tell me if you recall or whom you
21 recall the other professionals would have been that
22 would have joined the biochemical research laboratory
23 after 1937 and approximately when they would have
24 joined.

25 A. I can't answer that. I don't know.

1 Q. I take it that there were additions to the
2 staff over the years.

3 A. Yes.

4 Q. I'm not asking you to name every one, but
5 can you think back in time and sort of come forward
6 from 1937 and tell me the people - the professionals
7 that you remember that joined the biochemical research
8 laboratory?

9 MR. PIERCE: Objection to the
10 form.

11 A. Harold Hoyle joined us in the late Forties,
12 I believe. Larry Silverstein. I don't know when he
13 came. Arnold Schaffer.

14 What -- What time frame are you thinking
15 about? I'm trying to orient myself and -- because --

16 Q. Prior --

17 A. What?

18 Q. -- to 1970. From about 1937 to 1970.

19 A. Prior to 1970? Paul Wolf, Mark Wolf, Don
20 McCollister. I can't think of any others at the
21 moment.

22 Q. Mr. Silverstein: would you recall what his
23 job was, sir?

24 A. He was an industrial hygienist.

25 Q. And would you know if Mr. Silverstein is

1 still living?

2 A. Yes.

3 Q. And would you know where he lives, sir?
4 A. No.
5 Q. Mr. Sheffer or Schaffer. Arnold Schaffer.
6 What was his job, sir?
7 A. He was an industrial hygienist.
8 Q. And is Mr. Schaffer still living; would you
9 know?
10 A. Yes.
11 Q. Would you know where he lives now?
12 A. No.
13 Q. Paul Wolf: what was his job, please?
14 A. He was a microbiologist.
15 Q. And is Mr. Wolf, Paul Wolf, still living?
16 A. I think so.
17 Q. And there's another Mr. Wolf, Mr. Mark Wolf?
18 A. Yes.
19 Q. Were they related; would you know?
20 A. Yes.
21 Q. Brothers?
22 A. Yes.
23 Q. What was Mr. Mark Wolf's job, please?
24 A. He was a toxicologist.
25 Q. And would you recall the decade that

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1 Mr. Mark Wolf would have joined Dow?
2 A. It would be in the Fifties.
3 Q. And is Mr. Mark Wolf still living; --
4 A. No.
5 Q. -- would you know? He's deceased?

6 A. Yes.

7 Q. And Mr. Don McCollister: what would his job
8 have been, please?

9 A. He was a toxicologist.

10 Q. And would you know; is he still living?

11 A. Yes.

12 Q. Would you know where?

13 A. In Midland.

14 Q. Is he still with Dow?

15 A. I don't know.

16 Q. I think you've told us, if my notes are
17 correct, that when you joined the medical - the bio -
18 sorry - the biochemical research laboratory in 1937
19 that there were essentially two groups - or is that
20 wrong? - microbiology and the toxicology.

21 A. No. I think I mentioned, also, there was a
22 section on wood preservation with preservatives.

23 Q. I understood that was a subsection but --

24 A. It was a - yes, subsection. And the
25 agricultural chemicals was also a subsection, most of

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1 whom reported to Dr. Dunn.

2 Q. And Dr. Dunn was the microbiologist over --

3 A. Yes.

4 Q. -- the microbiology section, correct?

5 A. He was a biochemist, but in charge of that,
6 yes.

7 Q. How long, sir, did the organization of the
8 biochemical research laboratory remain essentially
9 that way with these two groupings?

10 MR. PIERCE: Objection to the form
11 of the question.

12 Q. I'm trying to find out the changes in the
13 organization of the biochemical research laboratory.
14 And I don't want to get caught up in sections and
15 subsections, but basically trying to find out how the
16 organization changed with time after 1937 while you
17 were there.

18 A. I can't tell you the dates at which that
19 name was dropped and - but there were - the main
20 section was toxicology, industrial hygiene. And that
21 would have occurred in about the early Seventies.
22 There was still a section -- Well, I don't know
23 whether the name was still "biochemical laboratory"
24 for the rest of it or not. That section split off.

25 Q. And when you say "the biochemical section,"

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1 how do you use that terminology, sir, "it split off"?

2 A. The whole operation was called the Dow
3 Chemical Research Laboratory. At some point in time
4 along there industrial toxicology and industrial
5 hygiene were separated, but I can't remember if there
6 was a formal name for the rest of it or not.

7 Q. This group that separated, what kinds of
8 activities did it do after it separated, as best you
9 understand?

10 A. It wasn't any different.

11 Q. What did it do before then?

12 A. I don't understand.

13 Q. I don't have an understanding yet of what
14 this section that split off - what its activities were
15 either before it split off or after. What kinds of
16 work --

17 A. Toxicology and industrial hygiene split off.

18 Q. Then I guess I don't understand what the
19 other group did.

20 A. The other group was con - consisted of
21 microbiology, pharmacology, organic synthesis. That's
22 it, as far as I can remember.

23 Q. How would -- How did you distinguish between
24 what was toxicology and what was pharmacology at The
25 Dow Chemical Company in your organization before the

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1 toxicology and industrial hygiene was split off?

2 MR. PIERCE: Objection to form
3 of the question.

4 A. The pharmacology group was - under Maynard
5 Chenoweth, was pretty much an individual unit. They
6 were not a part of - of toxicology and industrial
7 hygiene.

8 Q. And what -- I'm sorry.

9 A. And their work was basically in
10 pharmacology. And that was joined later by a
11 pharmacology group that was part of the drug operation
12 in Indianapolis.

13 Q. And what I'm trying to also learn, Dr. Rowe,
14 is when you say "pharmacology" as opposed to
15 "toxicology," what's the difference in those two, if
16 there is one?

17 A. They're pretty closely related, but they
18 were primarily concerned with - with new drugs that
19 were being developed as opposed to occupational or
20 industrial chemicals.

21 Q. You stayed in the toxicology group all your
22 career with Dow; is that right?

23 A. That's right.

24 Q. So, after this group split off that was
25 toxicology and industrial hygiene, you were in that

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1 group?

2 A. Yes.

3 Q. After the split-off, to whom did you report?

4 A. I reported to Dr. Irish.

5 Q. So, he was still with Dow; this was before
6 he retired.

7 A. At that point.

8 Q. And at some point in time, I take it you no
9 longer reported to Dr. Adams.

10 A. There was -- There was a transitional period
11 there. Dr. Adams became head of the laboratory when
12 Dr. Irish left. And at that time for about a year I
13 reported to Dr. Adams.

14 Q. And then did Dr. Adams retire, as well?

15 A. Yes.

16 Q. And who took his place, sir?

17 A. Dr. Charles Hinman.

18 Q. Hinmin? Could you spell that, please?

19 A. H-i-n-m-a-n.

20 Q. And what was Dr. Hinman's background, as you
21 understood, sir?

22 A. He was basically an organic chemist with a
23 lot of biochemical background.

24 Q. And was Dr. Hinman your supervisor until you
25 retired?

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1 A. No.

2 Q. Who succeeded Dr. Hinman in that role, then,
3 sir?

4 A. Dr. Blair.

5 Q. And Dr. Blair's first name?

6 A. Etcyl.

7 Q. Was there another person to whom you
8 reported after Dr. Blair?

9 A. No.

10 Q. So, you reported to Dr. Adams for about how
11 many years, sir?

12 A. About one year.

13 Q. And before that you reported to Dr. Irish?

14 A. Yes.

15 Q. For about how many years, perhaps 30 years?

16 A. Twenty-five, I suspect.

17 Q. And then the number of years, approximately,
18 you reported to Dr. Hinman.

19 A. About three, I think.

20 Q. And then Dr. Blair, about how many years,
21 sir?

22 A. About six.

23 Q. In this approximate 1937-'38 time period

24 when you first began working for Dow, would you recall
25 who Dr. Irish reported to, either by name or by title

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1 or both?

2 A. He reported to Dr. Veazey.

3 Q. Could you spell that, please?

4 A. V-e-a-z-e-y.

5 Q. And would you recall Dr. Veazey's first
6 name?

7 A. No.

8 Q. What was your understanding of Dr. Veazey's
9 position in Dow?

10 A. He was director of research.

11 Q. Was there any particular area of research
12 that Dr. Veazey was a director of, or was this general
13 research for The Dow Chemical Company?

14 A. I'll correct that. I believe at that
15 particular time Dr. Willard Dow was still corporate
16 director of research, and Dr. Veazey was his
17 right-hand man in charge of daily operations.

18 Q. And was this general research overall at
19 Dow?

20 A. Yes. Yes.

21 Q. And would you recall -- Did Dr. Irish report
22 to someone after Dr. Veazey?

23 A. Going back one step further, now, when
24 Dr. Irish first was employed by Dow, he reported to
25 Dr. John Grebe.

1 Q. And who was Dr. Grebe?

2 A. He was director of the physical research
3 laboratory, of which we were a part for about a year.

4 Q. And would you recall Dr. Grebe's first name?

5 A. John.

6 Q. John. Would you spell Dr. "Grebe" for us.

7 A. G-r-e-b-e.

8 Q. Now, later on did Dr. Irish's supervisor
9 change after Dr. Veazey?

10 A. Yes.

11 Q. Can you give me the people that Dr. Irish
12 would have reported to in some kind of sequence?

13 MR. PIERCE: I'm going to object
14 to the form of the question.

15 But go ahead, Doctor.

16 A. There were a number of people, and I can't
17 remember the sequence. One was Dr. Boundy.

18 Q. B-o-w-d-y?

19 A. B-o-u-n-d-y.

20 Q. Would you recall his first name?

21 A. Ray.

22 Q. And what was your understanding of
23 Dr. Boundy's position?

24 A. Pardon?

25 Q. What was your understanding of Dr. Boundy's

1 position when Dr. Irish reported to him?

2 A. Boundy, you mean?

3 Q. Yes, sir.

4 A. Director of Research.

5 Q. Was it that Dr. Irish always reported to the

6 director of research during his career at Dow, as you

7 understood it?

8 A. Yes.

9 Q. Were there any medical doctors in

10 Dr. Irish's organization, that you recall?

11 A. When?

12 Q. Any time.

13 A. What time frame?

14 Q. Any time that Dr. Irish was the director of

15 the biochemical research laboratory or what it later

16 became.

17 A. Yes.

18 Q. What's the earliest physician that you can

19 recall in that organization?

20 A. Dr. Maynard Chenoweth.

21 Q. And can you tell me approximately when

22 Dr. Chenoweth would have been in the group?

23 A. Late Seventies, I would guess - estimate.

24 Q. I take --

25 A. Excuse me.

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1 Q. Yes, sir?

2 A. Late -- Late Sixties or early Seventies.

3 Q. Would you have any understanding of

4 Dr. Chenoweth's background before he joined the group

5 with Dr. Irish?

6 A. Yes.

7 Q. What did you understand about

8 Dr. Chenoweth's background before he joined

9 Dr. Irish's group?

10 A. He was a professor of pharmacology at the
11 University of Michigan.

12 Q. Did you know Dr. Chenoweth before he joined
13 Dow?

14 A. Yes.

15 Q. For approximately how many years would you
16 say you knew Dr. Chenoweth before he joined Dow?

17 A. About two years.

18 Q. Did you know him through his work at the
19 University of Michigan?

20 A. Yes.

21 Q. What kinds of activities did you understand
22 Dr. Chenoweth to be doing at the University of
23 Michigan before he joined Dow?

24 MR. PIERCE: Objection to the form
25 of the question.

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1 A. He was a professor and a teacher.

2 Q. And -- I'm sorry.

3 A. I don't know what else. I don't recall what
4 other...

5 Q. Would you recall if he was engaged in any
6 research activities, that you were aware of, in
7 Michigan?

8 A. He was engaged in research, but I don't

9 remember the particular subjects.
10 Q. Could you spell Dr. Chenoweth's name for us,
11 please, sir?
12 A. C-h-e-n-o-w-e-t-h.
13 Q. In the time period that you first joined Dow
14 in the late Thirties, were there any physicians
15 employed by Dow Chemical Company, that you were aware
16 of?
17 A. As a con -- On a consulting basis.
18 Q. Who are you aware of who were acting as
19 medical consultants to Dow Chemical in the late
20 Thirties?
21 A. The general medical profession in the town.
22 Q. Do you recall any names?
23 A. I remember just one. Dr. Rice.
24 Q. Would you recall his first name?
25 A. No.

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1 Q. Is it your recollection, Dr. Rowe, that Dow
2 Chemical had no full-time-employed medical doctors in
3 the corporation in the late Thirties when you joined
4 the company?
5 MR. PIERCE: Objection to the form
6 of the question.
7 A. That's right. Yes.
8 Q. Was there a time that you became aware that
9 Dow did employ a full-time medical doctor?
10 A. Yes.
11 Q. Approximately when would that have been,
12 sir?

13 A. I -- I just don't know.
14 Q. Would it have been --
15 A. Probably in the Forties.
16 Q. In the Forties. After the War or before;
17 would you know?
18 A. I don't know.
19 Q. Do you recall who that would have been, sir?
20 A. Pardon?
21 Q. The first physician. Do you recall who the
22 first full-time physician Dow would have employed
23 would have been?
24 A. Yes.
25 Q. Who is that, sir?

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1 A. Dr. Harold Gay.
2 Q. And how would you spell Dr. Gay's name?
3 A. G-a-y.
4 Q. And in what organization within Dow did you
5 understand Dr. Gay to be working?
6 A. I don't -- I don't know what you mean.
7 Q. Dow had an organizational structure, and I'm
8 trying to find where Dr. Gay fit into the
9 organizational structure.
10 A. I can't tell you. I don't know.
11 Q. Did you have an understanding of Dr. Gay's
12 background before he joined Dow?
13 A. No. No.
14 Q. Did you know him at Dow?
15 A. I knew him at Dow.

16 Q. Would your job activities have brought you
17 in contact with Dr. Gay as a physician? I mean
18 professionally.

19 A. Yes.

20 MR. PIERCE: You have a time
21 frame?

22 A. Yes.

23 Q. What kind of work would you have, Dr. Rowe,
24 with Dr. Gay as early as you can remember in your
25 career at Dow?

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1 A. Well, Dr. Gay would frequently come to us
2 for information and advice with respect to medical
3 problems that he encountered.

4 Q. Do you recall some specific examples of
5 that?

6 A. Yes.

7 Q. Would you give me some of the ones you
8 remember, please.

9 A. The first one I can recollect had to do with
10 carbon tetrachloride. And he was seeing too many
11 people that didn't feel well. And he wanted to know
12 what we knew about it.

13 Q. Were these people who had been working with
14 carbon tetrachloride?

15 A. Yes.

16 Q. Did the medical program at Dow, to your
17 knowledge, grow with time after Dr. Gay was hired?

18 A. Yes.

19 Q. Were there other full-time physicians who

20 were hired by Dow Chemical Company after Dr. Gay?

21 A. Yes.

22 Q. Can you remember any of those gentlemen or
23 ladies?

24 A. Dr. Harold Gordon, Dr. Benjamin Holder,
25 Dr. Charnweber, Dr. Kilian, Dr. Landon - "Lanham" I

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1 should say - some others whose names I can't
2 recollect.

3 Q. Would you know, sir, is Dr. Gay still
4 living?

5 A. No. He is not.

6 Q. Is Dr. Gordon still living?

7 A. As far as I know.

8 Q. Where was he located the last time you knew,
9 sir?

10 A. It was in Colorado somewhere.

11 Q. Dr. Holder: would you know if he's still
12 living?

13 A. Yes. He is.

14 Q. And where was he the last time you knew,
15 sir?

16 A. In Florida somewhere.

17 Q. And Dr. Charnweber -- Is that his name?

18 A. I don't know.

19 Q. Could you spell Dr. Charnweber's name for
20 us, please?

21 A. I'll try.

22 MR. HOBSON: Can you spell it

23 better than he pronounced it?
24 A. C-h-a-r-n-w-e-b-e-r.
25 Q. Thank you. And Dr. -- Is it "Lanham"?

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1 A. Lanham.
2 Q. Could you spell that, please?
3 A. L-a-n-h-a-m.
4 Q. Would you know Dr. Lanham's first name,
5 please?
6 A. I don't recall at the moment.
7 Q. Would you know if he's still living?
8 A. Yes. He is.
9 Q. And where was he the last you knew, sir?
10 A. In Midland.
11 Q. Is he still with Dow, to your knowledge?
12 A. Is not, no.
13 Q. And Dr. Kilian. Which Dr. Kilian would that
14 have been, please, sir? First name.
15 A. Jack.
16 Q. I believe Dr. Jack Kilian is deceased.
17 A. Pardon?
18 Q. Is Dr. Jack Kilian deceased?
19 A. Yes.
20 Q. And Dr. Charnweber: would you recall his
21 first name?
22 A. Charles. Charles.
23 Q. Charles. And would you know if he's still
24 living, sir?
25 A. I don't know.

1 Q. The biochemical research laboratory, where
2 was it physically located in the late 1930's?

3 A. Located on Bay City Road. I don't know how
4 else to describe it. There was no streets or anything
5 like -- It was in the plant.

6 Q. Bay City Road within which plant?

7 A. In the fence -- It was in the plant area.

8 Q. And which plant would that have been, sir?

9 A. Midland Chemical Company -- Dow Chemical
10 Company in Midland.

11 Q. Now, when Dr. Gay was employed by Dow, where
12 was his office physically located, if you know, sir?

13 A. It was also on Bay City Road. Again, no
14 street.

15 Q. A different building than the biochemical
16 research laboratory's location?

17 A. No, no.

18 Q. Same building?

19 A. No.

20 Q. I'm sorry. I'm confused. Was Dr. Gay
21 located in the same building as the biochemical
22 research laboratory?

23 A. No, sir.

24 Q. Did the biochemical research laboratory stay
25 in the same location while you were an employee at

1 Dow, or did it change?

2 A. Two questions. Would you repeat - Give it
3 to me one at a time.

4 Q. Yes, sir. Let me ask it this way: Where
5 was the biochemical research laboratory physically
6 located during your tenure with Dow?

7 A. I described to you where it was initially.

8 Q. Yes, sir.

9 A. And then a new building was built in 1955,
10 and that was on Austin Street and Washington - Austin
11 and Washington. Then when the units were broken up,
12 we built a new building, also on Washington and Austin
13 but on the northeast corner. And that was known as
14 the toxicology laboratory.

15 Q. The --

16 MR. PIERCE: I'm going to just
17 interpose an objection now to this
18 whole line of questioning. You're
19 asking the witness to give you
20 addresses for events that happened 40
21 and 50 years ago clearly not relevant
22 at all - Dr. Gay's address, this
23 office's address. I wish you would
24 keep to relevant questions so that we
25 can all complete this deposition and

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1 that Dr. Rowe need not be put through
2 this type of questioning.

3 MR. BLANKS: They're pretty
4 abusive questions, aren't they?

5 Q. When you say "Austin and Washington,"
6 Dr. Rowe, is that still within the plant?
7 A. No.
8 Q. Is Austin and Washington - are those streets
9 in Midland, Michigan?
10 A. Yes.
11 Q. And you say the new building - the second
12 new building - that was built after the breakup, and
13 you called that the tox. lab. Was industrial hygiene
14 still located within the tox. lab, then, after the
15 breakup?
16 A. Yes.
17 Q. If I've understood correctly, you've told me
18 that the biochemical research laboratory - one of its
19 jobs was to do toxicity testing.
20 Going back to the late 1930's when you first
21 joined Dow, can you tell me if you have any
22 understanding how it was decided what materials would
23 be tested at the biochemical research laboratory?
24 A. I didn't make that decision at that time;
25 so, I don't know.

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1 Q. Was there a point in time in your career
2 where you either made that decision or were involved
3 in having input in making the decision as to what
4 materials would be tested by the biochemical research
5 laboratory at Dow?
6 A. Yes.
7 Q. Approximately when would that have been,
8 please?

9 A. I -- I don't -- I can't answer. I don't
10 know.

11 Q. Can you give me a decade?

12 A. Probably in the Fifties.

13 Q. Once you either had input or were -- Strike
14 that. Let me ask it this way: Was there a time when
15 you only had input into the decision making; or was
16 there a time that you, yourself, actually made the
17 decision about the priorities of what would be tested?

18 MR. PIERCE: Objection to the form
19 of the question.

20 A. Two questions again. Would you rephrase the
21 question, please.

22 Q. Yes, sir. Was there a time when you were -
23 you had the responsibility of making the decision as
24 to what materials would be tested at the biochemical
25 research laboratory?

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1 A. Yes.

2 Q. Before you had that decision-making
3 authority, was there someone else who made those
4 decisions but to whom you made input?

5 A. Those decisions were usually joint decisions
6 with input from various sources.

7 Q. Would you tell us for the time period that
8 you have knowledge of what the criteria would have
9 been for making the decision as to what materials
10 would be tested?

11 MR. PIERCE: For the period that

12 you know (directed to the witness).

13 Q. Absolutely.

14 A. Well, I don't think there was any material -
15 any new material - that was produced at Dow Chemical
16 Company that didn't go through our laboratory.

17 Q. When you say "go through our laboratory,"
18 how do you mean that?

19 A. I mean subjected to evaluation -
20 toxicological evaluation.

21 Q. What time period can you tell me that you
22 have knowledge of that this would be the case?

23 A. I can't tell you when. It was our general
24 policy to -- As soon as there was any significant
25 interest in a new material, it was almost automatic

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1 that it would be submitted to our laboratory for
2 evaluation.

3 Q. Is it your understanding that that was the
4 general policy of Dow even in the 1940's?

5 A. I can't be sure about the - that time.

6 Q. But by the 1950's do you feel that that was
7 Dow's general policy, as you understood it?

8 A. These sort of things evolved over a period
9 of years. It just didn't happen to fall off a log.

10 Q. But by the 1950's do you believe that that
11 was Dow's general policy about new materials?

12 A. Yes.

13 Q. When you say "new materials," do you mean
14 new materials that Dow was developing?

15 A. Yes.

16 Q. You say that toxicological evaluations would
17 have been made of new materials that Dow was
18 developing, as you've previously described, once it
19 looked like they were going to be - "Promising," I
20 guess, would be a way of saying it.

21 Would you tell us what you mean by
22 "toxicological evaluation" for these new materials.

23 MR. PIERCE: Objection to the
24 form. Objection to the small speech.

25 A. We had various categories of toxicological

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1 testing - different degrees. And if a material was
2 encountered or developed that was new and there was no
3 information that we could find in the literature, our
4 testing procedure was called what we -- Well, what we
5 called it was a "Class I evaluation," which was
6 designed to determine the - roughly, the qualitative
7 and quantitative hazards associated with ingestion;
8 eye contact; and skin contact; and, if it was likely
9 to be encountered as a vapor or a gas, short
10 inhalation studies.

11 Q. And you say that's Class I. Were there
12 other classes besides Class I?

13 A. Yes.

14 Q. And what would those classes have been,
15 sir?

16 A. That would be when materials would really
17 begin to show promise. The first class was -- Class I
18 studies were primarily designed to ascertain whether

19 these materials being handled by our research people
20 or whoever - were presented with an unusual hazard.
21 For instance, a splash in the eye, contact with the
22 skin, or accidental ingestion or inhalation. When --
23 The further the material was developed, we would do
24 more extensive studies in both areas - all these
25 areas - and we would begin to do repeated exposures.

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1 And this progressed along with the development or the
2 promise of a potential product. And the ultimate
3 was -- Of course, lifetime studies ultimately on such
4 materials that were going into food additives were
5 required by Government agencies for approval by the
6 Food and Drug or whatever.

7 Q. So, basically you're saying that as a
8 product was developed, also the toxicological
9 information for that product was developed along with
10 the product?

11 MR. PIERCE: Objection to the
12 form.

13 A. That was the general pattern.

14 Q. Have you heard the terminology used before
15 of "tier testing"?

16 A. Yes.

17 Q. Is that how you would -- What do you mean by
18 "tier testing," or what have you heard it used as?

19 A. It means different things to different
20 people. It's a stepwise evaluation similar to what
21 I've just described.

22 Q. Would it be unfair to characterize what Dow

23 did as tier testing?

24 A. I don't know how other people define "tier
25 testing" that detailed.

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1 Q. Did you have a name for this kind of testing
2 protocol for new products at Dow?

3 A. We called them Class I, Class II, and
4 Class III evaluations.

5 Q. Well, you obviously don't feel comfortable
6 with the term "tier testing." I was trying to find
7 out if there was another set of terminology we could
8 apply to this.

9 A. Not that I know of.

10 Q. You've told us about Class I in your testing
11 protocols for new products. When would you initiate
12 Class II testing?

13 MR. PIERCE: Objection to the form
14 of the question.

15 A. It'd depend on the status of a particular
16 material from the standpoint of production and
17 potential sales or utility.

18 Q. And then when would you initiate Class III?

19 MR. PIERCE: Objection to the form
20 of the question.

21 A. Depending upon the type of exposure
22 anticipated if this goes to a major product.

23 Q. Would you have been using the Class I,
24 Class II, Class III protocols for toxicity testing
25 that you've told us about in the 1950's?

1 A. Yes.

2 Q. Did you keep these protocols a secret at
3 Dow, or did you publish what you were doing or tell
4 others about it?

5 MR. PIERCE: Objection to the form
6 of the question.

7 A. I don't think I can answer your question as
8 phrased. If you'll break it up and - I'll do my best.

9 Q. Sure. Is it -- Can I call these protocols
10 "Class I," "Class II," and "Class III"?

11 A. There was never any set protocol.

12 Q. What would be a terminology you'd feel
13 comfortable with I can use in my questions for the
14 Class I, Class II, and Class III? I hesitate to say
15 "scheme" because it may give the wrong connotation.

16 MR. PIERCE: You want the witness
17 to phrase your questions for you,
18 Counselor?

19 MR. HOBSON: No, but I don't want
20 to use terminology that offends the
21 gentleman.

22 A. It would simply develop -- Your word
23 "protocol" was quite all right, except we did not
24 have what you might call a - the same protocol for
25 every problem. We modified our protocols depending

1 upon what the problems or anticipated problems would
2 be.

3 (By Mr. Hobson)

4 Q. This -- This concept of modifying your
5 protocols and fitting in the Class I, Class II,
6 Class III toxicity testing, is that something that you
7 published?

8 A. We published a great deal on the subject.

9 Q. And it was published in the 1950's - part of
10 it - was it not?

11 A. I don't remember the dates.

12 Q. You gave speeches, lectures at different
13 professional societies concerning this activity that
14 you followed with Dow concerning the toxicity testing
15 and the adaptation of these protocols to different
16 product - different products being developed, did you
17 not?

18 A. Yes.

19 Q. So, anyone who was following the medical and
20 scientific literature could learn the general
21 undertakings of Dow's toxicity testing of new products
22 as they were developed. Would that be accurate in
23 your view?

24 A. Yes.

25 MR. HOBSON: Dr. Rowe, if you'll

1 accept my apologies, I need to take a
2 short break, sir.

3 (SHORTLY AFTER THE RECESS WAS
4 CALLED, IT WAS DECIDED TO BREAK FOR

5 LUNCH. THEREFORE, AT APPROXIMATELY
6 11:15 A.M. THE DEPOSITION WAS RECESSED.
7 AT APPROXIMATELY 12:30 P.M. THE
8 DEPOSITION RESUMED AS FOLLOWS:)

9 (By Mr. Hobson)

10 Q. Dr. Rowe, before we took our luncheon break,
11 we were speaking a little bit about the work at the
12 biochemical research laboratories. I'd like to return
13 to that subject.

14 You told me about new product testing and
15 going through Class I, Class II, Class III testings.
16 Were there any other products besides new products
17 which you at the biochemical research laboratories did
18 toxicological evaluations of?

19 A. Yes. There could be. If we were using a
20 new raw material that was purchased from - new from
21 somebody and there was no literature or toxicological
22 data available, why, we would probably do it,
23 ourselves.

24 Q. Any other materials that you might do
25 testing on at your laboratory other than new products

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1 or purchased materials for which there was no
2 published toxicity testing data?

3 A. Not that I recollect.

4 Q. How would you know what materials were being
5 used? You talked about these purchased products. How
6 would you know what they were at Dow?

7 A. We had pretty close liaison with research

8 people, and they were pretty well programmed to let us
9 know when there were new materials coming forth.

10 Q. Was that formal or informal in letting you
11 know what purchased materials were going to be used in
12 Dow facilities?

13 MR. PIERCE: Objection to the form
14 of the question.

15 A. I would say some of each.

16 Q. Would you describe any formal procedures
17 that you had.

18 A. I don't -- Only that people in the plants
19 and the research laboratories were well aware of us
20 and what was expected; otherwise, I don't think there
21 was anything - no edict put out, if you know --

22 Q. Now, the purchased materials that you speak
23 of in this context, are these purchased materials that
24 are being used to manufacture items that are in
25 production or are these purchased materials that are

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1 for research purposes only or both?

2 MR. PIERCE: Objection to the form
3 of the question.

4 A. Could be either.

5 Q. Would you have been involved in the
6 biochemical research laboratory in evaluating the
7 toxicity of materials that were not used in - as
8 manufacturing materials or were not finished products;
9 for instance, intermediates?

10 MR. PIERCE: Is this at any time
11 with any product?

12 MR. HOBSON: We can start there.
13 If he says, "no," that answers the
14 question.
15 MR. PIERCE: Try to answer it, if
16 you can.
17 A. I guess I really don't understand your
18 question.
19 (By Mr. Hobson)
20 Q. All right. As I've understood what you've
21 told me so far, you've said that there are some
22 purchased materials that Dow would evaluate in your
23 laboratory. And you said that you evaluated new
24 products. It's my understanding that when you make
25 some products, you go through an intermediate step on

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1 occasion. You start off with something you buy, you
2 make an intermediate, you get to the finished
3 product. And my question to you, sir, is: Would you
4 evaluate the toxicology - the toxicity of the
5 intermediate product in this manufacturing process?
6 A. Yes. If there were opportunity and
7 likelihood of exposure to our people, yes.
8 Q. Would you evaluate the toxicity of any
9 materials that were involved in the manufacturing of
10 products but were not actually being used to make the
11 product, itself, as a purchased material?
12 MR. PIERCE: I object to that
13 question. It completely confuses
14 me. But if the witness can answer

15 it --

16 A. I don't understand the question.

17 Q. Would you look at catalyst, for instance?

18 A. That wouldn't be likely because of the very,
19 very small amounts of material. And usually they're
20 not new materials, they've been in use.

21 Q. Did you at the biochemical research
22 laboratories have a method of communicating your
23 knowledge about the toxicity of either products or
24 purchased materials to others within the corporation?

25 A. Yes.

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1 Q. What mechanism did you use?

2 A. We distributed our reports to every spot
3 that we knew the material might be encountered.

4 Q. Did your reports have a particular name or
5 format that you followed?

6 A. I guess again I don't know really what
7 you're asking.

8 Q. In more recent times we've seen Material
9 Safety Data Sheets. Would you have had some sort of a
10 forerunner to a Material Safety Data Sheet that you
11 would have used to communicate hazards to people in
12 the company?

13 A. That, I believe, was about the first form -
14 more formalized procedure, was a safety data sheet.

15 Q. Can you recall for me, as best you can,
16 about when you began to use these data sheets?

17 A. No. I don't. I can't remember when that
18 was.

19 Q. Can you remember the decade?
20 A. Not for sure.
21 Q. May I ask, sir, when did you leave Dow, what
22 year?
23 A. I retired in '79.
24 Q. Was that at the end of 1979?
25 A. It was July 1st, I believe.

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1 Q. What titles for your position did you hold
2 while you were at Dow, and approximately when did you
3 hold those?
4 A. I -- I don't remember them all. I think I
5 remember the first one. I was changed from a
6 biochemist to a toxicologist. And then I went up to
7 names such as "technical specialist" and "laboratory
8 director" and "assistant director of the - of
9 laboratory" and "head of health and environmental
10 sciences." I don't know -- Other administrative
11 titles.
12 Q. We've provided a request for certain
13 documents through the attorneys involved in the case.
14 Did that request make its way to you,
15 Dr. Rowe?
16 A. Yes.
17 Q. Did you bring anything responsive to that
18 request?
19 A. It was -- It is being brought by -- Someone
20 has it.
21 Q. May we have what you responded with, sir?

22 A. Yes.

23 MR. PIERCE: (Tendering a group of
24 documents to Mr. Hobson);.

25 Q. May I ask, Dr. Rowe, when is the first time

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1 you were aware of our request for documents?

2 A. Monday.

3 Q. And did you receive that request and review
4 it and go through your files and provide information
5 that was responsive to it?

6 A. Yes.

7 Q. Have you reviewed these articles or
8 documents that I've just been handed by Counsel?

9 A. I have not.

10 Q. Did you provide these to Counsel?

11 A. Yes.

12 Q. Do you know if I've been provided with what
13 you've provided them?

14 A. Have I checked the listing or anything like
15 that? No. I had copies made and, as far as I know,
16 that's - they're there.

17 MR. PIERCE: If you want a
18 representation, Mr. Hobson, you have
19 it.

20 MR. HOBSON: That...

21 MR. PIERCE: They have these other
22 copies of documents that Dr. Rowe
23 provided to us.

24 MR. HOBSON: And that's all -- You
25 gave me everything he gave you?

1 MR. PIERCE: Right. That he said
2 he wanted to provide to you.

3 (By Mr. Hobson)

4 Q. Since your retirement, Dr. Rowe, have you
5 done any consulting?

6 A. Yes.

7 Q. With whom have you done consulting, sir?

8 A. I have limited any work that I have done in
9 recent years to those things associated with Dow's
10 operation when I was there.

11 Prior to that I was a consultant to the
12 University of California Department of Toxicology,
13 another firm in the East -- And I can't tell you -- I
14 don't remember the name of it. And I've been a
15 consultant to Government agencies.

16 Q. The firm in the East: what was the nature of
17 that consulting work?

18 A. It was on environmental control.

19 Q. You say that in recent times you've limited
20 your consulting?

21 A. That's right.

22 Q. Can you tell me the nature of that
23 consulting once you limited your consulting
24 activities?

25 A. Had to do with materials and practices that

1 I was familiar with when I was at Dow.

2 Q. Was this consulting always for Dow or Dow's
3 attorneys?

4 A. I don't understand your question.

5 Q. Yes, sir. You said that you've - at one
6 point in time here since your retirement you've
7 limited your consulting activities to what you did at
8 Dow, I think.

9 A. (Nodding affirmatively)

10 Q. And I'm wondering if that work once you
11 limited your consulting was always for Dow or for
12 Dow's attorneys.

13 A. I'm still confused with the question.

14 Q. Who employed you for your consulting once
15 you limited your consulting practice?

16 A. Dow Chemical.

17 MR. PIERCE: So long as you're
18 reviewing these documents now, let me
19 take this opportunity to note that the
20 production of these documents does in
21 no way indicate concurrence on the part
22 of myself, as attorney for Dr. Rowe,
23 nor does it, I believe, for the
24 attorney from The Dow Chemical Company,
25 that these are relevant documents; but

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1 these are the ones that Dr. Rowe
2 thought he should bring to your
3 attention in accordance with his review

4 of the draft subpoena.

5 Q. Dr. Rowe, I find in here a C.V. in the
6 stack. Perhaps we could ask the court reporter to
7 mark it as an exhibit - or we will here and then pass
8 it over to you. In the stack is there only one C.V.?
9 I haven't gone through the whole stack.

10 A. No. I think there's only one.

11 Q. Is that C.V. current?

12 A. I believe so.

13 Q. I meant as opposed to one you found in your
14 files from maybe some years back.

15 A. Well, it hasn't changed for quite a few
16 years.

17 (PLAINTIFFS' EXHIBIT 141005 ROW VK
18 WAS MARKED FOR IDENTIFICATION
19 PURPOSES. SAME WILL BE FOUND IN
20 THE EXHIBIT VOLUMES ATTENDANT TO
21 THIS DEPOSITION.)

22 (By Mr. Hobson)

23 Q. Your publications that are listed here, have
24 there been any others other than in the C.V.?

25 A. I -- I can't answer you. I don't know.

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1 Q. We've marked this now as Plaintiffs'
2 Exhibit 141005 ROWE V. K. And I'll pass that over to
3 you, sir (tendering document). That's the C. V. you
4 provided --

5 A. That's the one I had in my file.

6 Q. Can you recall, from looking at this C.V.,
7 if there are any publications since your retirement

8 from Dow that might not have been included on it?

9 A. (Reviewing document) I do not recall any
10 (tendering document).

11 Q. Are you aware of some publications that you
12 might have written while you were a Dow employee that
13 didn't get on your C.V.?

14 A. I'm not aware of any.

15 Q. When you went to Dow in 1937 at the
16 biochemical research laboratory, was there a library
17 that you had access to?

18 A. Yes.

19 Q. What was your -- What's your best
20 recollection of the contents of that library?

21 MR. PIERCE: Objection to the form
22 of the question.

23 A. Well, it was a -- We thought it was a pretty
24 good library. I have no way of answering your
25 question in a quantitative or qualitative way, really.

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1 Q. Was it a library that was for the use of the
2 biochemical research laboratory, or was this a general
3 plantwide or a corporatewide library?

4 A. There was a main library used - for anyone
5 within the company. Within the toxicology or
6 biochemical research laboratory, we maintained those
7 journals that were of particular interest to us.
8 There may well have been a duplicate copy in the main
9 lab - in the main library.

10 Q. The library that you kept at the laboratory,

11 did it include both texts and periodic journals?

12 A. Yes.

13 Q. Would you recall any of the texts that were
14 in use at the time that you first began at Dow in the
15 late Thirties in the area of toxicology that you would
16 have been using in your work?

17 A. No.

18 Q. Would you remember what publications were in
19 use there at the laboratory at the time you began at
20 Dow?

21 A. I don't remember.

22 Q. What was the general nature of the kinds of
23 texts and periodicals that you had at the biochemical
24 research laboratory library?

25 MR. PIERCE: In 1937?

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1 MR. HOBSON: Yes, sir.

2 A. Could you please give me the date again?

3 (By Mr. Hobson)

4 Q. Yes, sir. When you began in 1937.

5 A. In 1937 the library - our local library
6 probably consisted no more than of what individuals
7 were subscribing to, themselves. Maybe Chemical
8 Abstracts, something of that nature, and maybe
9 The Journal of Industrial Hygiene or Toxicology, or
10 whatever was the name of it in those days. But those
11 well could have been just people's copies that they
12 put out - made available.

13 Q. You're familiar with the Industrial Hygiene
14 Foundation, are you?

15 A. Somewhat.

16 Q. Are you aware that at one time they
17 published a digest?

18 A. Yes.

19 Q. Was that a reference that Dow had at its
20 libraries, to your knowledge?

21 MR. PIERCE: Are you once again
22 asking in 1937?

23 MR. HOBSON: Well, if it was
24 available in 1937 or any time.

25 MR. PIERCE: But is there a time

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1 frame for your question?

2 MR. BLANKS: This man's work life
3 would be fine.

4 MR. HOBSON: At any time.

5 A. I cannot give you a time reference; but I am
6 well aware that that was one that was circulated
7 within our laboratory, yes.

8 (By Mr. Hobson)

9 Q. Do you recall that it was circulated when
10 you first went to work at Dow?

11 A. No, I don't recall it.

12 Q. Is there any time that you can give me when
13 you do recall that it was circulated?

14 A. No.

15 Q. In other words, can you put a beginning time
16 on it?

17 A. No.

18 Q. Would you know one way or the other if
19 anyone at Dow had any connection with the Industrial
20 Hygiene Foundation as part of, like, being on its
21 board or being involved financially in supporting work
22 of the Industrial Hygiene Foundation?
23 MR. PIERCE: Objection to the form
24 of the question.
25 A. I don't know.

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1 Q. Did you, yourself, attend any of the
2 Industrial Hygiene Foundation meetings?
3 A. Yes.
4 Q. What is the earliest time period you recall
5 attending those?
6 A. I have no recollection of time frame.
7 Q. Did you know any of the other people who
8 were involved in the Industrial Hygiene Foundation
9 when you first began going to their meetings, whenever
10 they were?
11 A. Dr. Brown comes to my mind.
12 Q. Would you recall his first name?
13 A. I -- I do not -- No.
14 Q. Do you remember any context of Dr. Brown's
15 activities?
16 A. No.
17 Q. Do you know a Vandiver Brown? Does that
18 ring a bell?
19 A. I don't know. It doesn't ring a bell.
20 Q. I believe you, yourself, were a member of
21 the American Chemical Society beginning in 1937; is

22 that right?

23 A. I'm not sure of the date, but I've been a
24 member of it for a long time.

25 Q. I think I've read in some of your

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1 biographies that it was 1937. Chemical Abstracts is
2 the publication of the American Chemical Society?

3 A. Yes.

4 Q. Would you have received copies of Chemical
5 Abstracts as part of your membership?

6 A. No.

7 Q. I take it that you were aware of Chemical
8 Abstracts' publication at least as early as your
9 formal education?

10 A. Yes.

11 Q. So, you were aware of them being in
12 existence by the time you got to Dow Chemical?

13 A. Yes.

14 Q. Was Chemical Abstracts a resource that you
15 used in your work at Dow Chemical in the 1930's?

16 MR. PIERCE: Objection to the form
17 of the question.

18 A. Yes.

19 Q. Do you recall if Chemical Abstracts was
20 divided into subject categories?

21 A. Yes.

22 Q. Was there a subject category for Chemical
23 Abstracts that you can recall was more attune to your
24 field of work in the 1930's?

25 A. I don't recall.

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1 Q. Was it your impression that - at the Dow
2 facilities there in Midland that there was an attempt
3 made to keep a current technical library for use by
4 the personnel?

5 A. Well, they made -- they made the library
6 available to anybody. No one I know of was forced to
7 go.

8 Q. But did it appear to you to be reasonably
9 current and reasonably thorough for the needs that you
10 had?

11 A. I would think so.

12 Q. You don't ever recall complaining that you
13 didn't have a particular resource or nobody would buy
14 a book that you wanted purchased or anything like
15 that?

16 A. I don't remember.

17 Q. Have you had any activities with the
18 American Standards Association?

19 A. I don't recall any of significance.

20 Q. Have you ever been nominated or considered
21 for one of their committees, to your knowledge?

22 A. Not that I recall.

23 Q. Have you ever done any work or had any
24 professional association with the American Petroleum
25 Institute?

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1 A. No.

2 Q. Would you know one way or the other if Dow
3 is a member of the American Petroleum Institute or has
4 ever been?

5 A. I do not know.

6 Q. Have you become familiar with any
7 publications in the area of health and safety or
8 toxicology published by the American Petroleum
9 Institute?

10 A. Yes. I'm -- I've seen them. I've seen
11 some, anyway. Very few, I expect.

12 Q. I think that I've read in your publications
13 that you were familiar with Professor Philip Drinker
14 at Harvard.

15 A. I know Philip Drinker, Dr. Drinker, yes.

16 Q. Are you aware that Dr. Drinker worked with
17 the American Petroleum Institute to prepare a series
18 called "Toxicological Reviews"?

19 A. I was not aware that he was associated with
20 the institute.

21 Q. Do you recall seeing a publications series
22 by the American Petroleum Institute called
23 Toxicological Reviews?

24 MR. PIERCE: Objection to the form
25 of the question.

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1 Are you asking him if he knows
2 Toxicological Reviews or if he knows
3 that it was prepared, as in your words,
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4 by the American Petroleum Institute?
5 MR. HOBSON: I'm asking him if he
6 recalls ever seeing a series of
7 publications called "Toxicological
8 Reviews" published by the American
9 Petroleum Institute.
10 MR. PIERCE: What you're asking
11 him -- I mean, if he knows
12 Toxicological Reviews or if he knows
13 Toxicological Reviews is published by
14 the American Petroleum Institute?
15 MR. HOBSON: There might be more
16 than one Toxicological Reviews. I'm
17 trying to identify which ones, if there
18 are more than one. And I'm asking --
19 MR. PIERCE: I'm trying to show
20 the ambiguity in your question.
21 But let the witness answer it.
22 A. I don't -- I don't recollect.
23 (By Mr. Hobson)
24 Q. Just don't recall one way or the other?
25 A. I don't -- I don't remember anything

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1 specific about that.
2 Q. Did you know Dr. Drinker professionally?
3 A. I knew him. I never worked with him.
4 Q. Can you give me an idea of how it is that
5 you knew Dr. Drinker?
6 A. I had heard much about him. And, yes, I can

7 remember the first time I met Dr. Drinker. He was
8 chairman of a session, I believe, at the A.I.H.A.
9 where I gave the first paper I ever delivered. And he
10 kept telling me "Relax. Relax. Relax."

11 Q. I take it that after that you continued to
12 see Dr. Drinker from time to time.

13 A. No, except as we would meet in a meeting.

14 Q. What was your impression of Dr. Drinker's
15 professional abilities?

16 MR. PIERCE: Objection to the
17 form.

18 A. I had great respect for him.

19 Q. You have an interest and a professional
20 background in industrial hygiene, as well as
21 toxicology; is that right, Dr. Rowe?

22 A. Very limited.

23 Q. I understand that you're certified in
24 industrial hygiene in the toxicological aspects.

25 A. That's right.

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1 Q. And you've delivered papers at the American
2 Industrial Hygiene Association a number of times over
3 the years.

4 A. Yes.

5 MR. PIERCE: Objection to the form
6 of the question.

7 Q. When did you first get interested in
8 industrial hygiene, Dr. Rowe?

9 A. About 1940. As I recollect, probably the
10 first meeting. Dr. Irish was involved in it, and he

11 wanted us to become acquainted with it and participate
12 in it. And he took me to the -- I think that was not
13 the first meeting, the second meeting. Very early in
14 the formation of A.I.H.A.

15 Q. Do you recall what led to Dr. Irish being
16 interested in industrial hygiene, or would you know?

17 A. I think it was because of its thrust in
18 maintenance of healthful working conditions.

19 Q. Was there any function at Dow Chemical
20 Company, to your knowledge, up until this 1940
21 conversation that you recall with Dr. Irish that had
22 to do with industrial hygiene?

23 A. Would you please rephrase or restate that.

24 Q. Yes, sir. I'm trying to find out what, if
25 anything, was going on at Dow Chemical Company

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1 regarding industrial hygiene prior to 1940 when you
2 had this meeting with Dr. Irish that you would know
3 about.

4 MR. PIERCE: Is there a question
5 pending?

6 MR. HOBSON: Yeah. That's it.

7 A. Yes. When I arrived in '37 and in the first
8 years, Dr. Adams had fashioned a pump with a Wet-test
9 meter on it, which he had to have a truck practically
10 to haul various places, to take air samples in various
11 places. And I was aware of this. I helped him build
12 the pump.

13 (By Mr. Hobson)

14 Q. And Dr. Adams, then, was actually doing air
15 sampling after he devised his pump within Dow's
16 facilities?

17 A. Yes.

18 Q. Was it your impression that that was the
19 beginnings of air sampling for airborne contaminants
20 in Dow's facilities?

21 MR. PIERCE: Objection to the form
22 of the question.

23 A. As far as I know, yes.

24 Q. Can you remember what kinds of materials
25 Dr. Adams was sampling in those days, as you've

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1 described?

2 A. One was methyl bromide.

3 Q. That's a material that Dow was manufacturing
4 at the time?

5 A. Yes.

6 Q. In Midland?

7 A. Yes.

8 Q. Any other materials you can recall being
9 sampled?

10 A. We sampled many materials. I don't know
11 what time or what he was working on at the time. I
12 can't answer the question sensibly.

13 Q. This beginning of building the pump that
14 you've told us about with the Wet-test meter, was that
15 shortly after you went to work at Dow?

16 A. Yes.

17 Q. What other activities, if any, did you have

18 in air sampling until you had the meeting with
19 Dr. Irish in 1940?

20 A. Would you restate that again, please.

21 Q. Yes, sir. All I understood you to tell me
22 that you did was help Dr. Adams build a pump. And I'd
23 like to know if you did anything else in connection
24 with industrial hygiene besides help Dr. Adams build
25 the pump.

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1 A. I helped him in the - when we were
2 sampling. I helped -- He was the primary; I was his
3 helper.

4 Q. So, you actually were involved in the air
5 sampling, itself.

6 A. Yes, yes.

7 Q. And, now, once you had the meeting with
8 Dr. Irish in 1940, can you pick up there and tell me
9 your involvement in industrial hygiene at Dow
10 following that meeting that you went to at the
11 American Industrial Hygiene Association?

12 MR. PIERCE: Objection to the form
13 of the question.

14 A. Well, my involvement in industrial hygiene
15 was cursory to my laboratory work in toxicology; but I
16 did on occasion visit plants and talk to them about
17 the problems they might have. I've been in the
18 plant. I've taken samples, myself - few, but I have.
19 And then we had people - gradually added a few
20 people. And it didn't really blossom until

21 Mr. Hoyle came with us. And from then on, I don't
22 recollect being in the plants, myself.
23 Q. So, would it be fair to characterize
24 Mr. Hoyle as your first designated full-time
25 industrial hygienist at Dow?

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1 A. Yes.
2 MR. PIERCE: Objection to the form
3 of the question.
4 Q. Do you recall in this time period between
5 1937 and when Mr. Hoyle came into industrial hygiene
6 what kinds of air sampling capabilities you had at
7 Dow?
8 A. I'm not sure I can give you everything. We
9 tried to develop sampling procedures involving
10 halogenated hydrocarbons in which we would pass
11 material through a furnace, collect the halides, and
12 have it sent to the analytical lab for analysis, and
13 with a blood-test meter or some such matter guess or
14 estimate the volume of the sampling in monitoring
15 the - of the occupational exposure as best we could
16 with the techniques we had available at that time.
17 Q. Do you recall if you had the ability to
18 sample particulates from 1937 until Mr. Hoyle came on
19 board?
20 A. I don't remember the particulates. I had
21 nothing to do with them.
22 Q. Now, would there have been someone else who
23 would have been involved with particulates, then?
24 A. I don't know -- I don't think -- I don't

25 recollect.

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1 Q. Do you recall having any discussions with
2 anyone outside of Dow about this industrial hygiene
3 activity - in other words, how to collect air samples
4 how to develop air sampling equipment - or was this,
5 something you did all internally at Dow?

6 MR. PIERCE: Objection to the form
7 of the question; lack of time frame.

8 Q. I'm interested while in this '37 time period
9 until when Mr. Hoyle came on board.

10 A. I don't recollect. I'm having a hard time
11 associating the various developments that were
12 occurring in that period of time. That's quite awhile
13 ago for me.

14 Q. I can appreciate it's a long time ago. Do
15 you have any recollection of anyone - for instance,
16 from the U. S. Public Health Service - working with
17 you in developing your program or methods?

18 A. No, I don't.

19 Q. How about from any of the universities? I
20 think you said that you knew about the activities at,
21 like, the University of Cincinnati and some other
22 places. Would you have worked with any university
23 personnel in developing an industrial hygiene program
24 before Mr. Hoyle came?

25 A. Not that I recollect.

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1 Q. Were there any insurance carriers for Dow,
2 that you're aware of, in that time period from '37
3 until Mr. Hoyle came on who might have provided you
4 information about air sampling?

5 MR. PIERCE: Objection to
6 form.

7 A. I don't recollect any.

8 Q. Have you ever had any dealings with
9 insurance companies while you've been a Dow employee,
10 Dr. Rowe?

11 MR. PIERCE: That's a completely
12 ambiguous question.

13 But answer it if you can.

14 Q. I'm talking about professionally. Any
15 industrial hygienists from insurance companies come
16 into Dow?

17 A. No, except that I knew some of the people in
18 there. But just meetings, we never had -- I never had
19 any contact with them on the technicalities.

20 Q. Would you know one way or the other while
21 you were a Dow employee if any insurance company
22 industrial hygienist ever did any air sampling in Dow
23 facilities?

24 A. I can't recall any.

25 Q. Did Dow, to your knowledge, sir, have any

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1 industrial hygiene consultants, people who were not
2 employees of Dow?

3 A. Not that I can recollect.

4 Q. Would you tell us --

5 MR. PIERCE: Could we knock off
6 the background chatter please?

7 I'm sorry. Go ahead.

8 MR. HOBSON: Okay. I didn't hear
9 any, so -- I'm sorry.

10 (By Mr. Hobson)

11 Q. Would you tell me, sir, how your job at
12 Dow once Mr. Hoyle was hired - how you would work with
13 Mr. Hoyle, if you did?

14 A. Well, my area was in charge of -- My area
15 was in charge of learning the facts as far as
16 toxicology was concerned and helping to interpret the
17 results that might come back from the field. We
18 conversed all the time. We were in the same building
19 together. So, sure, we talked about problems that we
20 had, what we might anticipate, and so on.

21 Q. That's -- What I'd like to know about,
22 Dr. Rowe, is what - how did you interface - not what
23 you necessarily said, but how did toxicology relate to
24 industrial hygiene?

25 MR. PIERCE: I object to the form

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1 of the question.

2 A. Well, I always have kind of looked at that
3 as "hand in glove."

4 Q. Can you explain what you mean by that?

5 A. Well, an industrial hygienist that doesn't
6 know anything about - does not have the background

7 information would have a hard time interpreting his
8 results, I think. And he relies on us for the
9 information.

10 Q. And what kind of information?

11 A. Toxicological information.

12 Q. And do you rely on the industrial hygienist
13 for any part of your work, then, as a toxicologist?

14 A. Yes.

15 Q. How does that work?

16 A. Well, to -- It comes to down whether or how
17 you comply with what you believe is a - is a safe
18 working atmosphere and what you know about the
19 toxicology, what the effects are, what kind of
20 symptoms you might expect to find in the people who
21 are working there, if any. It's a very close
22 relationship. An industrial hygienist without some
23 toxicological help ordinarily - in those days, at
24 least - was at great disadvantage. He was at that
25 point an empirical person.

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1 Q. And "in those days," you mean in the
2 Fifties?

3 A. Yes. Early in the -- Early in the days
4 industrial hygiene was not a very well-developed art
5 any more than industrial toxicology was.

6 Q. Did medicine play a part in your work in
7 toxicology and industrial hygiene?

8 A. Yes.

9 Q. How did that -- How did medicine fit in?

10 A. Well, the information that we developed on
11 animal work was always transmitted to the medical
12 department. And we had discussions with them. And if
13 they happened to see or to have workmen show up at the
14 office - at a medical office - with a particular
15 problem, they had no data. And they didn't have any
16 information on this - on what the exposure was. They
17 would come to us to find out. The first thing we
18 would probably do if we didn't have toxicological data
19 available would be to get something going or get the
20 information and find out what kind of exposures were
21 causing adverse effects. And we communicated freely
22 between the - those operations always.

23 Q. When you say that you would get the
24 information, would you ever get information about
25 toxicology of a material from other manufacturers?

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1 MR. PIERCE: You mean from
2 publications - scientific publications,
3 treatises?

4 MR. BLANKS: From other
5 manufacturers.

6 MR. PIERCE: That's completely --

7 Q. Telephone? By mail? Brochures? I mean,
8 would you relate with other manufacturers?

9 A. Well, at the time -- Well, what time frame
10 are you talking about now?

11 Q. Up until the -- From '37 until your
12 industrial hygiene program began to change.

13 A. Okay. I -- I don't recollect. But it would

14 be very logical, if there were information available;
15 and there wasn't much available in those days.

16 Q. As more information began to be available in
17 your own laboratories, would you have a way of
18 communicating with your customers what you learned
19 about your products?

20 A. Yes. We did this through our safety data
21 sheets. We did it through publications, talks,
22 presentations at meetings, and answering questions
23 when we got them on the telephone or by letter,
24 whatever.

25 Q. Were you involved, Dr. Rowe, in the

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1 preparation of safety data sheets?

2 A. Only peripherally. For the toxicological
3 information. This was Mr. Hoyle's primarily
4 responsibility.

5 Q. Did you have anything to do with the
6 distribution of the safety data sheets?

7 MR. PIERCE: Objection to the form
8 of the question.

9 A. No. That was pretty well standardized, I
10 think. I didn't -- Somebody wanted one special or
11 something like that, why, certainly we would just send
12 them one. That's all.

13 Q. I take it that from your early days in
14 involvement with the American Industrial Hygiene
15 Association you became aware of the American
16 Conference of Governmental Industrial Hygienists.

17 A. Yes.

18 Q. What is your earliest recollection of
19 learning about that organization's existence?

20 A. Probably about the time I went to the
21 A.I.H.A. meeting.

22 Q. Were you aware that there came a time when
23 the American Conference of Governmental Industrial
24 Hygienists published a list of chemicals and exposure
25 levels associated with those chemicals?

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1 A. Yes.

2 Q. How is it that you learned of this
3 information?

4 A. I can't answer you for sure because this was
5 common knowledge. Everybody that was working in the
6 A.C.G.I. started publishing the threshold limit
7 values. Anybody in the field was - became aware of
8 it. I don't even know when the first one was. It was
9 probably mid-Fifties or some such time; but everybody
10 in the field knew about that, I think.

11 Q. You're familiar with the National Safety
12 Council, are you?

13 A. Yes, to some extent, but not -- I never
14 worked with them real closely.

15 Q. Are you aware that the National Safety
16 Council used to publish the A.C.G.I.H. T.L.V. list in
17 its periodical?

18 A. I think there were a number of publications
19 that published that list.

20 Q. If anyone wanted to find the A.C.G.I.H.

21 T.L.V. list, would it have been hard to find if they
22 tried?

23 MR. PIERCE: Objection to the form
24 of the question.

25 A. I wouldn't think so.

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1 Q. I take it that being aware of that list and
2 familiar with it, you know that there's a section that
3 deals with mineral dust.

4 A. Yes.

5 Q. In your work at Dow, do you recall ever
6 being involved with any toxicity testing for asbestos?

7 A. No.

8 Q. Or of asbestos?

9 A. No.

10 Q. Do you recall that in the earliest of the
11 A.C.G.I.H. T.L.V. lists that you're familiar with that
12 asbestos was one of the mineral dusts that was listed?

13 A. I'm aware it was one, yes.

14 Q. Would you know one way or the other of any
15 evaluation of asbestos dust in the air at any Dow
16 facility?

17 MR. PIERCE: Objection to the form
18 of the question.

19 A. I guess I'd ask you to repeat, please.

20 Q. Yes, sir. I'm trying to find out if you
21 know one way or the other whether anyone has ever
22 conducted any air samples at a Dow facility for
23 asbestos.

24 A. I don't know.

25 Q. Would you know, Dr. Rowe, one way or the

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1 other if Dow has ever manufactured a product in which
2 asbestos was a component?

3 A. I don't recall.

4 Q. Did you have records available to you in
5 your work that would tell you what products Dow
6 manufactured and what their constituents were?

7 A. I think that that would be information that
8 was available. Whether I had it or not, I don't know.

9 Q. If we go back to the early part of your
10 career -- And I don't mean necessarily the first day
11 but the first few years - where would you have gone to
12 find out what materials Dow manufactured and what
13 their constituents were?

14 A. I don't know.

15 Q. I see from your C.V. that in 1954 it shows
16 that you were the director of toxicology research
17 section of the biochemical research laboratory.

18 If we go to that point in time or shortly
19 thereafter, would there be a place there that you
20 would know to go to find out products Dow manufactured
21 and what their constituents were?

22 A. Well, the Dow catalog would have given the
23 names of all the products and the constituents, what
24 information would have been available, if I had asked
25 for it from the - from the production plant or whoever

1 was involved.

2 Q. What do you mean by a "Dow catalog"?

3 A. Product catalog.

4 Q. There was in existence a Dow product catalog
5 that you recall?

6 A. Yes.

7 Q. How far back in time do you recall there was
8 a Dow catalog?

9 A. I don't know.

10 Q. Would you know one way or the other,
11 Dr. Rowe, if asbestos was used in your laboratory in
12 the late 1930's through 1954 when you became the
13 director?

14 A. No.

15 Q. Are you aware that asbestos was sometimes
16 used as a filtering agent in chemical testing?

17 MR. PIERCE: Objection --

18 A. Yes.

19 MR. PIERCE: -- to the form.

20 Q. You learned that as part of your training as
21 a chemist in chemistry?

22 A. Yeah. Occasionally used asbestos, yes.

23 Q. But do you recall one way or the other if
24 that was done at any Dow facility, the use of asbestos
25 as a filtering agent?

1 MR. PIERCE: Asked and answered.

2 A. I don't know where all it was or wasn't

3 used.

4 Q. Do you recall if Dow was a manufacturer of
5 chlorine?

6 A. Yes.

7 Q. Have you, yourself, been to the facilities
8 where chlorine was manufactured?

9 A. I was never there.

10 Q. Would you know one way or the other if
11 asbestos was used as a membrane in the cells that were
12 used to make chlorine?

13 A. I don't know.

14 MR. PIERCE: Objection to the
15 form; asked and answered.

16 Q. I'm sorry. I didn't hear you. I didn't
17 hear your answer, sir.

18 A. I don't know.

19 Q. Was Dow a manufacturer of chlorine in the
20 1930's when you began there, to your knowledge?

21 A. My recollection is I -- Yes.

22 Q. And I think you told us that part of your
23 work was evaluating halogenated hydrocarbons; and
24 chlorine would be one of the halogen chemicals,
25 correct?

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1 A. Yes.

2 Q. Are you familiar with what was called the
3 American Standards Association?

4 A. Peripherally.

5 Q. Are you aware that they in the past

Rowe-Verald-K-100192.txt
6 generated consensus standards?

7 A. I don't recall what kind of standards they
8 were.

9 Q. But you do recall that they generated
10 standards?

11 A. The ANSI standards, yes.

12 Q. And A.S.A., the American Standards
13 Association, later became the American National
14 Standards Institute or ANSI. You know that?

15 A. No.

16 Q. Do you recall having access to any of the
17 A.S.A. standards while you were at Dow?

18 A. I remember seeing them. I couldn't tell you
19 when.

20 Q. Would you recall, Dr. Rowe, if you would
21 have known that asbestos was a component of any of the
22 thermal insulation materials used in any of Dow's
23 facilities from 1937 to 1954?

24 MR. PIERCE: Asked and answered.

25 A. Yes. It was a commonly used pipe

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1 insulation.

2 Q. Do you recall seeing any - any information
3 from manufacturers of thermal insulation products
4 containing asbestos about any health hazards from
5 asbestos in your work at Dow up until 1960?

6 A. I don't recall specifically, no.

7 Q. Would you, Dr. Rowe, have ever been involved
8 as a Dow employee in visiting someone else's
9 operations other than Dow's where Dow products were

10 being used in evaluating either the toxicological or
11 industrial hygiene aspects of a Dow product?

12 A. Yes.

13 MR. PIERCE: Objection to the form
14 of the question; it's compound and it's
15 confusing.

16 But go ahead and answer it.

17 A. Yes.

18 Q. What do you recall in that regard, Dr. Rowe?

19 A. The one I recall was a visit - And this was
20 essentially an industrial hygiene visit - in the early
21 days in Texas in a flour mill which was using methyl
22 bromide. And I was asked to go down there and talk to
23 them about methyl bromide. And they wanted some air
24 samples taken, which I did.

25 Q. And about when would that have been, sir?

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1 A. That would have been in the early Forties,
2 probably. Around '40 or somewhere after that.

3 No, no. I can't answer you exactly. It
4 would be early days.

5 Q. Methyl bromide was used as a fumigant for
6 grains?

7 A. Yes.

8 Q. Is part of evaluating the industrial hygiene
9 aspects of a product a consideration of how that
10 product is going to be used in the field?

11 MR. PIERCE: Objection to form of
12 the question.

13 A. Yes.

14 Q. And essentially what you were doing in 1940
15 or thereabouts whenever you made this trip to the
16 field in Texas was evaluating its use in the field:
17 is that accurate?

18 A. I guess I would agree that's part of the -
19 part of the program, yes.

20 Q. Did you have any involvement at Dow in
21 writing any kind of labeling or instructions that had
22 to do with health and safety in the use of products
23 that Dow manufactured?

24 A. At times.

25 Q. How far back would that go in your career at

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1 Dow, as best you can recall, Dr. Rowe?

2 A. I cannot tell you. I don't know.

3 Q. In writing labeling or instructions for use
4 that have to do with health and safety of products, is
5 it important to know how those products are going to
6 be used in the field?

7 A. Insofar as reasonably possible.

8 Q. And how would you, as a manufacturer working
9 for a manufacturer of products, determine how products
10 are going to be used in the field?

11 MR. PIERCE: Objection to form of
12 the question.

13 A. Well, products are usually designed for a
14 particular use; but there are times when your
15 customers don't care about you knowing what they're
16 going to be used for.

17 Q. I'm not sure I understand how that fits into
18 your - the information you need to know to write
19 labeling and instructions for use.

20 A. Well, if you don't - if you're not sure
21 that - how it's going to be used, then you don't know
22 what kind of exposures to anticipate.

23 Q. And that's why you need to know how a
24 product is going to be used in the field?

25 A. Any bit of information is helpful.

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1 MR. PIERCE: Maybe this would be a
2 good time to take a brief recess.

3 We've been going more than an hour.

4 MR. HOBSON: That's fine. Take a
5 break.

6 (AT THIS TIME A BRIEF RECESS WAS
7 TAKEN, AND THE PROCEEDINGS THEREAFTER
8 RESUMED AS FOLLOWS:)

9 (By Mr. Hobson)

10 Q. Dr. Rowe, did you have any involvement in
11 your job at Dow in recommending that Dow have a person
12 designated as a full-time industrial hygienist?

13 A. No.

14 Q. Do you have any knowledge as to who it was
15 that did initiate the creation of an industrial
16 hygiene position at Dow?

17 A. Dr. Irish.

18 Q. Were you in on any of the discussions that
19 led up to the creation of the position?

20 A. I don't recall.

21 Q. Did you have anything to do with the
22 selection of Mr. Hoyle?

23 A. No.

24 Q. Did you know Mr. Hoyle before he became the
25 industrial hygienist?

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1 A. No.

2 Q. Did you have anything to do with any of the
3 training or orientation of Mr. Hoyle when he took the
4 industrial hygiene position?

5 A. Yes.

6 Q. What did you do in that regard, sir?

7 A. Acquainted him with the toxicological work
8 that we were doing and all in that area.

9 Q. Was it your impression that Mr. Hoyle was
10 not familiar with toxicology before he took the
11 position, or would you know one way or the other?

12 MR. PIERCE: Objection to the
13 form.

14 A. I don't believe he was.

15 Q. What did you do to orient or explain to
16 Mr. Hoyle about toxicology?

17 A. I don't recall.

18 Q. You, yourself -- Sir, I think you've said
19 that you began being involved in the American
20 Industrial Hygiene Association about 1940.

21 Did you go to other American Industrial
22 Hygiene Association meetings after the early 1940's?

23 A. Yes.

24 Q. Were you a regular attendee at those
25 meetings?

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1 A. Quite regular.

2 Q. Once Mr. Hoyle had the position, would he
3 have gone to the meetings, also --

4 A. Yes.

5 Q. -- to your knowledge? Was there anyone else
6 at Dow while it was just Mr. Hoyle being the
7 industrial hygienist and yourself that went to the
8 American Industrial Hygiene Association meetings on a
9 regular basis?

10 A. Other people went. I can't attest to how
11 regular.

12 Q. Did Dr. Irish go on several occasions, that
13 you're aware of?

14 A. He was a regular.

15 Q. Anyone else who went more than just once or
16 twice, that you recall, from Dow up until there were
17 other people hired in industrial hygiene for
18 Mr. Hoyle?

19 A. Dr. Adams went quite regularly.

20 Q. Do you recall if Dr. Irish or Dr. Adams made
21 presentations?

22 A. I don't recall.

23 Q. Has any of your interest as an industrial
24 hygienist professionally while you were at Dow dealt
25 with particulates?

1 MR. PIERCE: Objection to the form
2 of the question and the
3 categorization. The witness has
4 already indicated his particular role
5 in industrial hygiene.

6 But go ahead and answer the
7 question.

8 A. I guess I'd like to have you repeat it.

9 Q. Yes, sir. I'm curious to know if you in
10 your position at Dow had any particular interest in
11 particulates from a toxicology standpoint.

12 A. No.

13 Q. Was there anyone else at Dow, to your
14 knowledge, whose interest was in the area of
15 particulate toxicology?

16 A. No.

17 Q. If you had occasion to need some information
18 about particulate toxicology, where would you go to
19 get that information?

20 MR. PIERCE: Object to the form of
21 the question.

22 A. I would expect that I would go to the
23 primary manufacturers of the particular product that -
24 if we had an interest.

25 Q. Was it your experience, Dr. Rowe, when you

1 were at Dow that if a customer of Dow's came to you

2 and asked you for toxicity information regarding a Dow
3 product that they would be relying on you to provide
4 them with accurate and as complete information on the
5 toxicity of that product as you had available?

6 A. Yes.

7 MR. PIERCE: Objection to the form
8 of the question.

9 Q. I'm sorry, sir.

10 A. Yes.

11 Q. When you were doing your work at Dow, did
12 you ever do any human experimentation in your
13 laboratories, that you're aware of?

14 A. Yes.

15 Q. How far back in time do you recall there
16 being human experimentation at Dow's laboratories?

17 A. Probably 1940 --

18 Q. Is there -- I'm sorry. Go ahead. I didn't
19 mean to cut you off.

20 A. Roughly. I can't identify it specifically.

21 Q. What kinds of human experimentation was
22 being done in the approximately early 1940's, as best
23 you recall, sir?

24 A. Primarily odor thresholds, irritation
25 thresholds in the early days.

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1 Q. How would you go about conducting this work?

2 A. Well, you'd create a chamber, establish a
3 concentration, measure it, enter the chamber, and see
4 what happens.

5 Q. Who would be the the people who were

6 involved in actually entering the chamber and being
7 exposed to the materials?

8 A. Dr. Irish, Dr. Adams, and myself. Even
9 Mr. Hoyle or whoever else happened to be available.

10 Q. In essence you were doing human
11 experimentation on the staff of the laboratory.

12 A. That's all.

13 Q. And was this prior to Dr. Gay being hired by
14 Dow?

15 A. Yes.

16 Q. How long did you all continue to do
17 experiments on yourselves?

18 A. I can't answer you. Don't know.

19 Q. Would it have been more than ten years, you
20 think?

21 A. Oh, yes.

22 MR. PIERCE: By "experiments," you
23 mean threshold of odor and precisely
24 what Dr. Rowe described; is that
25 correct, Mr. Hobson?

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1 MR. HOBSON: Yes. Whatever they
2 did.

3 (By Mr. Hobson)

4 Q. Was there a point in time that you thought
5 better of the human experimentations on yourself and
6 stopped for that reason, or why did you stop?

7 MR. PIERCE: Objection to form of
8 the question.

9 A. I didn't know we stopped.
10 Q. Okay. As far as you know, when you left Dow
11 there was still the same kind of human experimentation
12 going on?
13 A. I -- I wasn't a part of it at that time
14 but -- I don't know.
15 Q. Do you recall that methyl bromide was one of
16 the materials that you would do human experimentation
17 on in the early 1940's?
18 A. No.
19 Q. And was it later done?
20 A. I don't think it was ever done.
21 Q. Did you, sir, yourself, ever while you were
22 a Dow employee get involved in any epidemiology
23 studies?
24 A. No.
25 Q. Would you know if there were any

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1 epidemiological studies done of Dow employees while
2 you were a Dow employee?
3 A. Yes.
4 Q. Who would have been doing those, sir?
5 A. Medical department and another M.D.,
6 epidemiologist, Dr. Cook.
7 Q. Would you recall Dr. Cook's first name?
8 A. No. Yes. Ralph.
9 Q. Can you give me the approximate time period,
10 as best you understand, when epidemiological studies
11 were begun at Dow?
12 A. No. I can't remember.

13 Q. Would you remember the decade?
14 A. Probably in the later Sixties.
15 Q. In the what, sir?
16 A. In the late Sixties.
17 Q. Did you have any role in giving input to the
18 epidemiologist or the medical department about what
19 should or should not be included in epidemiological
20 studies?
21 A. No.
22 Q. Did you provide any review of
23 epidemiological studies or drafts of epidemiological
24 studies for Dow?
25 MR. PIERCE: Objection to the form

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1 of the question.
2 A. I don't recall any.
3 Q. Basically you got the report when it was
4 finished, and that's about it as far as the
5 epidemiological work went on?
6 A. Yes.
7 Q. Would you know one way or the other if any
8 epidemiological studies were ever done of the Dow
9 Freeport facility or any groups within Dow Freeport?
10 A. I don't know.
11 Q. To your knowledge, were epidemiological
12 studies performed by Dow published?
13 A. I don't know.
14 Q. Were you ever involved personally with
15 communicating health hazards that might be associated

16 with a particular compound to workers who would be
17 handling that material?

18 A. Yes.

19 Q. How far back in your Dow history would that
20 go, sir?

21 A. Early Forties.

22 Q. I guess part of your trip to Texas where you
23 were dealing with methyl bromide included that
24 activity, did it not, telling workers about the
25 hazards of methyl bromide?

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1 A. I don't recall just what we did.

2 Q. Did you find that it was good practice to
3 advise employees about potential health hazards
4 associated with products they would be handling?

5 MR. PIERCE: Objection to the
6 form.

7 A. We made that information available to
8 anybody.

9 Q. And, in fact, I think you have published,
10 have you not, that telling the worker about health
11 hazards is necessary to help gain the assistance of
12 the worker in controlling risks to occupational
13 hazards, correct?

14 MR. PIERCE: Objection to the
15 form.

16 A. I think so.

17 Q. Would that be your position still today, --

18 A. Yes.

19 Q. -- Dr. Rowe?

20 A. Yes, it would.

21 Q. Workers should be informed about potential
22 risks of the use of any materials that they work with?

23 A. Yes.

24 Q. As far as you're aware, Dr. Rowe, was that
25 Dow's practice for the time periods you worked at Dow

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1 to inform its workers about any kind of health risks
2 associated with products the workers would be
3 handling?

4 A. It was a general policy.

5 Q. Are you aware of any instance where a
6 decision was made not to tell Dow employees of any
7 particular health risk associated with a product that
8 they would be handling?

9 A. No. I don't believe that ever happened
10 but -- Not to my knowledge.

11 Q. And certainly if it had come to your
12 attention, I think, based on what I've seen of your
13 writings, you would have taken any steps necessary to
14 prevent it, would you not have?

15 MR. PIERCE: Objection to the
16 form.

17 A. I probably would.

18 Q. Have you ever been accused of being bashful,
19 Dr. Rowe, in your professional activities?

20 A. No. I don't believe so.

21 Q. I understand that one of your interests in
22 the past has been occupational carcinogens; is that

23 correct?

24 A. Only as one facet of toxicology.

25 Q. What is your recollection of how early in

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1 your career you began to be interested, as one facet

2 of toxicology, in occupational cancers?

3 A. I don't know.

4 Q. Was Dow, to your knowledge, ever a
5 manufacturer of aromatic amines?

6 A. Yes.

7 Q. Tell me what you're aware of as far as Dow
8 being a manufacturer of aromatic amines.

9 MR. PIERCE: Let me now interpose
10 an objection. Are aromatic amines a
11 part of this case? Are we going to go
12 through every product that Dow has ever
13 manufactured in its history? When are
14 we going to get to the relevant aspects
15 for which Dr. Rowe is here?

16 MR. BLANKS: What was that
17 objection? Is that one to form?

18 MR. PIERCE: Let's get to
19 relevance on this because we're really
20 getting to the point where it's way
21 beyond the toleration point in terms of
22 extraneous materials. Dr. Rowe is here
23 to provide you his answers to questions
24 related to a certain litigation, not on
25 a broad fishing expedition relating to

1 nothing even closely resembling
2 relevancy here. So, please, let's get
3 to the matters before us.

4 MR. BLANKS: Well, we are trying
5 to be tolerant of your repeated
6 objections and attempts to coach the
7 witness and instruct him; and we'll
8 proceed with our discovery deposition
9 of areas that the doctor has knowledge
10 of.

11 MR. PIERCE: Well, I've interposed
12 my objections; and I add another one
13 for your insinuations and your
14 outrageous statement that you just
15 made.

16 Q. I think we're back to my question, Dr. Rowe.
17 Can you tell me what you recall about Dow
18 having manufactured aromatic amines, please?

19 A. Well, aniline was a product, has been and
20 was for a long time.

21 Q. Was aniline a product back in the late
22 Thirties when you joined the company?

23 A. As far as I know.

24 Q. Would you have become aware, then, shortly
25 after you joined the company of an association between

1 aromatic amines and bladder cancer in workers?

2 MR. PIERCE: Objection to the form
3 of the question.

4 A. At some time I became aware of it.

5 Q. Fairly early on in your career, you believe?

6 A. I have no recollection of time frame, no.

7 MR. PIERCE: Does that question
8 imply all aromatic amines? Are you
9 asking all aromatic amines or some
10 aromatic amines?

11 MR. HOBSON: I'm satisfied with
12 the question and answer.

13 MR. PIERCE: Okay.

14 (By Mr. Hobson)

15 Q. What is your earliest recollection,
16 Dr. Rowe, of learning of any association between
17 asbestos and cancer in humans?

18 A. I don't know. I can't recollect when.

19 Q. Can you even give me a decade?

20 A. No, I don't think so.

21 Q. Would the medical and scientific literature
22 as it was coming out in the area of occupational
23 carcinogens - is that something that you believe you
24 would have been trying to follow as closely as you
25 could, given your circumstances?

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1 A. No.

2 Q. Was cancer being caused by chemicals that
3 you were assessing in your laboratories at the
4 biochemical research laboratory at Dow anything that

5 you attempted to determine?

6 A. Yes.

7 Q. How early on would you recall that you at
8 the biochemical research laboratories were trying to
9 find out if chemicals that you were assessing could
10 cause cancer?

11 A. I don't know. Time frames are elusive.

12 Q. One of the items that you've brought here to
13 the deposition, Dr. Rowe, we've marked as Plaintiffs'
14 Exhibit 760600 Dow. And it's titled, "A Historical
15 Account of Dow's Environmental Stewardship," by Eugene
16 E. Kenega. Did I say that right?

17 A. "Ke-nig-a" is the way it's pronounced.

18 Q. I apologize. Is this the article that
19 you brought responsive to a subpoena (tendering
20 document)?

21 MR. PIERCE: (Reviewing document).

22 Counsel, may I ask, are the yellow
23 tabs yours?

24 MR. HOBSON: Yes. We've added
25 yellow tabs and --

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1 MR. PIERCE: And the blue
2 underlines?

3 MR. HOBSON: Yes.

4 MR. PIERCE: And the additional...

5 MR. HOBSON: We'll take off the
6 yellow tabs, but unfortunately we can
7 only mark on...

8 MR. PIERCE: Okay. I just wanted
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9 it to be clear.
10 MR. HOBSON: Yes.
11 (By Mr. Hobson)
12 Q. That's one of the articles you brought,
13 Dr. Rowe?
14 A. I believe so.
15 Q. What led to the generation of this article,
16 if you know, sir?
17 A. I don't remember.
18 Q. Did you know the author?
19 A. Yes.
20 Q. What do you know about the author's work?
21 A. He was very much interested in environmental
22 issues.
23 Q. And he was an employee of Dow, was he?
24 A. Yes.
25 Q. Can you give me some time frame for how long

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1 this gentleman was employed by Dow?
2 A. No, I don't remember.
3 Q. I wanted to ask you -- And I think Counsel
4 may have another copy of it.
5 MR. HOBSON: You've got my only
6 one.
7 MR. PIERCE: (Tendering
8 document to Mr. Hobson)
9 (By Mr. Hobson)
10 Q. On the second page of this document, it
11 appears that it attributes a 1938 article to -- A

12 statement in 1938, I guess it is. Let me ask you,
13 sir, because I don't know what it implies. Looking at
14 this article that's Exhibit 760600 DOW, on page 173
15 there's a paragraph in the right-hand column that
16 starts out "1938." Could you take a look at that,
17 sir, and tell us what that means to you (tendering
18 document)?

19 A. (Reviewing document) I remember a meeting
20 with the F.D.A. I don't know what year it was, and I
21 don't recollect this particular situation.

22 Q. "This particular situation" being what, sir?

23 A. That we were testing materials for
24 carcinogenic - cancer-producing potential on
25 susceptible mice over a period of six months.

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1 I don't remember if we were doing that at
2 that time.

3 Q. Does this article appear to you to say that
4 this work was being done in 1938?

5 A. That I can't attest to. I don't remember
6 at - at that time.

7 Q. There's a name here of "H. C. Spencer." I
8 don't recollect that as being a name we've talked
9 about.

10 Can you tell us who Mr. Spencer was? - or
11 maybe you did. I'm sorry. Dr. Spencer. You did tell
12 us. I beg your pardon.

13 Sir, I need to ask your indulgence for a
14 moment on this. Is it your testimony that you just
15 don't recall that you did this work in 1938; or is it

16 your recollection that you recall it did not happen in
17 1938?

18 A. My recollection: I don't recall being
19 engaged in that in 1938 or that early.

20 Q. Can you tell us that it's wrong?

21 A. No.

22 Q. There's mention here of someone named Dorsey
23 R. Mussell, M-u-s-s-e-l-l. Can you tell me who that
24 is, sir?

25 A. He was -- He was a medical technologist who

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1 worked with Dr. Spencer.

2 Q. As a med. tech., what kinds of things would
3 Mr. Mussell have been doing?

4 A. Preparing tissues for microscopic
5 examination and doing blood tests - "Blood counts," I
6 should say.

7 Q. Dr. Rowe, I'd like to ask you some questions
8 about some of your work that might have involved the
9 American Conference of Governmental Hygienists.

10 Have you worked with their T.L.V. committees
11 in the past?

12 A. On occasion.

13 Q. Would you tell me what occasions you recall
14 that you've worked on their T.L.V. committees? - or
15 "worked with their T.L.V. committees," I should say.

16 A. I don't recall being a member of the T.L.V.
17 committee or anything. That would not have been --
18 They wouldn't have done that, anyway. But they would

19 frequently call and ask what we - what data we had on
20 a particular substance and what we would recommend,
21 and we never hesitated to talk to them.

22 Q. I'm sorry. I didn't mean to cut you off.

23 A. We tried to be helpful.

24 Q. I have heard it said that you are an
25 ex officio member of the T.L.V. committee. Is that a

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1 term you've ever heard?

2 A. I suppose if anyone sits down with them and
3 is not a member of that organization, that that's what
4 it would be called.

5 Q. Can you tell me approximately how many times
6 you recall sitting down with the T.L.V. committees?

7 A. I can't tell you.

8 Q. Would it have been probably more than ten
9 times?

10 A. I doubt it.

11 Q. Have you been present at a meeting of an
12 A.C.G.I.H. T.L.V. committee when a decision on a
13 T.L.V. was reached?

14 A. I don't remember.

15 Q. Can you remember any of the people that
16 you've met with in regards to the T.L.V.'s of the
17 American Conference of Governmental Industrial
18 Hygienists?

19 A. Professor Warren Cook. I don't recall
20 offhand members of the committee at that time other
21 than Warren.

22 Q. Have you ever opposed the adoption of

23 threshold limit values as exposure standards for laws?

24 A. Yes.

25 Q. Have you been involved in -- Strike that.

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1 I take it, Dr. Rowe, that you understand how
2 threshold limit values were intended to be used.

3 A. I can't answer that the way it's phrased.

4 Q. Do you understand, sir, that threshold limit
5 values were never intended to be exact cutoffs between
6 safe and hazardous?

7 A. I think that's a fair statement.

8 Q. And that exposures that occur at or even
9 below the threshold limit value may in some cases
10 still result in an occupational disease?

11 MR. PIERCE: Objection to form.

12 A. Anything is probable. "Possible," I should
13 say.

14 Q. There -- Certainly, as a toxicologist, sir,
15 I would believe that you would accept that there is
16 wide variation in individual susceptibility for human
17 beings.

18 A. Yes.

19 Q. And as such, then, it is impossible to
20 predict the outcome of an exposure for any given
21 individual.

22 MR. PIERCE: Objection to the
23 form; asked and answered.

24 A. It's not impossible to predict.

25 Q. But to predict with certainty, I guess, it's

1 impossible.

2 A. Well, what degree of certainty?

3 Q. Have you been involved in any discussions
4 that concern the establishment of a threshold limit
5 value and how - what percentage or what portion of a
6 population that T.L.V. will protect?

7 MR. PIERCE: I'm going to object
8 to the form of the question in that a
9 portion of it is actually tes -
10 attempted testimony.

11 But go ahead.

12 A. I will have to have the question factored
13 before I can attempt to answer it.

14 Q. What kinds of factors would you need to
15 know, sir?

16 A. Well, restate it.

17 MR. HOBSON: Let me ask the young
18 lady to read it back. That way we'll
19 have it exact.

20 THE REPORTER: "QUESTION: Have
21 you been involved in any discussions
22 that concern the establishment of a
23 threshold limit value and how - what
24 percentage or what portion of a
25 population that T.L.V. will protect?"

1 A. That's two questions. I can't answer two
2 questions at once.
3 (By Mr. Hobson)
4 Q. Which two questions do you see there,
5 Dr. Rowe?
6 A. You asked if I'm involved - been involved in
7 any of the - of the setting of threshold limits. I'll
8 have to answer that question "yes."
9 Q. All right, sir.
10 A. But with respect to percentile of control
11 people, I'll have to answer "no."
12 Q. My question really was intended to find out
13 if you had any discussions about what percentage would
14 be protected in discussing T.L.V.'s. And you're
15 telling me you've not had any such discussions; --
16 A. No.
17 Q. -- is that right?
18 A. Right.
19 Q. Do you know Mr. Hill who was an industrial
20 hygienist at one time for Dow at Rocky Flats in the
21 Boulder, Colorado, area?
22 A. I do not.
23 Q. Don't recall having met him?
24 A. No.
25 Q. I believe, sir, that you have played some

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1 part in formulating air sampling strategies for
2 control of occupational diseases as part of your
3 professional work. Is that right?

4 A. That's right.

5 Q. And I understand from your - from your
6 writings that you are a firm believer in area
7 monitoring of industrial operations.

8 MR. PIERCE: Objection to the form
9 and to what you do or do not
10 understand.

11 Q. Is it true, Dr. Rowe, that you are an
12 advocate of area sampling in industrial operations?

13 A. Yes, sir.

14 Q. And if I've read your writings correctly,
15 you are an advocate of doing as much area sampling as
16 possible. Is that right?

17 A. I can't answer that quite that exact in that
18 respect. Anything is possible. You can spend a
19 hundred percent of your time, that's possible; but
20 it's impossible to do so.

21 Q. You're an advocate of doing a great deal of
22 area air sampling in industrial operations, correct?

23 A. As much as is reasonably possible.

24 Q. Why is that, sir?

25 A. Because in any area - occupational area -

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1 that I'm aware of, concentrations fluctuate and
2 duration of exposure fluctuates.

3 Q. And why would area sampling be preferable to
4 you over personnel sampling, then?

5 MR. PIERCE: Objection to form.

6 A. I didn't say that.

7 Q. Would it be?

8 A. I think the best monitor is personnel
9 sampling, but that's difficult in many instances to do.
10 Q. Why do you think that area sampling gives
11 you a good handle on exposure variations?
12 A. It tells you what areas are - what the
13 fluctuations are within particular given areas of the
14 workplace; and it will identify leaks, anything else
15 that may happen.
16 Q. Identify intermittent activities?
17 A. I don't know what you mean by that.
18 Q. Something that doesn't happen all the time?
19 A. Yeah. Yes.
20 Q. Do you know -- You're familiar with the term
21 "biological monitoring," are you not?
22 A. Yes.
23 Q. How does biological monitoring work with
24 doing area sampling and toxicology in protecting a
25 worker's health?

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1 A. It's another parameter.
2 Q. And how would you, sir, as a health
3 professional, utilize biological monitoring in
4 protecting a worker's health?
5 A. Well, biological monitoring measures the
6 integrated exposure to the individual, if it's - if
7 it's predicated upon blood concentrations, urine
8 analyses, breath samples; and it can tell you whether
9 people are doing their job correctly.
10 Q. And I think you've also published that
11 biological monitoring can indicate whether or not your

12 exposure level is adequate or not; isn't that true?

13 MR. PIERCE: Objection to the form
14 of the question.

15 A. It is one parameter.

16 Q. So, if you're using known toxic materials,
17 would you agree, sir, that biological monitoring is
18 important to incorporate into the overall health and
19 safety activity to know whether or not your exposure
20 levels are adequate?

21 A. It's one parameter.

22 Q. An important one?

23 MR. PIERCE: Objection to the
24 form.

25 A. It's not possible with everything; but where

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1 it is reasonably possible and analytical methods are
2 available, it's helpful. It's a parameter in total
3 evaluation.

4 Q. Would you include chest X ray as one method
5 of biological monitoring?

6 A. I'll leave that to the radiologists.

7 Q. You're not familiar with industrial hygiene
8 programs - occupational safety and health programs -
9 that incorporate chest X rays into biological
10 monitoring?

11 A. Oh, yes.

12 Q. So, in some cases chest X rays are included
13 in biological monitoring in health and safety
14 programs.

15 A. It can be.
16 Q. Are you familiar with the term
17 "pneumoconiosis-producing" dust?
18 A. Somewhat.
19 Q. Would you know one way or the other if a
20 chest X ray could be one of the appropriate biological
21 monitoring tools for a pneumoconiosis-producing dust
22 exposure?
23 A. If they were positive, it would probably
24 indicate - it would indicate something had happened
25 there. If they're negative, it doesn't mean anything

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1 except nothing has happened. It doesn't tell me what
2 the exposure would be.
3 Q. Yes, sir. And to get the exposure, that's
4 the reason you would go do air sampling. If I
5 understood you, you told me that finding - the
6 findings of a chest X ray will not tell you the
7 quantity of exposure to that individual. And my
8 question to you, sir, is in order to get the quantity
9 of exposure, that requires some sort of air sampling,
10 does it not?

11 MR. PIERCE: Let me object to the
12 repetitive nature of the questioning
13 and remind you that Dr. Rowe has
14 identified himself as a toxicologist.
15 But go ahead and answer.

16 A. A chest X ray only would be -- Well, I
17 shouldn't say "only" - would not indicate when
18 necessarily an exposure occurred or what intensity the

19 exposure was. So, it's qualitative and certainly
20 could not be used to quantitate what an exposure was
21 at some previous period of time.

22 Q. And if we wanted to know the answer to when
23 the exposure occurred and how much the exposure was,
24 the way to find the answer to those questions is to do
25 air sampling; is that correct?

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1 MR. PIERCE: Objection; it's a
2 compound question.

3 A. It's kind of like getting the horse before
4 the cart. You can't retrospectively conduct air
5 samples.

6 Q. I understand that, sir. But what my
7 question is, is that if you wanted to know how much a
8 person was exposed to of a pneumoconiosis-producing
9 dust, the way to answer that question is to do air
10 sampling, isn't it?

11 MR. PIERCE: Continue the
12 objection.

13 A. I still don't understand -- I'm trying to
14 explain, but I'm not getting through. Tell me again.
15 Air -- Go ahead.

16 Q. All right, sir. If we wanted to know how
17 much a person was going to be exposed to and we're
18 talking about a pneumoconiosis-producing dust, the way
19 to find out that question is to do air sampling while
20 they're doing their work, correct?

21 A. That's prospective, yes, sir.

22 Q. And if we're doing our air sampling
23 prospective and we're taking chest X rays of the
24 potentially exposed people as we go, then you can have
25 an assessment as to whether or not the exposures the

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1 person is receiving is responsible for a lung
2 disease. Do you agree with that?

3 A. Well, yes.

4 Q. And as I've understood your writings, Would
5 you agree that, then, if you've got historical air
6 sampling information and you've got historical
7 biological monitoring, it's the combination of the two
8 that gives you a handle on whether or not your
9 exposure levels that you're setting in the workplace
10 are adequate?

11 MR. PIERCE: Once again I'd like
12 to object to questions phrased in terms
13 of your understanding.

14 But go ahead and answer the
15 question.

16 A. It will give you -- No. It will give you an
17 indication of whether you're within an acceptable
18 range on the basis of judgment of peers or others.

19 Q. Doing the biological monitoring along with
20 the air sampling is part of the checking of the
21 judgment of the peers as to the adequacy of the
22 exposures levels, correct?

23 A. It's one of the parameters.

24 Q. Have you ever had any discussions with any
25 of the A.C.G.I.H. T.L.V. committees regarding

1 asbestos?
2 A. No.
3 Q. How about with any pneumoconiosis-producing
4 dust?
5 A. Not that I recollect. I don't recollect
6 any.
7 Q. Dr. Rowe, do you know or did you know
8 Jim Hammond?
9 A. Yes. I know Jim Hammond.
10 Q. Have you ever had any professional dealings
11 with Professor Hammond while he was an employee of
12 Exxon and while you were an employee of Dow that
13 involved company business?
14 A. I don't recollect any.
15 Q. Yours has been through professional
16 associations, --
17 A. Yes.
18 Q. -- your association with him? Do you know
19 Arthur Pabst?
20 A. Who?
21 Q. Arthur Pabst, P-a-b-s-t.
22 A. That doesn't ring any bells.
23 Q. He was an industrial hygienist at Mobil or
24 was --
25 A. I don't --

1 Q. -- predecessor --
2 A. I don't know him.
3 Q. Do you recall having any professional
4 dealings that were part of your work at Dow, not
5 through the professional associations, with any of the
6 oil company industrial hygienists?
7 A. With Dr. White.
8 Q. Dr. Norman White?
9 A. I don't recall others.
10 Q. What was your business dealing with
11 Dr. White, as you recall?
12 A. I don't recall. We were -- We were
13 schoolmates. We have known each other for 55 years -
14 60 years. We've talked about business at times. I
15 don't recollect what we talked about.
16 Q. Would you recall Allan Dooley?
17 A. I knew Allan -- I knew the name. I know --
18 I know Allan Dooley.
19 Q. Did you ever have any Dow company business
20 dealings with him?
21 A. Not that I know of.
22 Q. Did you know Lucian Renes?
23 A. Who?
24 Q. Lucian Renes, R-e-n-e-s, who was at
25 Phillips?

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1 A. No, I did not.
2 Q. Would you have known Mr. Dooley when he was
3 working for the State of Pennsylvania before he went

4 to Texaco?

5 A. I -- I did not know Al closely at all.

6 We -- Typical meeting acquaintances.

7 Q. I take it that you knew Warren Cook.

8 A. Yes.

9 Q. He was located in Michigan for some time; is

10 that right?

11 A. Yes.

12 Q. Did you know him before he moved to

13 Michigan?

14 A. I don't know if I can answer your question.

15 Q. Do you recall ever talking to Dr. Cook about

16 asbestos at all?

17 A. No.

18 Q. Did you know Dr. Wilhelm Hueper?

19 A. I had met him. That's all.

20 Q. Can you recall what context you met

21 Dr. Hueper in?

22 A. No.

23 Q. Do you know of his work at all?

24 A. Yes. I know a little of it. Very little of

25 it.

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1 Q. Is his work something you particularly

2 followed or just happened to come across it in the

3 literature?

4 A. No. We didn't follow it.

5 Q. I asked you about Dr. Drinker at Harvard.

6 Did you work with anyone at Harvard?

7 A. I don't think so. I don't recall any...

8 Q. Harvard was never a contractor for any
9 purpose to Dow, that you're aware of?
10 A. I don't think so, no.
11 Q. Would you recognize the name John - I think
12 it's "Staudt," S-t-a-u-d-t?
13 A. No.
14 Q. Other than Harvard at the school of public
15 health there, can you tell me what other public health
16 or occupational health programs you recall were in
17 place in the late Thirties and early Forties?
18 A. I don't recall.
19 Q. Do you recall Dow using any consultants from
20 any of the schools of public health while you were --
21 A. I beg your pardon.
22 Q. Do you recall Dow using any consultants in
23 the area of health and safety from any of the schools
24 of public health while you were at Dow?
25 A. I don't recall any.

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1 Q. Did you know Dr. Carl Nau, N-a-u?
2 A. Yes.
3 Q. How did you know Dr. Nau?
4 A. Met him in a meeting.
5 Q. When you were just beginning your career at
6 Dow, you began to publish some of your findings, I
7 believe. Is that right?
8 A. Yes.
9 Q. Were you encouraged to publish your results
10 at Dow?

11 A. Yes.
12 Q. How were you encouraged to publish?
13 A. Executives of the company - particularly
14 Willard Dow - wanted it to be published.
15 Q. And who was Mr. Dow?
16 A. He was president of Dow Chemical Company.
17 Q. How is it that you understood that Mr. Dow
18 wanted this information published?
19 A. My understanding is that he is the
20 individual who initiated the creation of the Dow
21 Chemical research laboratory because he was concerned
22 about occupational health and product safety, as well.
23 Q. Did you ever try to publish any of your
24 findings at Dow and were prohibited from doing so?
25 A. No, sir.

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1 Q. When articles that you were going to publish
2 were being considered for publications, who within Dow
3 would review those articles before being published?
4 MR. ALMQUIST: Object to the
5 question. It assumes somebody would
6 review it before he submitted it for
7 publication.
8 Q. I'll ask the question, Dr. Rowe. Did anyone
9 review your work prior to it being submitted to
10 publication at Dow?
11 A. Yes.
12 Q. May I know who?
13 A. Well, our close colleagues in the
14 laboratory; if there was anything involving the legal

15 side of it, the legal department it would be passed
16 through; and the manufacturing operation product
17 manufacturing plant superintendent if it involves his
18 product.

19 Q. And I take it each one of those reviews
20 would generate comments to you, and then you would
21 make an election about incorporating those comments or
22 not?

23 A. I can't ever having - remember changing
24 anything unless it was a technicality.

25 Q. Did they just never make any changes in

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1 substance - recommendations to you, that you can
2 recall?

3 A. No, except to compliment us on getting the
4 information out.

5 Q. What other companies do you recall in the
6 same time frame - the late Thirties, early Forties,
7 into the Fifties - doing the same thing, having a
8 toxicological laboratory and having published a great
9 deal of information about their work?

10 A. Dr. Smyth at Mellon Institute on behalf of
11 Carbide and Carbon published a certain amount, not as
12 much in the early days as they did later.

13 Q. If we talk about up until 1960, would you
14 know from your review of the literature who would have
15 generated the most information, comparing Dow and
16 Mellon and Du Pont?

17 A. I think I pub - we published more than

18 anyone.

19 Q. Would you publish your methods as well as
20 your results?

21 A. I don't know what you mean.

22 Q. When you would do a toxicological test and
23 publish the results would you tell the reader how you
24 did the test?

25 A. I believe those were - that was automatic in

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1 the introduction as to what was done and how it was
2 done, as best we could describe it.

3 Q. So, if anyone wanted to do similar-type
4 toxicity testing of materials, right there in your
5 works were the means and the techniques to be used to
6 do the tests?

7 A. I would think so.

8 Q. And those were published in the open and
9 scientific literature for anyone to find who cared to
10 look?

11 A. Yes.

12 MR. HOBSON: I understand we're
13 out of tape; so, let's take a break.

14 MR. PIERCE: No. Let's -- If
15 we're out of tape, it's appropriate --
16 In accordance with the agreement, the
17 two hours are up for the afternoon
18 session; and we can continue tomorrow.

19 (REPORTER'S NOTE: AT
20 APPROXIMATELY 2:40 P.M., ON OCTOBER 1,
21 1992, THE DEPOSITION WAS RECESSED.

22 AT APPROXIMATELY 9:00 A.M. ON
23 OCTOBER 2, 1992, WITH ALL PARTIES
24 PRESENT, THE DEPOSITION RESUMED AS
25 FOLLOWS:)

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1 RESUMPTION OF EXAMINATION BY MR. HOBSON:

2 Q. Good morning, Dr. Rowe.

3 A. Good morning.

4 Q. I've had a chance to look through some of
5 the documents that you brought yesterday, and I have a
6 few questions for you about the documents.

7 When you retired from Dow, sir, I take it
8 that some of the files that you had maintained at your
9 offices you kept with you after your retirement. Is
10 that correct?

11 A. Yes.

12 MR. PIERCE: Objection to form
13 of the question, as to whether you take
14 or not.

15 Q. Would you be kind enough to tell me, sir,
16 what documents you have at your home that came from
17 your work at Dow?

18 A. I went through what I had that --

19 MR. PIERCE: Excuse me. Could I
20 have a clarification on this question?
21 When you say that came from his work at
22 Dow, you mean his personal materials
23 that he may have collected or official
24 documents from Dow? I think that

25 question is ambiguous and vague, and I

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1 object to it for those reasons.

2 A. I tried to keep a library. I have no
3 official documents from Dow. I have not even a
4 complete listing of publications. I have some of
5 them. Those that were even vaguely related to this
6 action I pulled out for reproduction for you.

7 Q. When you were still working at Dow and you
8 would generate correspondence, did you maintain any
9 kind of a chronological file of your correspondence as
10 opposed to a subject filing?

11 A. No.

12 Q. So, each bit of correspondence that you
13 would generate day to day would be filed by its
14 subject?

15 MR. PIERCE: Objection to the
16 form.

17 A. That was my general practice, yes.

18 Q. You say that you tried to maintain a
19 personal library while you were at Dow; is that right?

20 A. I beg your pardon.

21 Q. You said that you tried to maintain a
22 personal library while you were at Dow? Is that what
23 you said, sir?

24 A. I suppose you could call it that.

25 Q. What would you have included in your

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1 personal library while you were at Dow?

2 MR. PIERCE: Objection to the form
3 of the question.

4 A. Reprints of copies of talks that I gave,
5 talks and papers of other people that I thought might
6 be useful to me in the future.

7 Q. How did you have those reprints and talks
8 organized while you were at Dow, those that were in
9 your personal library? Were they by subject or some
10 other way?

11 A. General practice was by subject.

12 Q. Did you tend to have subjects that were
13 specific chemicals or specific substances or were they
14 broad categories like toxicology, industrial hygiene,
15 or did it include both?

16 MR. PIERCE: Objection to the form
17 of the question.

18 A. It was some of each.

19 Q. Did you maintain any bound textbooks that
20 were yours personally while you were at Dow?

21 A. I don't remember whether they -- I had
22 access to the library. And at that time I probably
23 had a text of my own on Patty's Industrial Hygiene and
24 Toxicology which was my personal copy.

25 Q. Would you recall which edition you had, sir,

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1 As your personal copy?

2 A. At that time it was the first edition.

3 Q. Do you still have your first edition?

4 A. Yes.

5 Q. Do you have any other textbooks now that
6 were available to you while you were at Dow?

7 A. I don't recall.

8 Q. In going through some of the documents that
9 you brought yesterday I have found some I'd like to
10 ask you about. There's two pages here, Dr. Rowe, that
11 I can't connect to anything.

12 Can you tell me, sir, what they - what they
13 are and where they came from (tendering document)?

14 MR. PIERCE: Mr. Hobson, are you
15 marking this for identification?

16 MR. HOBSON: Well, I might. It
17 depends on what it is. I want to make
18 sure it really is something he brought,
19 though.

20 A. (Reviewing document) I cannot tell you
21 where I got that.

22 (By Mr. Hobson)

23 Q. What is it, sir?

24 A. It's a discussion of - of occupational
25 controls, T.L.V.'s, and the like.

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1 Q. Can you place it in time for us at all?

2 A. No, I can't.

3 Q. Would you recall who was having the
4 discussion or --

5 A. I have no recollection of having put this in
6 my file. When I went through it, it looked like
7 something that might have some interest. So, like I

8 said, I pulled things like that out.

9 Q. Can you tell from where you had it filed
10 whether this is something you had while you were at
11 Dow?

12 A. I can't tell, no.

13 Q. Was it your practice after you left Dow to
14 add things to your files from time to time?

15 A. Yes (tendering document).

16 Q. Thank you. Here's another document, sir.
17 And I'd ask the same questions. Can you tell by
18 looking at this where it came from or what it is
19 (tendering document)?

20 MR. PIERCE: (Reviewing document)

21 MR. BLANKS: Don't you all have
22 your own stack of documents over there
23 that you can look at?

24 MR. PIERCE: Mr. Hobson, I notice
25 that this has a sticker for Plaintiffs'

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1 Exhibit; but there's no number there.

2 MR. HOBSON: Yes, sir. We are
3 trying to identify documents with a
4 certain series that, if we can, will
5 include the date so that you can
6 organize documents chronologically.
7 That's why we haven't put a number on
8 it yet.

9 MR. PIERCE: Thank you (tendering
10 document to the witness).

Rowe-Verald-K-100192.txt
11 A. (Reviewing document) Do you have a
12 question?
13 (By Mr. Hobson)
14 Q. I think we do. Can you recognize this
15 document, Dr. Rowe; or can you tell us anything about
16 it?
17 A. I can't tell you where or when it was
18 presented. It's obviously a draft of a presentation
19 that Dr. Schwetz was - made at some meeting.
20 Q. And who was the author, sir?
21 A. Dr. Schwetz.
22 Q. And what capacity did Dr. Schwetz have when
23 you knew him?
24 A. He was basically a teratologist.
25 Q. Who was his employer, sir?

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1 A. Beg pardon?
2 Q. Who was his employer?
3 MR. PIERCE: At what point in
4 time?
5 A. He was a Dow employee in toxicology.
6 Q. Do you believe that this is a paper that was
7 likely drafted by this gentleman while he was a Dow
8 employee?
9 A. I'm quite certain it was.
10 MR. HOBSON: Perhaps Counsel could
11 indicate on that "Rowe 2" as the
12 exhibit number; or I will if you want
13 to pass it back.
14 MR. PIERCE: I don't want to mess
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15 up your system (tendering document to
16 Mr. Hobson).

17 MR. HOBSON: It's not easy to
18 keep...

19 (PLAINTIFFS' EXHIBIT ROWE 2
20 WAS MARKED FOR IDENTIFICATION
21 PURPOSES. SAME WILL BE FOUND IN
22 THE EXHIBIT VOLUMES ATTENDANT TO
23 THIS DEPOSITION.)

24 (By Mr. Hobson)

25 Q. All right, sir. I've marked here as Rowe 2

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1 Dr. Schwetz' paper; is that correct, sir?

2 A. Yes.

3 Q. And you found this paper by Dr. Swetz in
4 your files?

5 A. I found it in my category of general
6 toxicology.

7 Q. The first document I asked you about here
8 this morning I've now marked as Exhibit 1 and just
9 want to identify the fact that we did mark that
10 document as Exhibit 1.

11 MR. BLANKS: Why don't you make it
12 Exhibit 3, and we'll mark the notice as
13 Exhibit 1.

14 MR. HOBSON: Okay. Well, let me
15 have it back and I'll redo it.

16 MR. PIERCE: May I interject
17 something? How did you mark --

18 Yesterday you marked some document. I
19 believe it was a C.V. of Dr. Rowe.
20 MR. HOBSON: Right. It has 141005
21 Rowe VK.
22 MR. PIERCE: I give up.
23 MR. HOBSON: Well, he was born in
24 1914.
25 MR. PIERCE: Oh, I see.

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1 MR. HOBSON: It happens to be the
2 first date that appears on the
3 document.

4 (PLAINTIFFS' EXHIBIT ROWE 3
5 WAS MARKED FOR IDENTIFICATION
6 PURPOSES. SAME WILL BE FOUND IN
7 THE EXHIBIT VOLUMES ATTENDANT TO
8 THIS DEPOSITION.)

9 (By Mr. Hobson)

10 Q. Sir, we've marked as Rowe 3 the document I
11 questioned you about earlier. That's a document that
12 I think you told us some information about you
13 couldn't identify where it came from other than it was
14 in your files. There's a name that appears there on
15 the first page. Do you recognize the name at the
16 bottom of the first paragraph?

17 A. No, I do not.

18 Q. All right, sir. Thank you. Dr. Rowe,
19 here's another document that you brought yesterday.
20 And again I can't find a date on it; or for this one I
21 can't find the source, either. Could you look at

22 that, sir, and see if you could help me with either
23 one of those or both (tendering document)?

24 A. (Reviewing document) I can't tell you where
25 that was published.

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1 Q. It appears that it could be a chapter from a
2 text.

3 A. Yes.

4 Q. Could you tell us if that's what it was?

5 A. That would be my assumption (tendering
6 document).

7 (PLAINTIFFS' EXHIBIT ROWE 4
8 WAS MARKED FOR IDENTIFICATION
9 PURPOSES. SAME WILL BE FOUND IN
10 THE EXHIBIT VOLUMES ATTENDANT TO
11 THIS DEPOSITION.)

12 (By Mr. Hobson)

13 Q. Doctor, this exhibit that you just looked at
14 we've now put an exhibit sticker on it, Plaintiffs'
15 Exhibit Rowe 4. And it's Chapter 8, "Pharmacokinetic
16 Studies in Evaluation of the Toxicological and
17 Environmental Hazards of Chemicals." (Tendering
18 document) And that would be a document that you
19 brought as part of your response to the request; is
20 that right, sir?

21 A. Yes, sir.

22 Q. If I could, sir, let me show you another
23 document which again I could not place in time and ask
24 you if you would look at that document and tell us

25 what it is, as best you can, sir (tendering

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1 document).

2 A. (Reviewing document) This -- I cannot put a
3 time frame on it, either, at least not accurately.
4 Obviously this is an outline of a talk I was giving to
5 some group within Dow (tendering document).

6 Q. There are some what appears to be
7 handwritten notes or something. Can you tell us,
8 Dr. Rowe, if these two go together (tendering
9 document)?

10 MR. PIERCE: When you say "these
11 two," the document that Dr. Rowe just
12 reviewed?

13 MR. HOBSON: Yes.

14 MR. PIERCE: Because that's
15 unmarked right now.

16 MR. HOBSON: Right. I want to
17 know whether we need to put them
18 together and mark them as one or
19 two (tendering document to witness).

20 A. (Reviewing document) I do not believe that
21 these go together.

22 (By Mr. Hobson)

23 Q. All right, sir.

24 (PLAINTIFFS' EXHIBIT ROWE 5
25 WAS MARKED FOR IDENTIFICATION

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1 PURPOSES. SAME WILL BE FOUND IN
2 THE EXHIBIT VOLUMES ATTENDANT TO
3 THIS DEPOSITION.)

4 (By Mr. Hobson)

5 Q. All right, sir. I have put a sticker on
6 this exhibit, Plaintiffs' Exhibit Rowe 5, which has a
7 heading, "Mission of Health and Environmental
8 Research." Sir, that's, I believe, the document that
9 you told us represented a presentation that you gave
10 sometime within Dow. Is that right?

11 A. Yes.

12 Q. This presentation that's Rowe 5, can you
13 place that in a decade at all for us; or can you tell
14 us what job title you might have had at the time you
15 gave that, Dr. Rowe?

16 MR. PIERCE: Objection to the form
17 of the question.

18 A. This would probably have been in the
19 mid-Eighties - or mid-Seventies.

20 Q. Thank you.

21 (PLAINTIFFS' EXHIBIT ROWE 6
22 WAS MARKED FOR IDENTIFICATION
23 PURPOSES. SAME WILL BE FOUND IN
24 THE EXHIBIT VOLUMES ATTENDANT TO
25 THIS DEPOSITION.)

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1 (By Mr. Hobson)

2 Q. On the handwritten notes we've now put
3 sticker exhibit Rowe 6. Let me hand that back to you,

4 sir. Are those your notes? Is that your handwriting,
5 Dr. Rowe (tendering document)?

6 A. Yes.

7 Q. Can you tell us what this dealt with? What
8 does this mean to you, sir?

9 A. I don't know.

10 Q. Would you know if this was an outline for a
11 presentation or dealt with a paper you were going to
12 write, or can you tell us at all?

13 A. It -- It looks as though it was an outline I
14 used in making a presentation to a group that - I
15 don't know where.

16 Q. And since the last date at the top is 1975,
17 would it be fair to say that that was after 1975 you
18 gave this, or at least 1975 or later?

19 A. In that framework, yes.

20 Q. (Tendering document) Another document, sir,
21 that came yesterday from the attorneys -- I haven't
22 marked it yet because, again, I can't date it.

23 Could you look at that and tell us if you
24 can date it or place it anywhere, sir (tendering
25 document)?

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1 A. (Reviewing document)

2 MR. PIERCE: You have a question,
3 Mr. Hobson?

4 MR. HOBSON: Yeah. I was waiting
5 for the answer. I'm sorry.

6 MR. PIERCE: If there's a question

Rowe-Verald-K-100192.txt
7 pending, could you please read it
8 back (directed to the reporter)?
9 MR. HOBSON: I'll just ask another
10 one to save a little time.
11 (By Mr. Hobson)
12 Q. Can you place this document in time or tell
13 us what it is, Dr. Rowe?
14 A. This again would have been in the - in the
15 mid-Seventies.
16 Q. What kind of -- What was the purpose of the
17 document, as best you recall?
18 A. It was obviously a - a draft of a speech
19 that Dr. Blair wished to make somewhere. I don't know
20 where.
21 Q. This was not your speech?
22 A. No.
23 Q. Dr. Blair's speech?
24 A. Yes.
25 Q. There's handwriting on here. Can you tell

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1 tell whose handwriting it is?
2 A. It looks like mine.
3 Q. Do you expect, then, that Dr. Blair gave you
4 his proposed speech and asked for your comments?
5 A. That would be my supposition.
6 Q. Let us put a stick on it, then, sir, if we
7 may, so as to make sure we have it identified.
8 (PLAINTIFFS' EXHIBIT ROWE 7
9 WAS MARKED FOR IDENTIFICATION
10 PURPOSES. SAME WILL BE FOUND IN
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11 THE EXHIBIT VOLUMES ATTENDANT TO
12 THIS DEPOSITION.)

13 (By Mr. Hobson)

14 Q. We've marked as the document you've just
15 told us was a proposed presentation by Dr. Blair with
16 your handwritten notes on it as Rowe 7; is that right,
17 sir?

18 A. Yes.

19 Q. Thank you. Dr. Rowe, I have another
20 document I'd like for you to examine. I have done
21 some highlighting on this document which is mine; but
22 I'd like for you to identify this document for us, if
23 you could, please, sir.

24 A. (Reviewing documents)

25 MR. PIERCE: Do you have a

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1 question, Mr. Hobson?

2 MR. HOBSON: Seem to be doing this
3 repeatedly. Yes, sir.

4 (By Mr. Hobson)

5 Q. I think the question on the floor was can
6 you identify this document for us.

7 A. It is a draft of a talk I gave.

8 Q. Can you place it in time, sir?

9 A. It, again, would have been in the
10 mid-Seventies.

11 Q. Would you know where this talk was given, if
12 it was given?

13 A. I believe it was given in a symposium in

14 Midland.

15 Q. Would this have been a Dow symposium?

16 A. It was a Dow symposium, but there may well
17 have been others - other people present. I don't know
18 (tendering document).

19 (PLAINTIFFS' EXHIBIT ROWE 8
20 WAS MARKED FOR IDENTIFICATION
21 PURPOSES. SAME WILL BE FOUND IN
22 THE EXHIBIT VOLUMES ATTENDANT TO
23 THIS DEPOSITION.)

24 (By Mr. Hobson)

25 Q. All right, sir. I've now put "Exhibit

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1 Rowe 8" on the paper that I think you said was given
2 in the Mid-Seventies at a Dow symposium; is that
3 right, sir (tendering document)?

4 A. (Reviewing document) This is the one that I
5 just looked at.

6 Q. Yes, sir.

7 A. Yes. Okay (tendering document)

8 (PLAINTIFFS' EXHIBIT 400600 DOW
9 WAS MARKED FOR IDENTIFICATION
10 PURPOSES. SAME WILL BE FOUND IN
11 THE EXHIBIT VOLUMES ATTENDANT TO
12 THIS DEPOSITION.)

13 (By Mr. Hobson)

14 Q. Sir, let me show you Exhibit - We've put
15 "400600 Dow" as the exhibit number. I'll ask you,
16 sir, if you can identify that for us, please
17 (tendering document).

18 MR. PIERCE: (Reviewing document)
19 Is this one of the documents that
20 Dr. Rowe provided?

21 MR. BLANKS: This entire stack is
22 of that set.

23 MR. PIERCE: (Tendering document
24 to the witness)

25 Q. I think the question is, can you identify

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1 that for us, Dr. Rowe.

2 A. Yes.

3 Q. What is it, please?

4 A. It's a reprint of a publication, an article
5 entitled, "The Response Attending Exposure of
6 Laboratory Animals to Vapors of Methyl Bromide."

7 Q. This would be a reprint from the scientific
8 literature where it was published; is that right?

9 A. It's a reprint from The Journal of
10 Industrial Hygiene and Toxicology, Volume 22, No. 6,
11 June, 1940.

12 Q. Do you know The Journal of Industrial
13 Hygiene and Toxicology where this article was
14 published?

15 A. Would you repeat, please.

16 Q. Yes, sir. Do you know of this journal where
17 this article was published?

18 A. Do -- I don't -- I guess I don't understand
19 yet what you're --

20 Q. Probably just too simple a question,

21 Dr. Rowe. I'm just trying to find if you, in fact, do
22 know about this journal where you published your
23 article.

24 A. Oh. Yes.

25 Q. Would you tell us what this journal is, or

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1 what it was in 1940?

2 A. It's just an ordinary scientific pub -
3 journal that publishes scientific papers.

4 Q. Was there any affiliation of this journal
5 with any group?

6 A. I don't believe so. It may -- It possibly
7 may have been associated with -- I'm not aware of
8 that.

9 Q. I think you've published in this journal on
10 more than just this one occasion, have you not?

11 A. Yes.

12 Q. Did you pick the journals that you submitted
13 your publications to in this time period of this first
14 exhibit here we're talking about of your publications?

15 A. At that date I probably did not.

16 Q. Who would have been selecting the journals
17 for publication in 1940?

18 A. I would expect Dr. Irish.

19 Q. Because you selected this journal to publish
20 in in 1940, do you think it likely that you had this
21 journal in your library at Dow?

22 MR. PIERCE: Objection to the form
23 of the question. The witness has
24 testified that he did not pick any

25 journal but that Dr. Irish did.

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1 A. Yes, we had this journal.

2 Q. Do you recall how much before 1940 you would
3 have had this journal at Dow?

4 A. No.

5 Q. Which volume of the journal was this 1940
6 article published in?

7 A. Volume 22.

8 Q. Is it your experience that the usual
9 practice of these scientific publications is that they
10 change the volume number each year?

11 A. Not necessarily.

12 Q. Can you tell us approximately when this
13 journal began its publications?

14 A. No.

15 Q. Is this a journal that you in your work at
16 Dow relied upon for information about toxicology?

17 A. Yes.

18 Q. Is that article published in 1940 the same
19 reference here, then, that's number one in your
20 bibliography (tendering document)?

21 A. Yes.

22 Q. And I take it since it's number one, that's
23 your first scientific publication that you ever had
24 published.

25 A. Yes.

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1 Q. Were there scientific publications coming
2 from other Dow scientists in the area of toxicology
3 that predated your 1940 article with Dr. Irish and
4 others, or would you know?

5 A. I don't know.

6 Q. Could this very well be, then, the first
7 scientific article on toxicology published at Dow, or
8 do you know?

9 MR. PIERCE: Objection to the form
10 of the question.

11 A. I don't know.

12 Q. What kinds of tests in forms of category
13 were you reporting on here in 1940 for methyl bromide?

14 A. The results of single vapor exposures,
15 repeated vapor exposures. (Reviewing document)
16 That's all.

17 Q. Would you categorize the tests that were
18 done reported here in this 1940 article as acute or
19 short-term testing?

20 A. Both.

21 Q. And that would be something different than
22 what would ordinarily be called "chronic" or more
23 long-range type testing; would that be right?

24 A. Not necessarily.

25 Q. How did the two overlap?

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1 A. Basically in concept.

2 Q. Would you explain that, please.

3 A. Acute exposures are generally considered to
4 be single exposures. Chronic exposures can vary
5 anywhere from repeated - short-term repeated exposures
6 to long-term repeated exposures.

7 Q. And to qualify as chronic, do you have some
8 length of time that you continue the repeated
9 exposures in your definitions?

10 A. No. Really, one should not set a specific
11 time period for chronic -- "Chronic" is a very poor
12 word. It should be "repeated exposures over a
13 particular duration."

14 Q. Do you use the term "subacute" in
15 categorizing toxicity testing?

16 A. At some stages, yes.

17 Q. How would you use the term "subacute"?

18 A. Short-term repeated exposures.

19 Q. And what would be the proper category, then,
20 for long-term repeated exposures, if there is one?

21 A. Simply describing the duration of exposure
22 period.

23 Q. Are you aware of any reported associations
24 between methyl bromide and cancer today?

25 MR. PIERCE: Objection to the form

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1 of the question. Objection to the
2 relevancy of this matter.

3 Go ahead and answer.

4 A. Would you repeat the question, please.

5 Q. Yes, sir. I'd like to know if you're now
6 aware of any reports of connection between methyl

7 bromide and cancer.

8 A. No.

9 (PLAINTIFFS' EXHIBIT 421200 DOW
10 (JIHT) WAS MARKED FOR IDENTIFICATION
11 PURPOSES. SAME WILL BE FOUND IN
12 THE EXHIBIT VOLUMES ATTENDANT TO
13 THIS DEPOSITION.)

14 (By Mr. Hobson)

15 Q. Another document that I believe you brought
16 yesterday, Dr. Rowe, we've marked as Exhibit 421200
17 DOW and in parentheses "JIHT," end parentheses
18 (tendering document). And I wonder, sir, is that
19 another one of the articles that you published in the
20 scientific literature while you were an employee of
21 Dow (tendering document)?

22 A. (Reviewing document) Yes.

23 Q. On the front page of that document there's a
24 handwritten number. I believe it's "121"; is that
25 right, sir?

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1 A. Yes.

2 Q. Would you have any recollection of what that
3 means or why it's there?

4 A. Yes.

5 Q. What is it, sir?

6 A. That is a number that our toxicology file
7 room used to designate different publications that
8 were filed by - by number. In other words, this was
9 the hundred and twenty-first publication that was

Rowe-Verald-K-100192.txt
10 filed in that compilation.
11 Q. I'm not sure I understand what the
12 compilation consisted of. Would you --
13 A. It was a file of publications by Dow people.
14 Q. Were all of these publications in this file
15 in the medical and scientific literature, or were
16 these internal to Dow, as well?
17 A. I don't know.
18 Q. Did the compilation have a name?
19 A. Not that I know of.
20 Q. And you say this was in a library. Was this
21 the library that you had at the biochemical research
22 laboratory, or was this the bigger library you told us
23 about that was available at Midland?
24 MR. PIERCE: Objection to the form
25 of the question; mischaracterization of

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1 the previous statement of the witness
2 in use of terminology he did not use -
3 and that it's compound.
4 A. This was in the biochemical research
5 laboratory. This was not designated -- This
6 designation has no reference to the general large
7 library - company library.
8 (PLAINTIFFS' EXHIBIT 480621 DOW
9 WAS MARKED FOR IDENTIFICATION
10 PURPOSES. SAME WILL BE FOUND IN
11 THE EXHIBIT VOLUMES ATTENDANT TO
12 THIS DEPOSITION.)
13 (By Mr. Hobson)

14 Q. Sir, I have another document that, I
15 believe, you brought yesterday. We've put Exhibit
16 Sticker on it 480621 DOW. And I would ask you, sir,
17 if you could look at that and tell us if you can
18 identify it (tendering document).

19 A. (Reviewing document) Yes.

20 Q. What is it, please?

21 A. It's a reprint of an article entitled,
22 "Toxicological Studies on Certain Commercial
23 Silicones."

24 Q. And you are one of the authors of that?

25 A. Yes.

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1 Q. I noticed that the cover page of this
2 document differs from the previous one we talked
3 about. Can you tell me if there's any significance to
4 the cover page of this document (indicating document)?

5 A. Yes.

6 Q. What is that, sir?

7 A. The indication that reprints were purchased
8 by the Dow Corning Corporation for their distribution.

9 Q. What's the Dow Corning Corporation, as you
10 understand it?

11 A. It's a separate corporation called "Dow
12 Corning."

13 Q. Did you do any work that involved the Dow
14 Corning Corporation or its activities?

15 A. Yes.

16 Q. Was that why you were at Dow?

17 A. Yes.
18 Q. And your employer, now, was Dow Chemical
19 Company?
20 A. Right.
21 Q. Would you tell me about how you did your
22 work that involved the Dow - I'm sorry. I can't see.
23 Is it "Corning Company"?
24 A. We did it on a work order from them.
25 Q. They were essentially purchasing your

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1 services?
2 A. Yes.
3 Q. And what kind of services would Dow Corning
4 have been buying from Dow Chemical?
5 A. Well, Dow Corning did not have any facility
6 at that time for this sort of work. And inasmuch as
7 it was owned in part by Dow Chemical, our services
8 were made available to them on an as-needed basis.
9 Q. Can you remember what time period Dow
10 Chemical would have been selling services to Dow
11 Corning?
12 A. It would have been at the - at the very
13 inception or creation of the Dow Corning corporation
14 and for a few years after that. I can't tell you how
15 many.
16 Q. Up here at the top of this document that
17 we've been examining that dealt with Dow Corning,
18 there's a number that's been stamped on it.
19 Do you know what that number represents,
20 Dr. Rowe?

21 A. I have no knowledge.
22 Q. That number was there in your file?
23 A. I presume so.
24 Q. Okay. Were there other business entities
25 besides Dow Corning that Dow Chemical provided

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1 toxicity testing services to?
2 A. Not that I can recollect.
3 Q. Are you aware of any kinds of services
4 besides toxicology - toxicological services that the
5 biochemical research laboratory provided to any other
6 business entities besides Dow Corning?
7 A. I don't know.
8 Q. Dr. Rowe, have you ever heard of a company
9 called "Dowell"?
10 A. Yes.
11 Q. In what context have you heard of that
12 company, sir?
13 A. It was a subsidiary company of Dow.
14 Q. Of Dow Chemical Company, --
15 A. Yes.
16 Q. -- as you understand it?
17 A. It was a subsidiary of Dow Chemical.
18 Q. Did you provide toxicity testing services
19 for subsidiary companies at the biochemical research
20 laboratory?
21 A. On occasion.
22 Q. And I take it if -- Would it be correct,
23 sir, then, that if it was a subsidiary company, you

24 would not be selling those services?

25 MR. PIERCE: Objection to the form

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1 of the question.

2 A. I guess I don't understand your question.

3 Q. Well, I'm a bit confused. I asked you
4 earlier if you sold any services to any other business
5 entity besides Dow Corning, and you said that you
6 couldn't recall any. And now I've asked about Dowell,
7 and you say you've provided some services to them.
8 I'm wondering if they were sold to Dowell.

9 A. Well, Dowell is a part of Dow Chemical
10 Company. And when we did work for a - any subsidiary,
11 it was on a work order basis; and they would reimburse
12 us for that just on an accounting basis.

13 Q. Were there other subsidiaries of Dow
14 Chemical Company that you recall that you provided
15 services to at the biochemical research laboratory?

16 A. I don't recall any.

17 Q. Do you understand that Dowell - part of its
18 business involved doing work in the oil patch?

19 A. Do I understand what --

20 MR. PIERCE: Objection to the form
21 of the question.

22 Q. Do you understand that a part of Dowell's
23 business was providing services in the oil patch?

24 A. Yes.

25 Q. Would that include drilling muds, to your

1 knowledge?

2 A. I don't know.

3 Q. Has any of the work that you've been
4 involved with at Dow from a toxicological standpoint
5 dealt with drilling muds or their constituents, that
6 you're aware of?

7 A. I don't recollect.

8 (PLAINTIFFS' EXHIBIT 481100 DOW
9 (JIHT) WAS MARKED FOR IDENTIFICATION
10 PURPOSES. SAME WILL BE FOUND IN
11 THE EXHIBIT VOLUMES ATTENDANT TO
12 THIS DEPOSITION.)

13 (By Mr. Hobson)

14 Q. Let me show you another exhibit, if I could,
15 Dr. Rowe. It's 481100 DOW (JIHT).

16 A. (Reviewing document)

17 Q. Do you recognize this document, sir?

18 A. Yes.

19 Q. What is it, please?

20 A. The title is "Toxicological Studies on
21 Certain Commercial Silicones and Hydrolyzable Silane
22 Intermediates."

23 Q. And you're one of the authors?

24 A. Yes.

25 Q. And this is a reprint of its publication in

1 the scientific literature; is that right?

2 A. Yes.

3 Q. On the first page of the document - not the
4 page you're looking at, but the blank page that
5 precedes the one you're looking at - I see another
6 penciled number there. Do you see it toward the top?

7 A. Yes.

8 Q. And what number is it? I can't see it from
9 here.

10 A. One two four.

11 Q. Is that the same pencil numbering system
12 that you told us about a few moments ago with another
13 document where your library kept track of the
14 reprints?

15 A. I'm quite sure it is.

16 MR. PIERCE: Objection to the form
17 and to the characterization of the
18 previous testimony.

19 But go ahead and answer.

20 Q. I'm sorry, sir. I need your answer.

21 A. I'm quite sure it is.

22 Q. The previous document that - that we have
23 here - 421200 DOW (JIHT), had "121" on it. Are those
24 filed chronologically or with time by number?

25 A. Generally speaking, but I can't vouch for

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1 that being - always being the case because this was
2 clerical work (tendering document).

3 Q. The document that has "121" on it was
4 published in 1942, and the document that has "124" on
5 it was published in 1948. Would that indicate to you,

6 sir, that if they followed the system, they - that you
7 understood was in place, that there would have been
8 two publications in between these that were kept in
9 the Dow files?

10 MR. PIERCE: Objection to the
11 form.

12 A. I don't know.

13 MR. PIERCE: You're asking for
14 sheer speculation but...

15 Q. Was there a list kept that told you what
16 Document No. 124 was or what Document No. 121 was?

17 A. Yes.

18 Q. What would you call that list, sir, if we
19 were to describe it?

20 A. I can't tell you whether it was a list. It
21 was an open folder with strips that were replaceable
22 in it with numbers on them and the titles on it. It
23 was not a compilation of such as you're looking at
24 there.

25 MR. ALMQUIST: Before we go on to

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1 the next one -- We've been at this
2 an hour now. I think we might want to
3 take a 15-minute break right now.

4 MR. HOBSON: Okay.

5 (AT THIS TIME A BRIEF RECESS WAS
6 TAKEN, AND THE PROCEEDINGS THEREAFTER
7 RESUMED AS FOLLOWS:)

8 (By Mr. Hobson)

9 Q. Dr. Rowe, we'll begin again, if we could.

10 Dr. Rowe have you heard the term "central
11 research index" at Dow?

12 A. Yes.

13 Q. What is the central research index, as you
14 understand it, sir?

15 A. It was a repository for reports and
16 publications and the like.

17 Q. What is your understanding of what went into
18 the central research index?

19 A. I really don't recall what all went in
20 there.

21 Q. Did some of your work at the biochemical
22 research laboratories go into the central research
23 index?

24 A. I believe so.

25 MR. PIERCE: Objection to the

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1 form.

2 Q. I'm sorry. I didn't hear your answer, sir.

3 A. I believe so.

4 Q. What kinds of things do you remember from
5 the biochemical research laboratory going into the
6 central research index?

7 A. Reports.

8 Q. Any particular kinds of reports or all
9 reports? Can you give me a definition of that?

10 A. I -- I don't recollect what criteria we even
11 used; but most all reports that were written and
12 circulated, a copy was put in the central file.

13 Q. Where was the central research index kept,
14 sir?

15 A. I don't remember.

16 Q. Were there other research indexes besides
17 the central research index? I've seen reference to a
18 western research index.

19 MR. PIERCE: Objection to the form
20 of the question, if there is one.

21 A. I don't know.

22 Q. Would you, sir, have had access to the
23 central research index?

24 A. Yes.

25 Q. Was there a listing somewhere of what was in

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1 the central research index, that you recall?

2 A. I don't know.

3 Q. Who maintained the central research index?

4 A. I don't know.

5 Q. Would you know which grouping within the
6 company maintained the central research index?

7 A. No.

8 Q. If you wanted access to something in the
9 central research index, how would you go about getting
10 it, sir?

11 A. I'd have probably asked my secretary to get
12 it for me.

13 Q. And where she went to get it, you would not
14 know?

15 A. No. I do not know.

16 (PLAINTIFFS' EXHIBIT 511100 DOW

17 WAS MARKED FOR IDENTIFICATION
18 PURPOSES. SAME WILL BE FOUND IN
19 THE EXHIBIT VOLUMES ATTENDANT TO
20 THIS DEPOSITION.)

21 (By Mr. Hobson)

22 Q. Let me show you, sir, what we've marked as
23 Exhibit 511100 DOW and ask you if you can identify
24 that, please, sir (tendering document).

25 A. (Reviewing document) Yes.

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1 Q. What is it, sir?

2 A. It's a reprint entitled, "Vapor Toxicity of
3 Trichloroethylene Determined by Experiments on
4 Laboratory Animals."

5 Q. It's a paper that you were one of the
6 authors on?

7 A. Yes.

8 Q. And this came from your files that you've
9 been keeping at your home?

10 A. I beg your pardon.

11 Q. This came from your files that you've been
12 keeping at your home?

13 A. Yes.

14 (PLAINTIFFS' EXHIBIT 520700 DOW
15 WAS MARKED FOR IDENTIFICATION
16 PURPOSES. SAME WILL BE FOUND IN
17 THE EXHIBIT VOLUMES ATTENDANT TO
18 THIS DEPOSITION.)

19 (By Mr. Hobson)

20 Q. Let me show you, sir, what we've marked as
21 Exhibit 520700 DOW and ask you if you can identify
22 this document (tendering document).
23 A. (Reviewing document) Yes.
24 Q. What is it, sir?
25 A. Vapor toxicity of -- It's a reprint of an

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1 article entitled, "Vapor Toxicity of Carbon
2 Tetrachloride Determined by Experiments on Laboratory
3 Animals."
4 Q. And are you one of the authors of that
5 article?
6 A. Yes.
7 Q. And this is one of the documents that you've
8 brought with you to the deposition from your files you
9 keep at home?
10 A. Yes.
11 (PLAINTIFFS' EXHIBIT 551000 FDCLJ
12 WAS MARKED FOR IDENTIFICATION
13 PURPOSES. SAME WILL BE FOUND IN
14 THE EXHIBIT VOLUMES ATTENDANT TO
15 THIS DEPOSITION.)
16 (By Mr. Hobson)
17 Q. Let me hand you a document, sir, that we've
18 put a sticker on. It's Exhibit 551000 FDCLJ and ask
19 you if you can identify that, please (tendering
20 document).
21 A. (Reviewing document) Yes.
22 Q. And what is it, sir?
23 A. It's a reprint of an article entitled,

24 "Procedures for the Appraisal of the Toxicity of
25 Chemicals in Foods, Drugs and Cosmetics."

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1 Q. You brought this to the deposition from your
2 files, sir, that you've kept at your home; is that
3 right?

4 A. Yes.

5 Q. You're not one of the authors of this
6 document, are you, sir?

7 A. No, sir.

8 Q. Could you recall how you came into
9 possession of this document?

10 A. I -- I don't recall.

11 Q. Is this a document that you had while you
12 were a Dow employee?

13 A. Yes, yes.

14 Q. Thank you, sir.

15 (PLAINTIFFS' EXHIBIT 560425 CARB
16 WAS MARKED FOR IDENTIFICATION
17 PURPOSES. SAME WILL BE FOUND IN
18 THE EXHIBIT VOLUMES ATTENDANT TO
19 THIS DEPOSITION.)

20 (By Mr. Hobson)

21 Q. Let me show you Document 560425 CARB and ask
22 you if you can identify that document, sir.

23 MR. PIERCE: (Reviewing document)

24 Mr. Hobson, there are some
25 markings on this document that

1 obviously were not there when provided
2 to you. You want to identify these for
3 the record, please?

4 MR. BLANKS: Sure. They're
5 obvious. We'll just agree that the
6 markings are obvious and they weren't
7 there when it was provided. The blue
8 highlighting on the document was not
9 there when you gave it to us. And that
10 will be the case on all of them where
11 we've put markings on them. And we'll
12 stipulate to that right now.

13 MR. PIERCE: The difficulty,
14 Mr. Blanks, is that, of course, there
15 will be copies made of this; and I
16 don't know -- If the blue shows up on
17 those copies, all we will see is an
18 underlining.

19 MR. HOBSON: It won't show up.

20 MR. PIERCE: It will not show up?

21 MR. HOBSON: On the copies, no.

22 And by the way, if anyone has any
23 concerns that the highlighting might
24 show up, I think you all have other
25 copies. If you want to substitute them

1 with the same exhibit sticker, that's

2 fine with me.

3 (By Mr. Hobson)

4 Q. I'm sorry. Dr. Rowe?

5 A. Yes?

6 Q. Would you identify that for us, please,
7 sir.

8 A. This is a reprint of an article entitled,
9 "The Interpretation of Threshold Limits for
10 Inhalation of Chemical Substances, Excluding Mineral
11 Dusts, with Recommendations for Improvement."

12 Q. And that's a document that you brought to
13 the deposition from your files kept at your home?

14 A. Yes.

15 Q. Do you recall how you came into possession
16 of this document?

17 A. No.

18 Q. Is this a document that you had while you
19 were a Dow employee?

20 A. I'm sure -- Yes.

21 Q. Is this the Dr. Smyth that you mentioned
22 yesterday that, I think, was associated with Mellon?

23 A. Yes.

24 Q. Do you recall using this document any way in
25 your work at Dow, Dr. Rowe?

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1 A. I don't recall any specifics.

2 Q. Thank you, sir.

3 (PLAINTIFFS' EXHIBIT 560425 DOW

4 WAS MARKED FOR IDENTIFICATION

5 PURPOSES. SAME WILL BE FOUND IN

6 THE EXHIBIT VOLUMES ATTENDANT TO
7 THIS DEPOSITION.)

8 (By Mr. Hobson)

9 Q. Let me show you a document that's marked
10 560425 DOW and ask if you can identify that, please,
11 sir (tendering document).

12 A. (Reviewing document) Yes.

13 Q. What is it, sir?

14 A. It's a copy of an article entitled,
15 "Toxicological Information Useful for Industrial
16 Hygiene Purposes with Emphasis on Topical Contact."

17 Q. Are you the author of that paper, sir?

18 A. Yes.

19 Q. In what context was it written, please?

20 A. It was written for a presentation at the
21 American Industrial Hygiene Association Annual
22 Meeting, April 25th, 1956.

23 Q. And was it delivered there --

24 A. Yes.

25 Q. -- in the format that's set out here in the

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1 paper? This is the speech you gave?

2 A. To the best of my knowledge.

3 Q. I mean, you would typically present the text
4 as it's written to the group when you delivered the
5 speech. Is that right?

6 MR. PIERCE: Objection to form
7 of the question.

8 A. Yes.

9 Q. Looking back for a moment, sir, in 560425
10 CARB, the paper that we previously spoke of by
11 Dr. Henry Smyth, Jr., it says "Presented as part of
12 the Donald E. Cummings Memorial Lecture at
13 Philadelphia, Pennsylvania, April 25th, 1956, before
14 The American Industrial Hygiene Association."

15 What is that lecture, sir, as best you
16 understand?

17 A. It's -- It's an award presented each year,
18 or almost every year, by the American Industrial
19 Hygiene Association, recognizing an individual's
20 contributions to the field.

21 Q. And is it your understanding, then, that
22 this text by Dr. Smyth is what was presented at that
23 lecture in 1956 at the American Industrial Hygiene
24 Association?

25 A. I cannot attest to that.

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1 Q. Is that what it indicates to you on the face
2 of the document?

3 MR. PIERCE: Objection to the
4 form. The witness has answered the
5 question. The document speaks for
6 itself.

7 A. I do not know whether it was presented in
8 its entirety. It would have been difficult, I think.

9 Q. Would you recall, sir, if you attended the
10 American Industrial Hygiene Association meeting in
11 Philadelphia in 1956?

12 A. I don't recall.

13 Q. Did you usually attend the Cummings
14 Lectures --

15 A. Yes.

16 Q. -- when you went to the association
17 meetings?

18 A. Yes, I did.

19 Q. Did those meetings tend to be - those
20 lectures tend to be well attended?

21 MR. PIERCE: Objection to form
22 of the question. It's vague and
23 ambiguous.

24 A. Would you restate your question, please.

25 Q. Yes, sir. When the American Industrial

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1 Hygiene Association would meet and the Cummings
2 Lecture would be presented, was it well attended, as
3 you observed?

4 A. I -- In my opinion, yes.

5 Q. Do you have a recollection of Dr. Smyth
6 making this lecture - the Cummings Lecture - in 1956
7 in Philadelphia?

8 A. I don't recall it specifically.

9 (PLAINTIFFS' EXHIBIT 560800 DOW
10 WAS MARKED FOR IDENTIFICATION
11 PURPOSES. SAME WILL BE FOUND IN
12 THE EXHIBIT VOLUMES ATTENDANT TO
13 THIS DEPOSITION.)

14 (By Mr. Hobson)

15 Q. Let me hand you, sir, what's been marked as

Rowe-Verald-K-100192.txt
16 560800 DOW (AMA-AIH) and ask you if you can identify
17 that, please (tendering document).
18 A. (Reviewing document) Yes.
19 Q. What is it, sir?
20 A. It's a reprint of an article entitled,
21 "Toxicity of Paradichlorobenzene."
22 Q. Are you one of the authors of this paper?
23 A. Yes.
24 Q. Thank you. I don't recall that we talked
25 about this name, although I may have forgotten.

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1 F. Oyen, O-y-e-n. Could you tell us who that is,
2 please, sir?
3 A. Mr. Oyen was a pathologist.
4 Q. An employee of Dow, I assume.
5 A. Yes.
6 Q. Would you know if he's still living?
7 A. No. He is not living.
8 Q. Thank you.
9 (PLAINTIFFS' EXHIBIT 581000 DOW
10 (AIHAJ) WAS MARKED FOR IDENTIFICATION
11 PURPOSES. SAME WILL BE FOUND IN
12 THE EXHIBIT VOLUMES ATTENDANT TO
13 THIS DEPOSITION.)
14 (By Mr. Hobson)
15 Q. Let me show you Exhibit 581000 DOW (AIHAJ)
16 and ask you if you can identify that, sir (tendering
17 document).
18 A. (Reviewing document) Yes.
19 Q. What is it, please, sir?

20 A. It's a reprint of an article entitled,
21 "Toxicity of 1,1,1-Trichloroethane as Determined on
22 Laboratory Animals and Human Subjects."

23 Q. And is that an article that you're a
24 coauthor on?

25 A. Yes.

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1 Q. Thank you. Dr. Rowe, if I could, I want to
2 return to the previous article I asked you about,
3 560800 DOW (AMA-AIH) (tendering document). The
4 journal that this article is published in, could you
5 identify that for us, please, sir?

6 A. (Reviewing document) It's a reprint from
7 the A.M.A. Archives of Industrial Health.

8 Q. Are you familiar with that journal?

9 A. We used to publish in it.

10 Q. The A.M.A.: that's the American Medical
11 Association?

12 A. Yes.

13 Q. Are you familiar with the Journal of the
14 American Medical Association, as well?

15 A. Vaguely (tendering document).

16 Q. There's a number right here that is not real
17 legible on the side of the document. Can you tell us
18 what that number is, sir (tendering document)?

19 A. I don't know.

20 Q. Do you know what it symbolizes? It seems to
21 be in a different format than the others I asked you
22 about.

23 A. That's why I don't recognize it.
24 (PLAINTIFFS' EXHIBIT 561000 DOW
25 (AMA-AIH) WAS MARKED FOR IDENTIFICATION

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1 PURPOSES. SAME WILL BE FOUND IN
2 THE EXHIBIT VOLUMES ATTENDANT TO
3 THIS DEPOSITION.)

4 (By Mr. Hobson)

5 Q. Let me show you the next article here marked
6 561000 DOW (AMA-AIH) and ask you, sir, if you can
7 identify that document for us (tendering document).

8 MR. PIERCE: (Reviewing document)

9 There's a stick-on on the last
10 page of this article which I assume is
11 yours, Mr. Hobson.

12 MR. HOBSON: That's right. We'll
13 take that off before it gets copied.
14 It was just a reference note, but
15 that -- If you want to leave it there,
16 it will help Dr. Rowe find the question
17 I want to ask.

18 MR. PIERCE: Fine (tendering
19 document to witness)

20 A. (Reviewing document) Yes?

21 Q. What is that article, sir?

22 A. It's a reprint of an article entitled,
23 "Toxicological Studies of Certain Alkylated Benzenes
24 and Benzene."

25 Q. And you're one of the authors on that

1 article, are you?

2 A. Yes.

3 Q. Who is the lead author on that article, sir?

4 A. It says Mr. Mark - M. A. Wolf.

5 Q. And that's -- One of the gentlemen you told
6 us about yesterday, I believe, was Mark Wolf, who was
7 a Dow employee?

8 A. Yes.

9 Q. The bibliography that's in the back of this
10 particular article, sir, I asked you some questions
11 yesterday about the Toxicological Reviews of the
12 American Petroleum Institute. And I happened to find
13 here that some of those are referenced.

14 Do you see the reference there where I've
15 put the little --

16 A. Yes.

17 Q. -- sticky? When you referenced an article
18 like that in a publication that you were a coauthor
19 on, would that indicate that you had access to that
20 article and reviewed it in preparing this article?

21 A. Yes.

22 Q. Thank you.

23 (PLAINTIFFS' EXHIBIT 590425 DOW
24 WAS MARKED FOR IDENTIFICATION
25 PURPOSES. SAME WILL BE FOUND IN

2 THIS DEPOSITION.)

3 (By Mr. Hobson)

4 Q. Let me hand you, sir, Exhibit 590425 DOW and
5 ask you if you can identify it. Again, we have some
6 highlighting on there which we have added.

7 A. (Reviewing document) Yes.

8 Q. What is it, please, sir?

9 A. It's a reprint entitled, "Toxicological
10 Basis of Threshold Limit Values: 2. Pathological and
11 Biochemical Criteria."

12 Q. Are you an author on this article?

13 A. Yes.

14 Q. All right, sir. Thank you.

15 (PLAINTIFFS' EXHIBIT 600000 DOW
16 WAS MARKED FOR IDENTIFICATION
17 PURPOSES. SAME WILL BE FOUND IN
18 THE EXHIBIT VOLUMES ATTENDANT TO
19 THIS DEPOSITION.)

20 (By Mr. Hobson)

21 Q. Let me hand you what we've marked as
22 Exhibit 600000 DOW and ask you if you can identify
23 that, sir (tendering document).

24 MR. PIERCE: (Reviewing document)

25 MR. HOBSON: And, again, the

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1 highlighting is mine.

2 MR. PIERCE: There is highlighting
3 on this one, also?

4 MR. HOBSON: In a few places.

5 A. (Reviewing document) Yes.
6 Q. What is that item, please, sir?
7 A. It's a copy of a symposium. It's entitled,
8 "Symposium on Toxicology."
9 Q. And can you tell us where this symposium was
10 presented?
11 A. This symposium, as I recollect, was
12 presented in Houston.
13 Q. And who presented it, please, sir? Was
14 there a company sponsor, or was this a Dow symposium?
15 A. This was a Dow symposium. And as I
16 recollect, Texas management had invited other people
17 from outside of Dow to attend it.
18 Q. When you say "Texas management," who do you
19 mean there, sir?
20 A. I'm thinking particularly of Mr. Beutel.
21 Q. And who is Mr. Beutel?
22 A. He was general manager of the Texas
23 division.
24 Q. Of Dow Chemical Company?
25 A. Yes.

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1 Q. Did this symposium actually get held, to
2 your knowledge?
3 A. Yes.
4 Q. You were there and were a presenter?
5 A. Yes.
6 Q. Who else attended who was not a Dow
7 employee; can you recall?
8 A. I don't recall.

9 Q. Can you recall approximately how many people
10 were in attendance at that symposium?

11 A. I don't know how many there were there.

12 Q. And would it -- Can you categorize it at
13 all? Was it more than a hundred?

14 A. It would be up in that neighborhood
15 somewhere.

16 Q. Do you remember where in Houston it was
17 held?

18 A. I can't tell you where it was.

19 Q. Some meetings are held at the Shamrock
20 Hilton, the old Shamrock Hilton or Shamrock Hotel in
21 Southwest Houston. Could that have been it?

22 A. I don't know.

23 Q. The presenters at this symposium, were they
24 all Dow employees?

25 A. May I refer to the --

224

1 Q. Yes, sir. Here's the contents page
2 (tendering document).

3 A. Yes (tendering document).

4 Q. Were all of the presenters from Dow in
5 Midland, or were there some Dow employees from other
6 locations?

7 A. These were all Midland people.

8 Q. You say that there were people who were not
9 Dow employees who were invited to attend?

10 A. Yes.

11 Q. Did some actually attend who were not Dow

Rowe-Verald-K-100192.txt
12 employees?

13 MR. PIERCE: Objection to the
14 form; asked and answered several
15 times.

16 A. I presume so.

17 Q. Would you recall who was responsible for
18 sending out invitations to the meeting - the
19 symposium?

20 A. They were sent at the instigation of
21 Mr. Beutel. That's all I can tell you.

22 Q. The papers that are listed here in the
23 exhibit, is this the content of what was actually
24 presented at the symposium?

25 A. Best of my knowledge.

225

1 Q. Would you recall if Jim Hammond attended
2 this meeting?

3 A. I don't recall.

4 (PLAINTIFFS' EXHIBIT 601200 DOW
5 (I&EC) WAS MARKED FOR IDENTIFICATION
6 PURPOSES. SAME WILL BE FOUND IN
7 THE EXHIBIT VOLUMES ATTENDANT TO
8 THIS DEPOSITION.)

9 (By Mr. Hobson)

10 Q. Let me hand you, sir, Exhibit 601200 DOW
11 (I&EC) and ask you if you can identify that for us,
12 please.

13 A. (Reviewing document) Yes.

14 Q. What is it, please, sir?

15 A. It's a reprint of an article entitled,
Page 200

16 "Evaluating the Industrial Hazards of New Chemicals."

17 Q. Are you one of the authors of that?

18 A. Yes.

19 Q. The cover page again seems to be different

20 from some of the other exhibits we've talked about.

21 Is there a reason for the cover page being different?

22 A. Well, it looks like it may have been

23 reprinted at the request of somebody. "Industrial and

24 Engineering Chemistry," I believe, I.E.C. would stand

25 for. It was presented at the National Safety Congress

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1 in Chicago. I don't know.

2 Q. Did you present the paper at the National

3 Safety Congress?

4 A. Dr. Olson presented that paper.

5 Q. At the National Safety Congress?

6 A. Pardon?

7 Q. He did present it at the National Safety

8 Congress?

9 A. To the best of my recollection.

10 Q. Do you know this organization, Industrial

11 and Engineering Chemistry?

12 A. Well, that's a -- That's a journal. I

13 believe it's one of the many journals put out by the

14 A.C.S.

15 Q. American Chemical Society?

16 A. Yes.

17 (PLAINTIFFS' EXHIBIT 611000 DOW

18 (AIHAJ) WAS MARKED FOR IDENTIFICATION

19 PURPOSES. SAME WILL BE FOUND IN
20 THE EXHIBIT VOLUMES ATTENDANT TO
21 THIS DEPOSITION.)

22 (By Mr. Hobson)

23 Q. Now, let me show you Exhibit 611000 DOW
24 (AIHAJ) and ask you if you can identify that, please,
25 sir (tendering document).

227

1 A. (Reviewing document) Yes.

2 Q. What is it, please, sir?

3 A. It's a reprint of an article entitled, "The
4 Toxicity of Vinyl Chloride as Determined by Repeated
5 Exposure of Laboratory Animals."

6 Q. Are you one of the authors of that paper,
7 sir?

8 A. Yes.

9 Q. Thank you.

10 (PLAINTIFFS' EXHIBIT 611000 DOW
11 (RSCH) WAS MARKED FOR IDENTIFICATION
12 PURPOSES. SAME WILL BE FOUND IN
13 THE EXHIBIT VOLUMES ATTENDANT TO
14 THIS DEPOSITION.)

15 (By Mr. Hobson)

16 Q. Let me show you Exhibit 611000 DOW (RSCH)
17 and ask you if you could identify that, sir.

18 MR. HOBSON: The highlighting is
19 mine.

20 MR. PIERCE: Thank you,
21 Mr. Hobson.

22 A. (Reviewing document) Yes.

23 (By Mr. Hobson)

24 Q. What is it, please, sir?

25 A. It's a reprint of an article entitled,

228

1 "Evaluating the Toxicity and Hazards of Chemicals."

2 Q. And are you one of the authors?

3 A. Yes.

4 Q. I notice the last item in the bibliography
5 is a text by von Oettingen, I believe, if I recall
6 right. Do you see it there, sir, a text called
7 "Poisoning"?

8 A. Yes.

9 Q. Is that a text that you recall being in
10 Dow's library?

11 A. I don't recall it.

12 Q. If it's referenced there in your
13 bibliography, is it a reference that at least you and
14 your co-workers were aware of and utilized?

15 A. It probably was. I just don't recall it.

16 Q. Thank you, sir.

17 (PLAINTIFFS' EXHIBIT 670300 USSR
18 WAS MARKED FOR IDENTIFICATION
19 PURPOSES. SAME WILL BE FOUND IN
20 THE EXHIBIT VOLUMES ATTENDANT TO
21 THIS DEPOSITION.)

22 (By Mr. Hobson)

23 Q. Let me show you, sir, a document that we
24 have marked 670300 USSR and ask if you can identify
25 that for us (tendering document).

1 A. (Reviewing Document) Yes.
2 Q. What is it, please, sir?
3 A. It's a reprint of an article entitled,
4 "Industrial Toxicology and the Prevention of
5 Occupational Poisonings in the Chemical Industry."
6 Q. This is a translation from a foreign
7 article, correct?
8 A. It's a translation from a Russian article.
9 Q. Do you recall how you came to have this
10 article, Dr. Rowe?
11 A. No, I don't.
12 Q. This is one you brought from your personal
13 library at home to the deposition?
14 A. Yes.
15 Q. Would you have had this article while you
16 were still at Dow?
17 A. Yes.
18 Q. Can you recall if you ever utilized this
19 article in any of your work?
20 A. We always considered it for information that
21 we could glean from the literature.
22 Q. In what way do you recall having considered
23 this article, sir?
24 A. I beg your pardon.
25 Q. In what way do you recall having considered

1 this article?

2 A. It was of particular interest to me because
3 I knew Professor Letavet and Dr. Korbakova.

4 Q. And you met them on one of your visits to
5 Russia?

6 A. Yes.

7 Q. When was that visit, sir?

8 A. I think that was in 1963.

9 Q. This original Russian article was printed in
10 1967; so, it would have been printed after - published
11 after your visit there, then?

12 A. Must have been.

13 MR. BLANKS: It's a good witness.

14 Q. I apologize, Dr. Rowe. You didn't seem to
15 be as sure about the '63 date, is why I ask. I
16 apologize. I'm not trying to be cute or anything with
17 you.

18 Was there any particular part of this
19 Russian article that you found particularly
20 interesting in your work that you utilized?

21 A. I don't recall.

22 Q. Did you maintain correspondence with either
23 of these gentlemen after your visit in Russia?

24 A. No.

25 (PLAINTIFFS' EXHIBIT 730409 DOW

1 WAS MARKED FOR IDENTIFICATION
2 PURPOSES. SAME WILL BE FOUND IN
3 THE EXHIBIT VOLUMES ATTENDANT TO
4 THIS DEPOSITION.)

5 (By Mr. Hobson)

6 Q. Let me hand you Exhibit 730409 DOW and ask
7 you if you can identify this article, sir (tendering
8 document).

9 MR. PIERCE: (Reviewing document)

10 MR. HOBSON: It would help speed
11 things along if Dr. Rowe would look at
12 the first part after you've looked at
13 it, Counsel.

14 MR. PIERCE: No. I don't want to
15 do that. Did you make any markings in
16 this, Mr. Hobson, or your colleagues?

17 MR. HOBSON: I don't recall that I
18 did, but I won't tell you I didn't.

19 MR. PIERCE: Then I'd like to
20 check it through.

21 MR. BLANKS: In the event, what
22 should we do then?

23 MR. PIERCE: Excuse me?

24 MR. BLANKS: Well, on the
25 assumption that there might be some in

232

1 there, what about it? I mean, we
2 already said we marked these --

3 MR. PIERCE: I don't care what you
4 said, Mr. Blanks.

5 MR. BLANKS: Pardon me?

6 MR. PIERCE: I don't care what you
7 said, Mr. Blanks. I'd like to find out

8 if there are markings. You assure me
9 there are none - make that
10 representation - that's fine.
11 MR. BLANKS: Well, I don't think
12 that any that are in there were made by
13 me, if there are any. That paper looks
14 so boring I don't think I've even made
15 any.
16 MR. PIERCE: Want to start looking
17 through (directed to the witness)?
18 A. (Reviewing document)
19 (By Mr. Hobson)
20 Q. All right. Do you recognize that document,
21 Dr. Rowe?
22 A. I can honestly say that I don't recognize it
23 as such.
24 Q. Can you tell us -- Is this something you
25 brought from your library at home?

233

1 A. Yes.
2 Q. Would you have any recollection of why it's
3 in your library?
4 A. Yes. It's -- It's a general compilation of
5 methodology and examples of it in various categories
6 of toxicological evaluation.
7 Q. And do you know what it was used for, this
8 document?
9 A. My memory is vague about this, but I do
10 remember that - It must have been in 1973 because
11 that's when it's dated - that we tried to get our

12 experts in each of the fields of toxicology to write
13 up a comprehensive piece that could be used in
14 educating our other people.

15 Q. And by "our other people," who do you mean,
16 sir?

17 A. Whoever.

18 Q. Any Dow employee?

19 A. Anybody that -- If we happened to want to
20 use it for a symposium or education of new employees
21 and so on.

22 Q. The last sheet that's there, I think, is
23 handwriting.

24 A. Yes. I remember that.

25 Q. Can you tell me whose handwriting that is,

234

1 sir?

2 A. No, I can't.

3 Q. It's definitely not yours, though?

4 A. It's not mine.

5 Q. All right, sir. Do you recall, sir, ever
6 participating in any training sessions, yourself,
7 dealing with toxicology and what I'll call "hourly
8 workers" of Dow Chemical Company?

9 MR. PIERCE: Objection to the form
10 of the question.

11 A. Yes.

12 Q. How far back in your career at Dow does that
13 go, sir?

14 A. Probably started in the Nineteen - around

15 1940.

16 Q. And what do you recall about those sessions?
17 What did they deal with, sir?

18 A. The purpose was to acquaint people -
19 employees in one area or another - salespeople, other
20 research people - about the significance of - or
21 existence of the biochemical research laboratory.

22 Q. And why would you want to do that?

23 A. Education.

24 Q. And what was the value to you in your work
25 in providing this education?

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1 A. Well, people can't do anything about what
2 they don't know about.

3 Q. Could you tell me more what you mean by
4 that, sir?

5 A. Toxicology was unknown to almost even most
6 chemists.

7 Q. And, so, you were trying to get information
8 about toxicology to chemists and to people working
9 with chemists about the problems - the hazards of
10 chemicals that you dealt with.

11 MR. PIERCE: Objection to the form
12 of the question.

13 But go ahead and answer.

14 A. I don't know what limitations you are
15 referring to or what -- We -- We conducted safety
16 meetings throughout the plant, various groups, from
17 time to time, impromptu, some scheduled, where we
18 tried to explain the - what we did in the toxicology

19 section of the biochemical research laboratory.

20 Q. And as early as the 1940's, you found that
21 to be a good practice to follow, I take it.

22 A. Very, very, very good.

23 Q. And what I'm trying to learn, sir, in your
24 words, is why you found that to be a good practice.

25 MR. PIERCE: Objection.

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1 Q. Why did you find it necessary to do?

2 MR. PIERCE: Objection to the
3 form.

4 A. We made every effort to create a
5 consciousness among employees about the safe handling,
6 proper procedures to use, and so forth in handling
7 chemicals.

8 Q. And in your words, sir, would you tell us
9 why that was something you found important to do at
10 Dow.

11 MR. PIERCE: Asked and answered.

12 Q. What was the benefit, sir?

13 A. We sought --

14 MR. PIERCE: Objection.

15 A. -- to make it a safer place - a safer
16 workplace.

17 Q. Does your --

18 MR. ALMQUIST: If you're switching
19 gears, we've been going for an hour.
20 Continue? Okay.

21 MR. PIERCE: How much do you have

22 left? Okay.

23 MR. ALMQUIST: We'll finish.

24 Q. Let me ask you one question, I guess,

25 Dr. Rowe. I've looked through your bibliography

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1 that's attached to your C.V.; and I don't find listed
2 a chapter that I think you wrote in the second edition
3 of Patty. Did you write a chapter in the second
4 edition of Patty?

5 A. Yes.

6 Q. I may have missed it. Would you recall if
7 it's there? I didn't find it (tendering document). I
8 found the third edition but not the second edition.
9 1958.

10 A. (Reviewing document) I guess I don't
11 understand your question, then.

12 Q. Did you write a section of the second
13 edition of Patty that would have been published about
14 1958?

15 A. Your dates are -- I don't remember what all
16 was in the first edition and the second edition.

17 Q. Did you write a portion of the first
18 edition, as well?

19 A. I don't remember which edition it is.
20 That's my problem.

21 MR. HOBSON: All right, sir. I
22 think we're out of tape; so, I'll stop
23 at that point.

24 (SHORTLY AFTER THE RECESS WAS
25 CALLED, IT WAS DECIDED TO BREAK FOR
Page 211

1 LUNCH. THEREFORE, AT 11:20 A.M. THE
2 DEPOSITION WAS RECESSED AND AT 12:30
3 P.M. RESUMED AS FOLLOWS:)

4 (By Mr. Hobson)

5 Q. Dr. Rowe, just before we broke for lunch, I
6 was asking you about your authorship in sections of
7 the various editions of the Patty's Industrial Hygiene
8 and Toxicology. In your bibliography you referenced
9 the third edition which was edited by George Clayton
10 and his wife.

11 Do you recall if you did have a chapter in
12 the earlier editions of Patty?

13 A. My confusion is with -- Which edition is
14 which?

15 Q. All right sir. The third edition that
16 Mr. and Mrs. Clayton did was published in 1981.

17 A. Okay.

18 Q. The earlier editions of Patty - I believe
19 the first edition was '48 and the second edition was
20 about 1958.

21 A. Okay.

22 Q. I thought that you had a chapter in at least
23 the 1958 Patty's.

24 A. Yeah.

25 MR. PIERCE: If you recall,

1 Doctor. All you can do is the best you
2 can do.

3 A. I had several chapters in that edition. I
4 don't remember the date. That was right around 1960,
5 though, --

6 Q. Yes, sir.

7 A. -- the one I'm referring to.

8 Q. I didn't find those chapters referenced in
9 your bibliography, though, the ones that would have
10 been around 1960. Is that just something you didn't
11 put in your bibliography that's your C.V.?

12 A. I don't -- I don't know. Is the volume as a
13 whole listed? I --

14 Q. I don't know, sir. Let me give it back to
15 you (tendering document).

16 MR. PIERCE: You have a stick-on
17 with arrows. Do you want those there?

18 MR. HOBSON: You can pull them
19 off, if you like.

20 A. (Reviewing document) It's not there. I
21 don't know why.

22 (By Mr. Hobson)

23 Q. All right, sir. One of the things that I
24 believe you were asked to bring to the deposition,
25 Dr. Rowe, was industrial hygiene and occupational

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1 medicine texts. And I didn't find, when I went
2 through the stack, any texts. Some people who have
3 come to the depositions have only brought copies of,

4 perhaps, the cover page or something to the published
5 text. I was wondering if -- I didn't see those in
6 here.

7 Did you bring anything - any textbooks or
8 any parts of textbooks?

9 A. No, I did not.

10 Q. Do you have any some texts that were written
11 before 1965 on these subjects?

12 A. I have Patty. I don't know that I have any
13 other texts that were written that early.

14 Q. All right, sir. And you have Patty's first
15 edition?

16 A. No, I don't think I have the first edition.
17 I have the one that - that was published in about
18 1960's, around there.

19 Q. All right, sir. I'm sorry. I thought you
20 told --

21 A. And the - that's a one-volume deal. And the
22 next volume was a three-volume deal. I have -- I have
23 both of those but not the first edition.

24 Q. All right, sir.

25 MR. HOBSON: We want to attach as

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1 Rowe Exhibit 1 the notice for the
2 deposition, and it does say with
3 subpoena duces tecum. And I think our
4 earlier discussion about the fact that
5 Dr. Rowe was not served with a subpoena
6 but his appearance is by agreement --

7 We will note that exception, but we

8 will ask that the notice of the
9 deposition be attached as Exhibit 1.
10 (PLAINTIFFS' EXHIBIT ROWE 1
11 WAS MARKED FOR IDENTIFICATION
12 PURPOSES. SAME WILL BE FOUND IN
13 THE EXHIBIT VOLUMES ATTENDANT TO
14 THIS DEPOSITION.)

15 (By Mr. Hobson)

16 Q. Dr. Rowe, does the term "environmental
17 stewardship" have meaning to you, sir?

18 A. Yes.

19 Q. What does it mean to you?

20 A. It means to me that - that almost anything
21 that has an impact on the environment ought to be
22 considered and handled in the - in the best way
23 available.

24 Q. Was environmental stewardship a term that
25 was in use at Dow?

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1 A. I don't know whether that term specifically
2 was used or not.

3 Q. Were you at Dow practicing what you've just
4 described as "environmental stewardship" for your
5 products?

6 MR. PIERCE: Objection to the
7 form.

8 A. I believe so.

9 Q. How were you doing that, sir?

10 A. We were trying to convey all the information

11 that we had relative to downstream uses of products.

12 And I guess I don't know exactly what - what you're

13 referring to from the standpoint of specifics.

14 Q. Well, sir, I'd really like to know how the

15 description of environmental stewardship that you gave

16 me was practiced in general at Dow, if it was.

17 MR. PIERCE: Objection to the

18 form. The witness testified that

19 he doesn't even know if that term was

20 employed at Dow.

21 A. We're very conscious of by-product waste and

22 this sort of thing that can contaminate the

23 environment; and we did what I believe was -

24 everything we had available to us, technology and so

25 forth, to avoid environmental contamination.

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1 Q. You used the terminology a moment ago

2 "downstream uses." What did you mean by that, sir?

3 A. Well, you dispose of a material, you sell a

4 product, and you do everything you can to avoid having

5 it misused or, for example, dumped in a - in a dump or

6 whatever.

7 Q. How would you at Dow, in your own words,

8 deal with those kinds of problems for Dow Chemical

9 products?

10 A. Labeling, product brochures, following

11 regulations as close as we could, contacts with other

12 people in an attempt to avoid everything that we could

13 reasonably avoid in contamination of the environment.

14 Q. Would you know, sir, did Dow ever have as a

15 practice evaluating a potential customer before you
16 sold the product to the customer to make sure that
17 customer knew how to properly deal with the chemical
18 from a health and safety standpoint?

19 MR. PIERCE: I'll object to the
20 form of that question.

21 A. Yes. We had situations like that.

22 Q. Would you give me some of those examples
23 that you remember, sir.

24 A. I recollect one very early in which a
25 company wished to use methyl bromide as a fire

244

1 extinguisher. And we, even under threat of suit,
2 refused to sell it for that purpose.

3 Q. Are you saying that the company that wanted
4 to buy the material threatened to sue Dow if you
5 wouldn't sell it to them?

6 A. Yes.

7 Q. And even in the face of that, the decision
8 was made not to sell the product to the company?

9 A. That's my understanding.

10 Q. And what was the reason the decision was
11 made not to sell the product for that purpose?

12 MR. PIERCE: Asked and answered.

13 A. Because we believed that it was too
14 hazardous to use for such a purpose.

15 Q. What was the approximate time frame of that,
16 Dr. Rowe?

17 A. I can't be sure, but it would have been in

18 the early Forties.

19 Q. Would you have been maintaining a file of
20 customer inquiries or customer correspondence about
21 different Dow products?

22 A. I didn't.

23 Q. If -- Would it occur from time to time that
24 a customer would write to Dow and ask for information
25 about the safe use of a product and you would be asked

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1 to respond?

2 A. It's possible.

3 Q. I know that it's possible, but do you recall
4 that actually happening?

5 A. Specifics I don't remember. I don't
6 remember, but I'm sure the situation did exist.

7 Q. And when you would respond, would you have
8 done that in writing occasionally?

9 A. In either writing or conversation.

10 Q. If you did it in writing, would you have
11 kept a record of that written correspondence?

12 A. I don't know. I might -- I don't imagine
13 that I would have. I don't know.

14 Q. When you would write a letter -- Strike
15 that. Let me ask this: If you wrote a letter while
16 you were an employee of Dow to someone outside the
17 company, could you put your name on that letter?

18 A. Yes.

19 Q. Was there ever a time when you weren't
20 authorized to sign your own letters, that someone
21 above you had to put their name on a letter that you

22 had written?

23 A. I don't recollect any.

24 Q. Was it your general practice to keep copies
25 of letters that you had written in the Dow files?

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1 MR. PIERCE: Objection to the form
2 of the question.

3 A. I had a correspondence file, yes; but it
4 was -- I'd usually clean my files once a year and
5 discarded the -- that which was of no longer any
6 significance.

7 Q. When you would do your toxicity testing work
8 at the biochemical research laboratories on Dow
9 products, would you know, sir, if that was carried as
10 just a general overhead charge; or would that charge
11 be billed back to certain groups within Dow Chemical
12 Company?

13 MR. PIERCE: I'm going to object
14 to the form of the question.

15 A. It's two questions.

16 Q. All right, sir. If you could, give me the
17 answer to each one, then, please, sir.

18 A. Some were billed as an overhead to our
19 department. Others were agreed to -- The financing
20 was agreed to by product departments or subsidiaries
21 or what.

22 Q. Would this be the case back in as early as
23 the 1930's -- about late 1930's -- when you began in the
24 biochemical research laboratory?

25 A. I don't know.

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1 Q. Can you tell me, based on your knowledge,
2 approximately when this practice began?

3 A. I don't recall.

4 Q. Could you initiate toxicity testing on a
5 material at the biochemical research laboratory
6 without one of the other groups within Dow requesting
7 that work be done?

8 A. Yes. At times.

9 Q. You didn't have to wait for some other
10 entity in Dow, then, to ask you to begin a project?

11 A. No.

12 MR. HOBSON: Dr. Rowe, I
13 appreciate your patience with me.
14 That's all the questions I have on this
15 subject right now, sir. Thank you very
16 much.

17 THE WITNESS: You're welcome.

18 MR. PIERCE: Anyone else have any
19 questions?

20

21 EXAMINATION BY MR. BLANKS:

22 Q. Dr. Rowe, I wanted to visit with you about
23 some of these same areas, hoping not to repeat too
24 much.

25 Where and how did you get your training to

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1 do toxicology work? I understood that you graduated
2 with degrees in biochemistry.

3 A. That's right.

4 Q. And I'm just wondering what more you needed
5 to learn to do toxicology.

6 A. That's a long story. There weren't
7 anything - or no one existed that - except for,
8 perhaps, a very few who would call themselves
9 "toxicologists" when I began to do this sort of
10 thing. So, what was -- It was really we developed, I
11 think, in many instances the discipline of what is now
12 known as industrial toxicology. There were forensic
13 toxicologists but very, very few people who would
14 consider themselves as industrial toxicologists. So,
15 we grew with it, saw the need, tried to invent means
16 and methods to answer the pertinent questions. So, we
17 grew up doing it.

18 Q. Did you have any jobs between your graduate
19 work and beginning with Dow?

20 A. No.

21 Q. Was it, then, Dr. Irish who was in a way
22 your initial teacher into the area of industrial
23 toxicology?

24 A. Dr. Irish and Dr. Adams.

25 Q. So, they were in some respect your mentors,

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1 then; and I suppose --

2 A. Yes.

3 Q. -- in a way you all grew together in the

4 field. What were the pertinent questions in 1937 in
5 your field?

6 MR. PIERCE: I'm going to object
7 to the form of the question.

8 But try to answer it.

9 A. I don't know that I knew enough in 1937 to
10 identify them.

11 Q. Well, looking back with what you learned
12 over the following years as you matured in your field,
13 what you perceived it to have been, then.

14 A. Well, the problems that we were looking at
15 are identified by our publications and the problems
16 that The Dow Chemical Company had. We were interested
17 in the halogenated hydrocarbons; so, much of our
18 effort went into that. This was in those days quite
19 colloquial.

20 Q. Meaning -- Meaning what?

21 A. Meaning the problems that were surrounding
22 us - immediately surrounding us rather than the world
23 problems.

24 Q. I don't think that Mr. Hobson asked you, but
25 I'd appreciate it if you could give the jury just a

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1 plain understandable definition of what toxicology is
2 and what it involves.

3 A. Our efforts at toxicology, perhaps, would
4 explain what I'm trying to say; but basically we would
5 expose animals to various compounds to try to learn
6 the amounts that were required under what conditions

7 to identify the areas of target organs, so to speak,
8 and apply the qualitative and quantitative aspects to
9 the - give it to the medical people, others involved
10 in - in the minimizing of occupational exposures.

11 Q. Okay. Well, that's --

12 A. And that was foundation that we looked to
13 apply. It involved various types of exposures that I
14 have described elsewhere there we've talked about.

15 Q. Thank you. And I think that is helpful.
16 In growing into your field, I would suspect that you
17 did a lot of reading along the way after you went to
18 work at Dow in areas that would be related to
19 toxicology in the work you were doing: wouldn't that
20 have been true?

21 A. No. I don't believe that I ever did a lot
22 of reading.

23 Q. Would you and your colleagues have at the
24 least been following the literature in the
25 occupational health field and industrial hygiene and

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1 toxicology field?

2 MR. PIERCE: Objection to the form
3 of the question.

4 A. Yes. We tried to do that.

5 Q. And at that time in 1937, the volume of
6 publications and articles was certainly less than it
7 was in the last years that you worked, was it not?

8 A. Oh, yes.

9 Q. So, at that time, in fact, it was practical
10 for one to be pretty well abreast of the published

11 literature in his professional field.

12 MR. PIERCE: Objection to the form
13 of the question.

14 Q. Would you agree?

15 MR. PIERCE: It requires
16 speculation on the part of the witness
17 as to what affects someone else and
18 what someone else does.

19 A. We tried to do that.

20 Q. At any rate, it was easier to do then than,
21 say, in 1977, 40 years later, when there were more
22 journals, more articles, more presentations, and so
23 on: would that be fair to say?

24 A. I think so.

25 Q. Have you given any -- any kind of testimony

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1 for Dow before at any time?

2 A. I beg your pardon.

3 Q. Have you given testimony for Dow at any
4 time?

5 A. Yes.

6 Q. Would that have been in lawsuits or in front
7 of regulatory bodies or Government groups or both?

8 MR. PIERCE: Objection to the form
9 of the question.

10 A. Yes.

11 Q. All of the above?

12 A. Yes.

13 Q. Okay. What -- What sort of litigation

14 topics have you given testimony on, sir?

15 A. Agricultural chemicals, chlorinated
16 hydrocarbons, 2,4,5-T, dioxin. I don't know any...

17 Q. Have you ever testified in any case
18 involving any sort of mineral dust exposure at a Dow
19 facility?

20 A. No.

21 Q. You've testified, I suppose, before some
22 governmental groups, committees, agencies?

23 A. Yes.

24 Q. Would that be so? And what was the subject
25 matter of those appearances?

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1 A. 2,4,5-T and - and dioxins were one of the
2 major ones. But I was a member of a number of
3 committees, and I can't remember all the things we
4 talked about.

5 Q. Did your committee membership carry on after
6 you left Dow, or did you withdraw from your
7 professional association?

8 A. I withdrew from that.

9 Q. I'm sorry. I talked over you.

10 A. I withdrew.

11 Q. Okay. So, while connected with committees
12 and testifying before Government groups, you were
13 still a Dow employee?

14 A. Yes.

15 Q. And were there testifying at Dow's behest, I
16 would suppose. Is that true?

17 MR. PIERCE: Objection to the form

18 of the question.

19 A. I don't know how to answer that because I
20 was a Dow employee, but I was given the privilege of
21 testifying and discussing problems with the committee
22 as an independent person.

23 Q. So, you weren't necessarily expressing Dow's
24 view when you'd testify? Well, you might have been?

25 A. That would have my background of most of my

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1 opinions; but I was speaking, not for Dow, but for
2 myself.

3 Q. Did some of your testimony involve efforts
4 to oppose or resist changes in regulations about
5 occupational health --

6 MR. PIERCE: Objection to the form
7 of the question.

8 Q. -- and industrial hygiene standards?

9 MR. PIERCE: Continue the
10 objection.

11 A. Yes.

12 Q. And some of that testimony involved
13 resisting tightening up standards as to suspected
14 human carcinogens, did it not?

15 MR. PIERCE: Objection to form
16 of the question.

17 A. I don't really -- Can you be more specific?

18 Q. Well, unfortunately, since I don't know what
19 you testified on, I can't be specific about what
20 materials might have been involved.

21 A. Maybe it would help me if you could tell me
22 what you mean by "testifying."

23 Q. Well, I meant where you appeared in front of
24 OSHA regulatory hearings or some Congressional
25 committee or something of that sort.

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1 A. I see. Okay. Yes. I have -- I have -- The
2 first one I was interested in mentioning was with the
3 T.L.V. committee. And I remember distinctly of -
4 urging that committee to lower the level on carbon
5 tetrachloride because I felt that the standards were
6 excessive.

7 Q. In what decade do you recollect doing that
8 service in?

9 A. Probably the Forties.

10 Q. And, indeed, it was probably your opinion
11 that there were other T.L.V. standards that were
12 excessive, as well, during those years; isn't that
13 true?

14 MR. PIERCE: Objection to the
15 form.

16 A. I -- I don't believe I ever testified in
17 that sense. I provided data for the committee to use
18 in making evaluations.

19 Q. In fact, though, many of the T.L.V.'s that
20 the American Congress of Governmental Industrial
21 Hygienists had originally set out were not supported
22 by the quantity or quality of data such as you were
23 providing on particular substances, were they?

24 MR. PIERCE: Object to the form

25 of the question. It's argumentative

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1 and speculative.

2 A. I think that's correct.

3 Q. In fact, they originated just as a
4 benchmark, something that was in the nature of being
5 better than nothing to provide some guidelines to
6 people in industry to protect workers from exposures.

7 MR. PIERCE: Objection to the form
8 of the question.

9 Is there going to be a question?

10 MR. BLANKS: Well, if the
11 objection does not interrupt it.

12 (By Mr. Blanks)

13 Q. Isn't that so, sir?

14 A. I think we always have looked at the
15 A.C.G.I.H. threshold limit values as the best estimate
16 of a basis of the information that was available at
17 that particular time.

18 Q. You mean at the time they were initially
19 promulgated?

20 A. Yes.

21 Q. And over the course of the years that
22 followed, the - additional information came to light
23 with respect to different substances which did not
24 immediately show up in terms of changes of the
25 T.L.V.'s; isn't that right?

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1 MR. PIERCE: Objection to the form
2 of the question; leading.

3 It's just really a speech; but
4 deal with it, sir.

5 A. As new information becomes available,
6 there's always some lag time before it is accepted.
7 In that sense, surely, we're always going to have
8 change.

9 Q. And with respect, for instance, to the
10 mineral dust, the lag time was on the order of many
11 years and not just a few; isn't that right? Those
12 topics -- Those materials weren't revisited by the
13 committee until many years - some decades after the
14 standards had originally been set. Isn't that so?

15 MR. PIERCE: Objection to form of
16 the many questions at the same time,
17 all of which were compound.

18 MR. ALMQUIST: And I'll join in
19 that objection and also raise the
20 objection it's an argumentative
21 question.

22 A. I do not know. I was - never believed that
23 I was an expert or really knowledgeable in the area of
24 particulate toxicology.

25 Q. So, that was something that you never really

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1 concerned yourself with at Dow?

2 A. I -- I didn't.

3 Q. Isn't it the case that Dow was one of the
4 first few companies to actually set up a toxicology
5 department and laboratory?

6 A. One of the first.

7 Q. One of the first of maybe half a dozen in
8 the United States; is that about right?

9 A. Perhaps.

10 Q. Well, you've mentioned Carbide's efforts
11 through the Mellon Institute and, I think, Du Pont at
12 the Haskell Laboratory, and maybe a couple others; but
13 Dow was certainly one of the leaders in that area,
14 correct?

15 A. We thought so.

16 Q. And to whom do you attribute this - the
17 foresight that led to the creation of an industrial
18 toxicology department and laboratory?

19 A. To Willard H. Dow.

20 Q. And was he a doctor, a Ph.D., a scientist?

21 A. He received honorary doctorate degree.

22 Q. He wasn't a physician?

23 A. No.

24 Q. Was it a matter of scientific curiosity that
25 led him to do this, or was it more a concern for the

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1 health and safety of the people that worked --

2 MR. PIERCE: Objection.

3 Q. -- for his company?

4 MR. PIERCE: Objection to form of
5 the question; it's compound. Objection
6 that you're asking Dr. Rowe to

7 speculate on the thoughts of Willard
8 Dow.

9 But go ahead.

10 A. Willard Dow, president and the founder, was
11 a very people-oriented person. And we had an accident
12 in the plant where a man was killed from a splash of
13 phenol. No one knew at that particular time the
14 toxicity of phenol when applied to the skin. As a
15 result of that, my understanding: that Dr. Dow wanted
16 that never to happen again and he tried to and did
17 create the biochemical research laboratory to study
18 materials that Dow people were handling so that such a
19 thing would not happen again to the best of his
20 ability.

21 Q. And it was around that time that he hired
22 Dr. Irish to set up the laboratory and get the program
23 going, correct?

24 A. That's right.

25 Q. Did I understand that the goal then was to

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1 know at Dow about the hazards, the toxicity of all the
2 materials that were being handled in the plants in
3 order to protect the safety of the people in the
4 plants?

5 MR. PIERCE: Objection to form of
6 the question.

7 A. As far as that was humanely possible with
8 the resources available.

9 Q. And as I think you've testified, the

10 resources were made available and in steadily
11 increasing amounts over the decades that you were with
12 the company.

13 A. That's right.

14 Q. Would that be true?

15 A. Yes.

16 Q. Starting with one man in 1933 or '34 and
17 growing up to over a hundred late in your career,
18 correct?

19 MR. PIERCE: Mr. Blanks, could you
20 ask a single question, allow the
21 witness to answer it instead of
22 continually piling question on question
23 as he tries to answer the first one.
24 Please attempt that.

25 Go ahead, Dr. Rowe.

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1 A. Would you please start over your - that
2 question.

3 Q. Dow did, indeed, apply resources to the area
4 of occupational health, beginning with the hiring of
5 one - one scientist in 1933 or '34 in the person of
6 Dr. Irish and continuing over the decades you were
7 with the company to build a staff that approached or
8 exceeded even a hundred people, correct?

9 A. Yes.

10 Q. Would you say, sir, that Dow had a
11 state-of-the-art biochemical research and toxicology
12 program in 1937 when you joined the company?

13 MR. ALMQUIST: I'm going to

14 object --

15 MR. PIERCE: Objection to form of
16 the question.

17 MR. ALMQUIST: I'm also going to
18 object to the form of the question
19 because of the use of the term "state
20 of the art" which has a legal
21 connotation in the sense it calls for a
22 legal conclusion on the part of this
23 witness.

24 A. That was not possible with our staff.

25 Q. It was not possible with your staff in 1937

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1 to have a - a program that - that was what we call
2 "state-of-the-art" for that time?

3 MR. PIERCE: Continue the
4 objection.

5 MR. ALMQUIST: And also I want
6 to - if possible, Mr. Blanks to have
7 your agreement to a running objection
8 to state-of-the-art questions again
9 because --

10 MR. BLANKS: That's fine because I
11 don't understand that it is a legal
12 term unless you've just invented it.
13 It's certainly in common usage, and I'm
14 using it in that respect. And I think
15 if Dr. Rowe doesn't understand it that
16 way, he'll tell me; but you have a

17

18 (By Mr. Blanks)

19 Q. I'm sorry, sir. I'm not meaning to belittle
20 your program or to criticize it. I'm trying to get an
21 understanding of it, and I mean that sincerely. But
22 in 1937 when you joined Dow, was the Dow toxicology
23 program at the biochemical research laboratory
24 comparable to the other good programs - the few good
25 programs - that existed in the Country then?

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1 A. I don't know.

2 Q. Did you learn over the next three or four
3 years, say up before World War II, that it was on a
4 par with those of some of your competitors?

5 A. Yes. In -- In areas in which we were
6 primarily concerned, in organic chemicals, I think
7 that was true.

8 Q. Now, your charter from Dr. Dow had been to
9 know the hazards in the plant, as I understood your
10 testimony, so that you would not have repeat -
11 repeated deaths and injuries to workers there from
12 exposures in the plant, --

13 MR. PIERCE: Objection to the --

14 Q. -- correct?

15 MR. PIERCE: -- characterization
16 of the witness' prior statements.

17 A. To the limit of our capabilities.

18 Q. Yes, sir. And certainly you weren't
19 expected to go out and reinvent the wheel and do tox.
20 studies on materials about which there was already

21 reported information in the literature, were you? I
22 mean, you could rely on what others had already
23 published about some materials and concentrate your
24 efforts on those that - about which little was known.
25 True?

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1 MR. PIERCE: Objection to the form
2 again. Please ask a single question,
3 allow the witness to answer it. Nobody
4 can answer it if you ask a question --
5 The witness tries to begin to answer
6 it, and you continue with a second
7 question and put them together.
8 Please.

9 Q. Dr. Dow didn't tell you to go out and
10 reinvent the wheel and do toxicology work on every
11 material used in a Dow plant, did he?

12 A. No.

13 Q. You were, though, concerned to investigate
14 materials about which there was not existing
15 toxicological data in the literature, weren't you?

16 A. I'm -- I'm sorry. I don't think I heard all
17 of what you said.

18 Q. All right. The scope of your interest in
19 the tox. department, even in 1937, was first limited
20 to materials that were used in the Dow facilities.

21 A. To very few of them.

22 Q. But that defined the set or the universe of
23 materials to even consider studying, right, that were

24 used in your plants or came out the end of it as a
25 product?

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1 A. Yes.

2 Q. You focused your efforts, I think, not on
3 materials about which information already existed, but
4 rather on those about which the toxicological
5 information was either limited or nonexistent; is that
6 true?

7 A. That's right.

8 Q. Such as the phenol, correct?

9 A. Yes.

10 Q. Okay. And relied, then, on the existing
11 literature in the medical journals and toxicology
12 journals and so on for those other materials that you
13 could look to the work of others on?

14 MR. PIERCE: Objection to the form
15 of the question. It's ambiguous and
16 it's compound.

17 A. Yes.

18 Q. Okay. Because you had limited resources and
19 you had to use them in the most efficient way,
20 correct?

21 A. Right.

22 Q. And the contributions that you and your
23 colleagues made in the field of toxicology are well
24 recorded in the articles that you and the other
25 gentlemen you worked with published over the years.

1 True?

2 A. Yes.

3 Q. And for the most part they provided new
4 insights and new data about the materials that you
5 reported on, right? You were breaking new ground?

6 MR. PIERCE: Please just - just
7 keep it to one question. Don't keep
8 adding that second question to each of
9 your questions.

10 A. We were plowing new ground in some areas.
11 We were extending knowledge in others.

12 Q. Okay. Now, as to those materials that were
13 used in the Dow plants which you did not study, where
14 did you look to get the toxicological or hazard
15 information about - about those materials?

16 A. The literature - available literature - at
17 the time or by correspondence or inquisition - verbal
18 inquisition - with people who were supposed to know.

19 Q. Such as perhaps the people that sold some of
20 the raw materials to Dow?

21 A. I'd presume so. I wasn't involved in that
22 particular part of the game at that stage.

23 Q. Now, how did the biochemical research
24 laboratory share the information it gleaned from the
25 literature with the Dow employees who would be

1 interested in knowing about particular hazards?

2 A. What we learned we tried to use in our

3 normal distributions which were, of course, quite
4 limited in those days.

5 Q. But the biochemical research laboratory
6 staff did, I suppose, make it a point to get the
7 material hazard information to the appropriate Dow
8 employees that would benefit from knowing it, correct?

9 A. I don't believe it was that extensive at
10 that time. Plant superintendents and people who were
11 in charge of operations were the channels through
12 which we worked.

13 Q. So, you'd communicate with the plant
14 superintendents, and then they would just share the
15 information with the people working in their plants.
16 Right?

17 A. I don't know what happened after that -
18 after our communications or discussions.

19 Q. Did you ever have any reason to think that
20 the plant superintendents weren't disseminating the
21 product and material hazard information that you
22 provided?

23 A. I don't know -- I don't -- I don't know.

24 Q. You recall no instances where you learned
25 that something that your department had reported on

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1 had not reached the field?

2 A. I don't remember ever particularly looking
3 at it.

4 Q. I'm sorry.

5 A. I say I don't remember particularly looking

6 for it.

7 Q. All right, sir. Have you ever taught any
8 courses in - at Dow or in colleges or universities?

9 MR. PIERCE: Objection to form of
10 the question.

11 Q. Have you ever taught?

12 A. Well, I've done - given -- I've given
13 lectures to lots of groups at our - in our
14 organization. I have -- I don't believe I could say
15 that I ever taught a course.

16 Q. So, the teaching you did was in Dow and it
17 was limited to presentations on a particular topic?

18 A. As far as I can recall.

19 Q. Okay. Did you ever belong to the American
20 Public Health Association?

21 A. Beg your pardon.

22 Q. Did you ever belong to the American Public
23 Health Association?

24 A. No, I did not.

25 Q. Ever attend any of their meetings, sir?

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1 A. Don't recollect that I did.

2 Q. Is Fred Meyers still living?

3 A. I don't know.

4 MR. PIERCE: Objection to form.

5 A. Are you speaking of the Fred Meyer who was
6 in our laboratory?

7 Q. Yes, sir.

8 A. I don't know.

9 Q. Do you have a recollection of when you met

10 Jim Hammond - James Hammond?

11 A. I beg your pardon.

12 Q. Do you recall when you met James Hammond?

13 A. No.

14 Q. Did you know him before he went to work with
15 the Exxon company or its - what its predecessor was
16 then?

17 A. I don't know.

18 Q. Did you actually have a librarian at the
19 library at the Dow plant in Midland where you worked?
20 Was there a technical librarian there?

21 A. I don't know.

22 Q. You don't recall?

23 A. I don't know what her qualifications were.

24 Q. There was a librarian at the company
25 library?

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1 A. Oh, yes.

2 Q. Company library?

3 A. Yes.

4 Q. Did you have to go to university libraries
5 to find the - all of the literature that you might
6 want to review on a particular material, or was it
7 present in the Dow library?

8 MR. PIERCE: Objection to form of
9 the question.

10 A. I recall one instance in which I went to
11 another library to find something. That's all I can
12 remember about it. I don't know what - what it was

13 and I can't remember where it was. In Chicago, I
14 believe. But I don't remember the name of the
15 library.

16 Q. But otherwise you were able to find what you
17 needed in the Dow company library?

18 A. I can't answer that.

19 Q. What other toxicology laboratories has Dow
20 had over the years that you were with the company
21 besides the one in Midland?

22 A. There was a laboratory established at
23 Freeport, Texas.

24 Q. When would that have been, approximately?

25 A. I don't remember when it was started.

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1 Q. Do you recall who staffed it originally?

2 A. I'm not sure.

3 Q. What kind of work did they do there?

4 A. They did primarily what we referred to
5 before as Class I type work.

6 Q. The preliminary investigations?

7 A. Yes.

8 Q. Was it specialized as to any particular type
9 of products or materials?

10 A. Not to my knowledge.

11 Q. Was it -- Was the Freeport lab doing the
12 same kind of work that you were doing in Michigan?

13 Let me do that again. Was the Freeport lab
14 looking at the same materials as you were
15 investigating in Michigan?

16 A. No. No necessarily.

17 Q. Were they to some extent duplicating your
18 work, or were they set up just to deal with a
19 specialized separate line of materials and products?

20 MR. PIERCE: Objection to the form
21 of the question.

22 A. The problem of transporting research
23 quantities of materials back and forth became a
24 logistic problem; so, we established a laboratory to
25 avoid that. They were trying to use the same

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1 methodology that we used.

2 Q. So, they were concerned with the materials
3 that were being used or produced in Freeport, correct?

4 A. Yes.

5 Q. Okay. Did they have the capacity in
6 Freeport to do any kind of dust studies or dust
7 inhalation studies?

8 A. Not to my knowledge.

9 Q. Do you recall approximately how many people
10 staffed that facility at Freeport? Was it a very
11 small lab, two or three; or more than that?

12 A. I don't know what the range was.

13 Q. Did you ever visit the laboratory there?

14 A. Yes.

15 Q. Several times?

16 A. Yes.

17 Q. What decades would you have gone there in?

18 A. Again I can't be specific, but it must have
19 been in the Sixties.

20 Q. Now, Doctor, would you have been down there
21 to consult with them on some particular problems; or
22 would this just have been a courtesy call?

23 MR. PIERCE: Objection to the form
24 of the question.

25 A. We tried to get together with the group down

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1 there maybe once a year or oftener if there was
2 something specific, but I don't recall anything other
3 than normal-type conversation, I guess, about what was
4 going on at the moment. And it wasn't on an
5 inspection-type basis.

6 Q. Did the Freeport laboratory come under the
7 biochemical research laboratory in Midland? Was it
8 subordinate to your laboratory?

9 A. No.

10 Q. Just more parallel to it?

11 A. Yes.

12 Q. So, to whom would the chief of the Freeport
13 laboratory have reported, to his plant superintendent?

14 MR. PIERCE: Objection to form of
15 the question.

16 A. I don't remember.

17 Q. How frequently would you Dow scientists meet
18 to exchange ideas and information? And I don't mean
19 in your own office, but like companywide.

20 A. I don't believe I can answer that unless you
21 become more specific.

22 Q. Well, did you have a custom or a practice of
23 getting together periodically with the other Dow

24 people that were working in your field and related
25 fields?

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1 A. Yes.

2 Q. And how frequently would that happen?

3 A. I don't know that it was on any planned
4 basis.

5 Q. On an unplanned basis how frequently did it
6 happen over the years you were with the company?

7 A. Well, it didn't happen at all in the early
8 times because there wasn't anybody except our local
9 people to go to it. We did meet with the Texas people
10 and medical directors, safety department people,
11 industrial hygienists, toxicologists. Met maybe once
12 a year, usually under the auspices of the medical
13 departments.

14 Q. How old is the Freeport plant?

15 A. That was started in 1940. I don't know what
16 stage of construction it was. I wasn't there.

17 Q. Would you know when they got a medical
18 doctor at that plant like you had at Midland?

19 A. Yes.

20 Q. Could you tell us when?

21 A. Excuse me. Rephrase your question. Maybe I
22 answered it incorrectly.

23 Q. Okay. Do you know if and when the Freeport
24 plant had a full-time doctor hired?

25 A. No, I do not know.

1 Q. Don't know if they ever did?

2 A. Yes.

3 Q. Just don't know when?

4 A. Yes.

5 Q. Okay. Do you know who the first one was?

6 A. My recollection was Dr. Kilian.

7 Q. Were there any other toxicology laboratories

8 in the Dow company besides Midland and Freeport?

9 A. You'll have to give me a time frame.

10 Q. Well, any time you know of because I don't

11 know where your other plants were.

12 A. There was a toxicology laboratory at the -

13 at the drug laboratory in Indianapolis.

14 Q. Any others, sir?

15 A. There was a drug laboratory in Livorno, I

16 believe, in Italy, LePetite, which was at one time a

17 subsidiary of Dow.

18 Q. Was Lapatee the name of the subsidiary or

19 the town? You lost me there.

20 A. That was a drug company, an Italian drug

21 company.

22 Q. And what was the subsidiary in Indiana that

23 had the drug lab?

24 A. That was the Dow Pharmaceutical.

25 Q. Are those the only ones you recall, Doctor?

1 A. That's the only ones I recall.

2 Q. Did your department ever report to the
3 medical department, or were you separate?
4 A. No.
5 Q. You never reported to the medical
6 department?
7 A. That's right.
8 Q. What relationship did you have with the
9 safety department?
10 A. A working relationship.
11 Q. They would come to you with problems
12 occasionally, and you'd provide information and
13 advice?
14 A. We com - communicated, I think, routinely.
15 Q. Did the safety department handle industrial
16 hygiene tasks before you hired industrial hygienists
17 at Dow?
18 A. Not to my knowledge.
19 Q. Is it so that there was no industrial
20 hygiene work being done, then, in 1937 when you joined
21 Dow?
22 A. Not to my knowledge.
23 Q. And you and Dr. Adams were the initial
24 practitioners in the field for Dow?
25 A. Dr. Adams, not me.

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1 Q. And you assisted him in some of that work,
2 didn't you, sir?
3 A. Later on.
4 Q. Including designing the air sampling device
5 and taking samples?

6 A. Yes.

7 Q. And then but it really wasn't until

8 Mr. Hoyle was hired that you had industrial

9 hygienists?

10 A. I don't think any of us could qualify as

11 that.

12 Q. Well, did Mr. Hoyle qualify as that when he

13 was hired; or was that something he - he sort of

14 learned his way into?

15 MR. PIERCE: Objection to the form

16 of the question.

17 A. He learned his way in like the rest of us.

18 Q. What specifically was being done at Dow in

19 1937 when you joined the company to protect people in

20 the Dow plants from toxic mineral dust, --

21 MR. PIERCE: Objection.

22 Q. -- if anything?

23 MR. PIERCE: Objection to form of

24 the question. It's overly broad. It's

25 ambiguous.

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1 A. I don't know.

2 Q. When did you first become aware that

3 anything was being done at Dow to protect people

4 working in the plants from exposures to toxic mineral

5 dust?

6 MR. PIERCE: Objection to the

7 form.

8 A. I don't remember.

9 Q. Is it your recollection that this is not a
10 matter that Dr. Adams worked on while you were working
11 with him, assisting him in industrial hygiene-type
12 work?

13 MR. PIERCE: Objection to the
14 form --

15 A. I don't know.

16 MR. PIERCE: -- of the question.
17 It assumes facts not in evidence.

18 Q. I'm sorry.

19 A. I don't know.

20 Q. Being as there were only, like, three or
21 four of you there in the biochemical research lab in
22 the beginning, isn't it likely that you would have
23 known at least the general areas Dr. Adams was working
24 on in 1937- '38?

25 A. I'd doubt it necessarily, that stage of the

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1 game, because I was preoccupied with other things.

2 Q. And those are the things that show up in
3 your early articles?

4 A. Yes.

5 Q. Did you ever or do you speak any foreign
6 languages, Dr. Rowe?

7 A. No.

8 Q. Did you ever learn to read any foreign
9 languages?

10 A. Elementary, I guess.

11 Q. Which would that be?

12 A. French.

13 Q. So, in terms of following the literature
14 that was published in foreign journals, sir, you would
15 have relied on translations or Digest abstracts that
16 had been - from translations without reading it,
17 yourself?

18 MR. PIERCE: Objection; to the
19 form.

20 A. Yes. And even any French articles.

21 Q. Okay. Dr. Rowe, do you believe that Dow
22 needed to be told by the manufacturers of insulation
23 products about the dangers of asbestos in 1937?

24 MR. PIERCE: Objection to form of
25 the question.

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1 A. I would ask you if you would repeat that.

2 Q. Is it your belief that Dow required to be
3 informed - to be told by the makers of asbestos
4 insulation about the dangers of asbestos, say, in 1937
5 when you joined the company?

6 A. I don't know.

7 Q. Would you say that Dow needed to be told by
8 the manufacturers of asbestos products about the
9 health hazards of asbestos ten years later in 1947?

10 MR. PIERCE: Objection again.

11 A. Well, I think that anybody that was
12 getting a product would like to know what - what's
13 known about it at the time, so -- I don't know.

14 Q. So, that would have been beneficial to Dow
15 to have been informed by the manufacturers about what

16 they did know about asbestos health hazards?

17 MR. PIERCE: I'm going to object
18 to the form and continue the objection
19 for this type of question.

20 A. The question relates to something that one
21 would have to answer philosophically. You also would
22 have to have someone that understood the other side of
23 it. Whether or not that was in existence, I don't
24 know.

25 Q. You mean whether the information was in

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1 existence in 1937 or 1947?

2 A. No. On the receiving end.

3 Q. I see.

4 MR. ALMQUIST: We've been going
5 about an hour - a little bit over an
6 hour now. You want to take a short
7 break?

8 Q. You want to stop now, sir?

9 MR. PIERCE: Yeah. We'll take a
10 short break now.

11 MR. BLANKS: I was asking
12 Dr. Rowe.

13 THE WITNESS: I would
14 like to relax for a few minutes.

15 MR. BLANKS: All right, sir.

16 (AT THIS TIME A BRIEF RECESS WAS
17 TAKEN, AND THE PROCEEDINGS THEREAFTER
18 RESUMED AS FOLLOWS:)

19 (By Mr. Blanks)

20 Q. Dr. Rowe, besides the folks working at the
21 biochemical research laboratory, was there anyone else
22 who had the responsibility at Du Pont - at Dow --

23 MR. BLANKS: All right. Go ahead
24 and laugh.

25 Q. Dr. Rowe, I'll start over, sir. He's trying

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1 to mess me up here (indicating Mr. Pierce).

2 MR. PIERCE: You do very well by
3 yourself.

4 (By Mr. Hobson)

5 Q. Were there any persons at Dow besides you
6 gentlemen in the biochemical research laboratory who
7 were responsible to look for health hazards in Dow
8 plants before the War?

9 A. Yes.

10 Q. What positions would those people have been
11 in?

12 A. Medical people, nurses, safety people.

13 Q. And the safety people looked to health
14 hazards as well as what would be the more ordinary
15 mechanical safety hazards at Dow?

16 A. Yes.

17 Q. This was so when you joined the company in
18 1937?

19 A. I don't know.

20 Q. Do you know when it became so?

21 A. No, because I can't speak for the safety
22 people.

23 Q. You remember them being there early on in
24 your career at Dow, though, and that you did see them
25 routinely or frequently?

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1 MR. PIERCE: Objection to the form
2 of the question.

3 Q. I think you told us that earlier, didn't
4 you?

5 A. Yes.

6 Q. Who was responsible at Dow for following the
7 medical and scientific literature that pertained to
8 occupational health matters?

9 A. I don't know.

10 Q. Now, you've told us that you and the other
11 doctors with whom you worked in the early years did,
12 indeed, try to follow the literature; but I'm
13 wondering if there was any person who had that as
14 their specific responsibility.

15 A. Not to my knowledge.

16 Q. So, that obligation fell upon the shoulders
17 of each professional, then, to try and stay abreast in
18 his field?

19 MR. PIERCE: Objection to the
20 form; leading, really testimony.

21 A. Yes.

22 Q. Was the term "product stewardship" one used
23 at Dow?

24 A. I beg your pardon.

25 Q. Was the term "product stewardship" one that

1 was used at Dow?

2 A. Yes.

3 Q. And could you explain to the jury what that
4 concept means?

5 A. It was a program designed to acquaint people
6 within Dow in the production plants relative to the
7 consequences or hazards associated with the various
8 chemical products and their undesirable effects either
9 to people within the plant or without the plant and
10 to - I guess one could say nature, herself - streams
11 fish, desirable plants, and so forth.

12 Q. And how long has Dow been following this
13 philosophy?

14 A. Well, it was not anything organized until -
15 I suspect it was in the neighborhood of the Seventies.

16 Q. But Dow had, in fact, been doing many of
17 these things before the Seventies, had it not?

18 A. It had been doing things, yes; but it wasn't
19 at all formalized.

20 Q. So, it was put into a policy then in the
21 Seventies, --

22 A. Yes.

23 Q. -- what had been done informally before
24 then?

25 MR. PIERCE: Objection to the

1 form.

2 Q. "Yes"?

3 A. More or less.

4 Q. Do you recall that Dow or its employees or
5 the people working in its plants ever had the benefit
6 of this sort of product stewardship from the
7 manufacturers of asbestos materials used in Dow
8 facilities?

9 A. I don't -- I don't know anything about it.

10 Q. You don't know anything about any asbestos
11 health information that may have been provided to Dow
12 by the manufacturers of those products?

13 MR. PIERCE: Asked and answered.

14 Q. Is that what you meant, sir?

15 A. I don't know, no.

16 Q. Did you, yourself, ever inquire of any of
17 the asbestos insulation manufacturers about the
18 hazards of their products?

19 A. I don't recall that I did.

20 Q. Is that something that would have been more
21 in the realm of Mr. Hoyle's responsibilities or one
22 that would have fell in your area?

23 MR. PIERCE: Objection to the form
24 of the question.

25 A. I wouldn't want to infer that it was

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1 anybody's direct responsibility. I'd have to say that
2 I was not particularly concerned in those days about
3 asbestos. I have relied, more or less, on the
4 observations that if things were under control as

5 recommended by the various agencies that -- And that
6 was Mr. Hoyle's job to see that that was the case.
7 And I did not have any direct operation or function
8 there.

9 Q. Would that also have been true with respect
10 to silica dust hazards that might occasionally be
11 created in your plants?

12 A. Yes.

13 MR. PIERCE: Objection to the form
14 of the question and --

15 Q. Sir?

16 MR. PIERCE: Assumes facts not
17 evidence.

18 A. Yes.

19 Q. So, you have no knowledge about what
20 particular brands of asbestos insulation might have
21 been used in Dow facilities?

22 A. I do not.

23 Q. Did you ever see in the Dow plant the
24 handling of asbestos insulation material by Dow
25 employees or other persons working there?

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1 A. I don't recall any.

2 Q. In fact, most of your work was, in fact,
3 done in the laboratory, wasn't it?

4 A. That's right.

5 Q. Very little fieldwork involved?

6 A. Very little.

7 Q. So, you're not really in a position to tell
8 us much at all about the methods of handling asbestos

9 insulation or other materials, are you?
10 MR. PIERCE: Objection to the form
11 of the question. It's argumentative
12 and also asked and answered as to what
13 he could tell you before.
14 Q. Was there a time, Dr. Rowe, when you were
15 responsible for running the industrial hygiene program
16 at Dow?
17 A. Administratively, yes.
18 Q. And would that have been when you were the
19 director of toxicology and industrial hygiene?
20 A. Yes.
21 Q. That was, according to your C.V., 1970 to
22 1973. Is that --
23 A. Yes.
24 Q. That's your recollection? Now, after you
25 became the research scientist-director of

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1 toxicological affairs, health and environmental
2 research, was the industrial hygiene work at Dow still
3 under your supervision or responsibility
4 administratively?
5 A. Administratively, yes.
6 Q. Was 1970, then, the first year that you were
7 administratively responsible for industrial hygiene?
8 A. No. I can't recall.
9 Q. Would you have had that responsibility as -
10 while serving as the assistant director of the
11 biochemical research laboratory?

12 A. Yes.

13 Q. Would you have had responsibility
14 administratively for industrial hygiene while serving
15 as the director of toxicology research section?

16 A. No.

17 Q. And it was Mr. Hoyle, of whom we've spoken
18 several times, who was then the man that reported to
19 you on industrial hygiene during those years that you
20 had administrative responsibility for it?

21 A. Yes.

22 Q. Would you agree, sir, that it was desirable
23 and, indeed, the right thing for Dow to know how many
24 cases of occupational disease were occurring in its
25 work force in the plants?

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1 MR. PIERCE: Objection to form of
2 the question.

3 A. Well, I don't believe that any time you can
4 say that it's undesirable to have information that's
5 available.

6 Q. And would it not also have been desirable to
7 know how many cases of suspected occupational cancer
8 were taking place among people working in your plants?

9 MR. PIERCE: Objection to the form
10 of the question.

11 A. It's always well to have information, but
12 there is more to that than just the fact that...

13 Q. Yes, sir. What more?

14 A. The quantitative aspects are usually missing
15 in that sort of thing.

16 Q. You mean quantitative in terms of the
17 exposure levels --

18 A. Yes.

19 Q. -- that the men may have had?

20 A. That's what I'm referring to.

21 Q. And I think we talked about that yesterday.

22 Not meaning to repeat unduly; but you would obtain

23 this quantitative information through doing

24 monitoring, correct, sir?

25 MR. PIERCE: Objection to the

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1 form.

2 A. I'm going to ask you to repeat that, please.

3 Q. The quantitative information that you said

4 was part of the equation, you obtained that by doing

5 monitoring whether it's air monitoring or

6 environmental monitoring?

7 A. Yes.

8 Q. Or even biological monitoring?

9 A. In some instances, yes.

10 Q. When did Dow begin to collect information on

11 the incidence of occupational diseases in the work -

12 workers in Dow plants?

13 A. I don't know.

14 Q. When did it begin to collect information on

15 the occupational cancers among people who worked in

16 Dow plants?

17 MR. PIERCE: Objection to form.

18 A. That would have probably have been in the

19 late Fifties.

20 Q. And did not some of Dow's studies in this
21 area lead to discovering a connection between arsenic
22 and cancer? Do you recall that, sir?

23 A. No, I don't.

24 Q. Do you recall a Gerald M. Ott, O-t-t?

25 A. Yes.

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1 Q. And an H. L. Gordon?

2 A. Yes.

3 Q. A B. B. Holder?

4 A. Yes.

5 Q. What were these men?

6 A. Dr. Holder and Dr. Gordon were physicians,
7 and Ott was a statistician.

8 Q. And they're the men that instituted the
9 program of computerizing the data from death
10 certificates, were they not?

11 A. That type of work would have been conducted
12 mostly through the medical department, yes.

13 Q. And it was certainly the case that the
14 medical department shared the results of these type of
15 studies with you in your department, correct?

16 A. I'm sure they would - did.

17 Q. Was that the kind of information that would
18 be helpful to you in the biomedical research
19 laboratory?

20 MR. ALMQUIST: I think perhaps the
21 question -- You just said "biomedical"
22 or "biochemical"?

23 Q. I'm sorry, sir.

24 A. We didn't have a biomedical laboratory as
25 such.

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1 Q. My apologies. But information about the
2 incidence of disease and causes of death in your work
3 force would be valuable to you in the work you were
4 doing in the biochemical research lab?

5 A. Sure.

6 Q. When did Dow begin to use industrial hygiene
7 standards or maximum allowable concentrations as for
8 mineral dust?

9 MR. PIERCE: Objection to form.

10 A. I don't know.

11 Q. Do you recall when Dow began to use T.L.V.'s
12 for mineral dusts like asbestos and silica?

13 A. I don't remember.

14 Q. Would this have been done, sir, during the
15 time that you were administratively responsible for
16 industrial hygiene?

17 MR. PIERCE: Objection to form;
18 asked and answered.

19 A. I think it would have been done any time,
20 but I just don't recall all of Mr. Hoyle's duties in
21 this respect. So, I can't tell you when.

22 Q. All right, sir. Well, not -- I accept you
23 can't tell me when, but can you tell me whether you
24 remember that any one of these three - either I. H. -
25 industrial hygiene standards or maximum allowable

1 concentrations or threshold limit values - were used
2 with respect to mineral dust during the years you
3 had administrative responsibility for industrial
4 hygiene?

5 A. I can't tell you.

6 Q. Do you recall, sir, how any of these
7 standards, if they were used, were implemented or
8 enforced at Dow?

9 MR. PIERCE: Objection to form
10 of the question.

11 A. I don't know.

12 Q. Can you tell us, sir, what was the maximum
13 allowable concentration for asbestos or silica dust
14 during the years that you were administratively
15 responsible for industrial hygiene?

16 A. No.

17 Q. How many plants and facilities did your
18 responsibilities involve when you were in charge of
19 industrial hygiene?

20 MR. PIERCE: Administratively? Is
21 that what you mean, Mr. Blanks?

22 MR. BLANKS: Well, that's the only
23 way he's described it. I'm not sure
24 what it means but...

25 A. Just the Midland location.

1 (By Mr. Blanks)

2 Q. So, it was the case, then, at least during
3 the years you were administratively in charge of
4 industrial hygiene that Freeport had its own
5 industrial hygiene program and that wasn't part of
6 your responsibility?

7 A. That's right.

8 Q. Would that Freeport program whenever it
9 existed have been under the toxicology laboratory
10 there?

11 A. My recollection is that it was under the
12 medical department in Texas.

13 Q. Can you tell us, sir, when during your time
14 of being administratively in charge of industrial
15 hygiene at Dow that air monitoring for mineral dust
16 was implemented?

17 A. I cannot.

18 Q. Was it done at all during the time that you
19 were administratively in charge of industrial hygiene?

20 A. I didn't participate in any. I don't know.

21 Q. Would not the people who reported to you
22 have been responsible for that?

23 MR. PIERCE: Objection to form.

24 A. Yes.

25 Q. And isn't this a matter that would have been

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1 of some interest to you as the man administratively in
2 charge of that program?

3 A. My involvement in the industrial hygiene
4 area there was administrative, and I relied on

5 Mr. Hoyle to run that operation.

6 Q. So, in fact, you don't really know what
7 year, if ever, air monitoring for asbestos dust or
8 silica dust was done in the Dow facility, do you?

9 A. No, I do not.

10 Q. Do you know when, if ever, any engineering
11 controls for dealing with these toxic mineral dusts
12 were put in place at Dow?

13 A. I do not.

14 Q. Would that have been the responsibility of
15 the industrial hygiene department that you were
16 administratively in charge of?

17 A. I am sure they would have been involved.
18 Perhaps the engineering department, as well.

19 Q. Who would have been involved in setting up a
20 biological or medical monitoring program for people
21 potentially exposed to toxic mineral dusts such as
22 asbestos or silica --

23 MR. PIERCE: Objection.

24 Q. -- in Dow facilities?

25 MR. PIERCE: Objection to form of

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1 the question.

2 A. Medical department.

3 Q. If we assume that Dow did not begin air
4 sampling for asbestos dust until some time in the
5 1960's, can you explain to us, sir, why Dow waited so
6 long to begin doing that?

7 MR. PIERCE: That's a completely

8 improper question. I object to your
9 assumption, and certainly I object to
10 the question that goes from an
11 assumption that has no basis.
12 MR. BLANKS: Well, excuse me,
13 sir. Since you don't know the prior
14 testimony in this case, I don't suppose
15 you're in a position to - to fairly
16 make that objection but --
17 MR. PIERCE: But I'm making it
18 because there's nothing here today.
19 It's not based upon anything that we
20 have before us.
21 But go ahead and try and answer
22 the question.
23 (By Mr. Blanks)
24 Q. Dr. Rowe, you'd agree with me, wouldn't you,
25 that Dow had the ability to do air monitoring for

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1 mineral dust certainly before World War II, would you
2 not?
3 A. I'm sure we had the capability someplace,
4 but I don't know what time it was established.
5 Q. And you understand that the mechanical
6 devices, the tools for air sampling for dust, were
7 available before the War, correct, sir?
8 A. I don't know.
9 Q. Did you ever learn about the availability of
10 dust sampling tools?
11 A. I know nothing about dust sampling tools.

12 Q. If we assume, sir, that it wasn't until the
13 Fifties that the first air monitoring for asbestos
14 dust was done in a Dow facility, can you explain to us
15 why it had not been done in the preceding years?

16 MR. PIERCE: I'm going to again
17 object to an assumption not based on
18 anything before us and to the question
19 that follows that thought - that
20 assumption.

21 Q. Sir?

22 A. My assumption, in answer to yours, is that
23 we didn't consider it to be a - in our operation to be
24 a significantly - significant problem.

25 Q. And by that you mean it wasn't a significant

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1 problem relative to some of the other problems that
2 you faced, some of the other chemicals you had to deal
3 with?

4 A. I didn't say that. That would have been a
5 factor, but I don't believe that - that we were too
6 concerned about the operations that we had that may
7 have been involving asbestos.

8 Q. Would it also be the case that you weren't
9 too concerned about operations involving silica?

10 A. Yes.

11 Q. It's true, though, isn't it, that certainly
12 by 1958 that Dow was aware of the long-term health
13 hazards of asbestos, correct, Mr. Rowe - Dr. Rowe?

14 A. I think that's a fair statement.

15 Q. And, in fact, your own laboratory did some
16 toxicology testing on asbestos fibers in that period,
17 did it not, 1958?

18 A. I don't know. We did some -- I don't know
19 what -- I don't know the dates.

20 Q. Well, what was the testing that you did that
21 you were thinking of there and couldn't remember a
22 date for?

23 A. We did some very preliminary work with
24 respect to particulates, using a technique that was
25 only a very preliminary evaluation of potential. And

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1 this involved the injection interperitoneally of
2 suspensions of dust and examining the animals after a
3 period of time to see what the response was.

4 Q. What decade do you remember that being done
5 in?

6 A. Pardon?

7 Q. What decade do you remember those
8 experiments being done in?

9 A. I do not remember a time. I only remember
10 one time we were involved in that sort of thing.

11 Q. Was this work done for some other company
12 or --

13 A. No.

14 Q. What led to this research at Dow?

15 A. This was done in attempting to answer a
16 question that Dow Corning had in the use of DeGussa
17 silica in one of their operations. And it was claimed
18 that DeGussa was not fibrogenic, I guess. And, so,

19 this was just a massive treatment to see if that were
20 true; and we used some materials like silica and
21 asbestos as positive controls.

22 Q. Did you see any mention of asbestos in any
23 of the documents you reviewed to prepare for your
24 deposition, Dr. Rowe?

25 MR. PIERCE: Objection to form of

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1 the question.

2 A. I didn't understand. What?

3 Q. Did you review any documents to prepare for
4 your deposition, Dr. Rowe?

5 A. I don't recollect.

6 Q. Do you recollect preparing for this
7 deposition today?

8 A. I did not prepare for this deposition. I
9 just appeared.

10 Q. So, you weren't provided with any documents
11 to look at by anybody from Dow?

12 A. No, sir.

13 Q. Was it decided while you were responsible
14 administratively for industrial hygiene at Dow to
15 cease the use of asbestos thermal insulation products
16 in Dow plants?

17 A. I don't recollect that.

18 Q. Do you recollect that any consideration was
19 given by you or your staff to finding substitutes for
20 asbestos materials in Dow plants?

21 A. Yes. We were looking for something that

22 would replace dust known to be active.

23 Q. And you would also, then, have been looking
24 for replacements for sand as an abrasive to use in Dow
25 facilities?

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1 A. I don't know for what purpose.

2 Q. Can you tell us what year that Dow ended all
3 asbestos exposures to people working in its plants?

4 MR. PIERCE: Objection to the
5 form.

6 A. I certainly cannot.

7 Q. Do you believe that at any time while you
8 were working with Dow that all asbestos exposures to
9 workers in the plants had ended?

10 A. I didn't get the end of that.

11 Q. Before you left Dow, was it the case that
12 workers in Dow plants were still facing asbestos dust
13 exposures in the plants?

14 A. I don't know.

15 Q. Is that something that you would expect your
16 industrial hygienists to have known?

17 MR. PIERCE: Objection to the
18 form.

19 A. I would expect so.

20 Q. What was done at Dow during the years you
21 were administratively responsible for industrial
22 hygiene to warn people working in your plants about
23 the hazards of toxic mineral dusts such as asbestos or
24 silica?

25 MR. PIERCE: Objection to the form

1 of the question.

2 A. I don't know.

3 Q. Who would you expect to -- to be
4 knowledgeable about that, sir?

5 A. I would expect Mr. Hoyle to know the answer
6 to that.

7 Q. Was it the policy of Dow to allow men
8 working in its plants to be exposed to harmful or even
9 deadly amounts of toxic dust, sir?

10 MR. PIERCE: Objection to form of
11 the question; argumentative, assumes
12 facts not in evidence, compound.

13 Q. Sir?

14 A. Well, philosophically you'd never want to
15 have people exposed to hazardous quantities of any
16 material.

17 Q. And was that --

18 A. But --

19 Q. -- the policy of Dow, as well as the
20 philosophy?

21 MR. PIERCE: Will you let him --

22 Excuse me.

23 I don't believe you've
24 finished your answer, Doctor. Please
25 do it.

1 A. Now I'm confused. Certainly that's a
2 philosophy, but that doesn't mean that any exposure is
3 necessarily a hazard exposure.

4 Q. And would that also be true with respect to
5 exposures to carcinogens, Dr. Rowe?

6 A. Yes. My belief, yes.

7 Q. And how do you determine what is a safe
8 level of exposure to a carcinogen such as asbestos?

9 A. Very difficult. You try to minimize. But
10 the body has a remarkable ability to accommodate when
11 you're speaking of asbestos. We've been exposed to
12 asbestos since the beginning of time.

13 Q. Was it known at Dow in 1979 when you retired
14 what a safe maximum level of exposure to asbestos was?

15 A. I don't know.

16 Q. Was it known to you, sir?

17 A. No.

18 Q. Do you know now?

19 A. No.

20 Q. Do you think it's known to toxicological
21 science today?

22 A. I don't think so.

23 Q. What was the industrial hygiene program as
24 concerned contractor employees working in Dow plants
25 during the years that you were administratively in

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1 charge of industrial hygiene?

2 A. I had nothing to do with contract
3 employees. I don't know what they did. My

4 understanding was that they were treated like the rest
5 of the Dow employees.

6 Q. That is, required to follow the same safety
7 rules and --

8 A. As far as I know.

9 Q. Was it the case at Dow that safety was
10 everybody's business in the plant?

11 A. That was our teaching.

12 Q. You have no recollection of the 1958
13 toxicology studies of asbestos short fibers done in
14 your laboratory by Dr. Olson, do you?

15 MR. ALMQUIST: I'm going to object
16 to the characterization in that
17 question that there was such a study
18 performed. I don't think there's any
19 evidence from any witness so far that
20 the study, as you've described it, was
21 performed in 1958.

22 MR. PIERCE: Objection. Join the
23 objection.

24 Q. While you were still with Dow, did you ever
25 obtain information about the incidence of

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1 pneumoconiosis diseases in workers in Dow plants, sir?

2 A. I don't recollect.

3 Q. Who was R. A. Erhart? Do you remember
4 Dr. Erhart?

5 A. Erhart?

6 Q. From the coatings technical service.

7 A. No. I don't know him.

8 Q. You remember Ken Olson, don't you, sir?
9 A. Yes.
10 Q. And Mr. McCollister?
11 A. Yes.
12 Q. Were they working for you in 1958, Dr. Rowe?
13 MR. PIERCE: I think Dr. Rowe has
14 already testified he didn't even know
15 one of them.
16 Q. Well, "they" being the two gentlemen --
17 A. Would you -- Would you repeat who you were
18 asking me about at this point.
19 Q. Yes, sir. Messrs. Olson and
20 Mr. McCollister, sir.
21 A. They worked for me, but I can't attest to
22 '58. I don't -- The time frame is...
23 Q. By 1958 you were the director of toxicology
24 research, were you not, at the - at the biochemical
25 research lab?

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1 A. If that's what it says on the --
2 Q. It does. It says 1954. And there's no
3 change until '64, so --
4 A. Okay.
5 Q. Okay. Do you remember the form that you
6 used back then titled, "Data Sheet of Properties,
7 Health hazards, and Precautions for Safe Handling of
8 Materials"?
9 A. The name is familiar.
10 Q. Well, it's sort of a forerunner of a

11 Material Safety Data Sheet in a way. Yes?

12 A. Yes.

13 Q. What use would the technical - I'm sorry -
14 the coatings technical service be making of asbestos
15 fibers at Dow in 1958, sir?

16 A. I don't know.

17 Q. Are you acquainted with any formulations for
18 floor tile that Dow worked on in the Fifties?

19 A. I'm not familiar with them.

20 Q. Did Dow, to your knowledge, ever manufacture
21 any floor tile?

22 A. Not to my knowledge.

23 Q. Would it have been making epoxy to sell to
24 others as a component of floor tile?

25 A. We made epoxies, yes.

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1 Q. Was it the practice at Dow to experiment on
2 these component parts that it was selling to others,
3 such as the epoxy and floor tile?

4 MR. PIERCE: Objection to form of
5 the question.

6 A. Floor tile would - was in a rather curious
7 situation, I would think.

8 Q. Do you know who, if anybody, from your
9 company attended Dr. Selikoff's 1964 presentation on
10 asbestos health hazards in New York, sir?

11 A. I don't know.

12 Q. You didn't get to go, apparently.

13 A. I'm not sure. I don't know.

14 Q. When was it, Dr. Rowe, that Dow began to

15 fully warn about the hazards of asbestos dust on its
16 premises?

17 A. I don't know.

18 MR. PIERCE: Objection to the form
19 of the question.

20 A. I don't know.

21 Q. When was it that Dow began to warn people on
22 its premises that asbestos could cause pleural changes
23 in the lung?

24 A. I don't know.

25 Q. When was it that Dow's industrial hygiene

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1 department or anybody else at Dow began to warn people
2 working on Dow premises that asbestos dust could cause
3 a permanent lung scarring?

4 A. I don't know.

5 MR. PIERCE: Objection to the
6 form.

7 Q. When, Dr. Rowe, did Dow begin to warn people
8 working on its premises that asbestos could cause lung
9 cancer?

10 A. I don't know.

11 Q. And when was it that Dow began to warn
12 people working on its plants that asbestos dust could
13 cause mesothelioma?

14 A. I don't know.

15 Q. Do you recall yourself learning when
16 asbestos came to be known to cause mesothelioma --

17 A. No.

18 Q. -- or suspected of it?
19 A. No.
20 Q. You've heard of that disease before, sir,
21 have you not?
22 A. I've heard of it, yes; but I don't know
23 when.
24 Q. Do you think, sir, that it would be proper
25 to begin to warn people about the health hazards of a

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1 material like asbestos at the point when you first
2 suspect the material of being toxic and causing
3 disease?
4 MR. PIERCE: Objection to the form
5 of the question.
6 A. I think any time you can - you have
7 information of that nature it's well to distribute it
8 as far as possible.
9 Q. It was not the philosophy that you had that
10 you should wait for conclusive irrefutable scientific
11 evidence of a health hazard before warning the people
12 that might be exposed to a material, was it, sir?
13 MR. PIERCE: Objection to form of
14 the question and the terminology
15 "conclusive," "irrefutable," and
16 whatever else you used there.
17 But try to answer it, if you can.
18 A. I don't -- I don't know what was said or
19 what educational programs were in that theory. It's
20 desirable, of course, to do as much as you can.
21 Q. Well, as a toxicologist, was it your

22 personal view that you should not warn about a
23 suspected health hazard until you had conclusive
24 evidence of the hazard?

25 A. Well, you have to identify the hazard; but

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1 then once it's known, certainly you should inform
2 people.

3 Q. Dr. Rowe, I have a document from among those
4 that you were kind enough to bring that you authored,
5 according to this. It's titled, "40 Years of Dow
6 Industrial Toxicology and Industrial Hygiene."

7 MR. PIERCE: Has that been marked,
8 Mr. Blanks?

9 MR. BLANKS: Well, it hasn't yet.
10 (By Mr. Blanks)

11 Q. Do you remember that paper, sir, as one you
12 would have given somewhere around 1977 or so?

13 A. I remember the paper.

14 Q. Do you remember a version of it from a year
15 earlier?

16 A. I beg your pardon.

17 Q. Do you remember one that you gave with the
18 same title a year earlier?

19 A. No. I don't -- I don't know the time
20 frame. That's --

21 Q. I found one that was titled, "39 Years of
22 Dow Industrial Toxicology and Industrial Hygiene,"
23 and then one titled "39 Years"; and they looked very
24 much alike.

25 MR. BLANKS: Do you have the other

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1 one, Mr. Hobson?

2 (By Mr. Blanks)

3 Q. So, I couldn't figure out whether you
4 started to give it one year and didn't or you dusted
5 it off and snuck it in on them again the next year.

6 MR. PIERCE: There's no question.
7 Is there a question pending?

8 MR. BLANKS: You just raised one.
9 (PLAINTIFFS' EXHIBIT 760517 DOW
10 WAS MARKED FOR IDENTIFICATION
11 PURPOSES. SAME WILL BE FOUND IN
12 THE EXHIBIT VOLUMES ATTENDANT TO
13 THIS DEPOSITION.)

14 (By Mr. Blanks)

15 Q. Let me hand you these papers, sir, that
16 this -- This first one is titled, "39 years,"
17 etcetera; and I've marked it 760517 DOW. It's said to
18 have been presented at the Dow Global Physicians
19 Meeting held at Newport, Rhode Island, May 17th of
20 '76. And the companion to it appeared to be the same
21 document with writing on it and a strike-out that
22 takes the 39 years up to 40. That's what perplexed me
23 a little. And I know your lawyer doesn't want you to
24 have your documents back but...

25 MR. BLANKS: You through reviewing

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1 his document there?

2 MR. PIERCE: Well, I certainly

3 intend to review all of the parts

4 that you've put stickums on and

5 notations, --

6 MR. BLANKS: Well, please, carry

7 on.

8 MR. PIERCE: -- which I think is

9 appropriate.

10 Q. Dr. Rowe, do you --

11 MR. PIERCE: Just permit me to do

12 that - and plus your underlinings, plus

13 your notations. I think that's

14 appropriate

15 (By Mr. Blanks)

16 Q. Do you remember giving the paper twice or is

17 that --

18 A. I don't remember giving it twice. Could

19 well have been, though.

20 Q. Okay.

21 MR. PIERCE: Are you going to mark

22 for identification the one entitled

23 "39 years," Mr. Blanks?

24 MR. BLANKS: Well, we'll see what

25 we can figure out about it.

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1 (By Mr. Blanks)

2 Q. Is the one that your lawyer is holding there

3 that's been written on, is that - is that - does that

4 carry your handwriting on there, sir?

5 A. It looks like it. Probably I cleaned up my
6 language.

7 MR. BLANKS: Well, for convenience
8 let's just connect those two and treat
9 them as one exhibit as labeled since
10 it's - It's the same type document but
11 with the written material on it.

12 MR. PIERCE: You mean you want "39
13 years" and the one "40 years" with all
14 the changes to be identified as a
15 single document?

16 MR. BLANKS: Sure. Why not?

17 MR. PIERCE: It's your choice.

18 Q. Now, I've got another typed version here,
19 Dr. Rowe, from your documents that you brought from
20 home that, as typed, says "40 Years of Dow Industrial
21 Toxicology and Industrial Hygiene" and shows you to be
22 the author of it. Would that be -- Would that be so,
23 sir?

24 MR. PIERCE: Could you hand it
25 over so that the witness can look at

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1 it; or do you expect him to read it
2 from across the room, sir?

3 MR. BLANKS: (Tendering document)

4 MR. PIERCE: Oh, I see you have
5 some stick-ons again. Have you made
6 any underlinings?

7 MR. BLANKS: Well, you can
8 probably assume that I have.

9 (By Mr. Blanks)

10 Q. Do you recall when or where you gave that
11 paper, Dr. Rowe?

12 A. No. I don't recall where, but I gave it.

13 (PLAINTIFFS' EXHIBIT 770000 DOW
14 WAS MARKED FOR IDENTIFICATION
15 PURPOSES. SAME WILL BE FOUND IN
16 THE EXHIBIT VOLUMES ATTENDANT TO
17 THIS DEPOSITION.)

18 (By Mr. Blanks)

19 Q. Okay. I've labeled that, the latter one,
20 770000 DOW for lack of a better date, inferring that
21 you did give it the year after '76; and it looks like
22 you did.

23 A. Was it the case, Dr. Rowe, that in a lot of
24 your professional writings and your professional
25 presentations that you did express your professional

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1 opinions, based on your best knowledge and beliefs and
2 the information that you had at that time that you
3 wrote them or published it?

4 MR. PIERCE: Objection to the form
5 of the question.

6 A. Yes.

7 Q. One other thing, sir: Are the handwritten
8 notes on 770000 DOW your handwriting, sir?

9 A. That's the one we just looked at?

10 Q. Yes.

11 A. No, that's not my handwriting.
12 Q. Okay. Dr. Rowe, when did somebody first
13 contact you about giving a deposition in these cases?
14 A. I don't know.
15 Q. Was it the case that somebody from Dow did
16 contact you about testifying?
17 A. They indicated this might be required.
18 Q. Do you remember who it was, sir?
19 A. I think it -- No. I'm not sure.
20 Q. Okay. Is it one of the gentlemen here with
21 us today?
22 A. I think it was -- I think it was Mr. Stuart.
23 Q. All right, sir. And what did he tell you
24 about --
25 MR. PIERCE: Objection.

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1 Objection.
2 Q. -- what was likely to be involved here?
3 MR. PIERCE: Look, I'm
4 representing Mr. Rowe here; and
5 although Dow is capable of taking care
6 of itself, certainly we're not going to
7 get into any conversations between
8 either Mr. Rowe and myself as his
9 attorney nor Dow which apparently
10 offered him up. So, let's cut this
11 business and not get to attorney-client
12 privileged areas, please.
13 MR. ALMQUIST: On behalf of Dow

14 Chemical - And I am here representing
15 Dow Chemical - I would object and raise
16 the attorney-client privilege for any
17 communications that were had with
18 Mr. Rowe as a former employee of Dow
19 concerning this lawsuit in which Dow is
20 a party.

21 Q. Then I'll repeat my question to you, sir.
22 What did people from Dow say to you about the
23 deposition say to you about the today, sir?

24 MR. PIERCE: I direct you not to
25 answer that question, Dr. Rowe.

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1 Q. I take it that you're not going to answer me
2 because this man has told you not to, sir. Is that
3 right?

4 MR. PIERCE: His lawyer has told
5 him not to answer that question, that
6 it's a privileged communication.

7 Q. Dr. Rowe --

8 MR. BLANKS: Wait. You're
9 asserting the privilege on behalf of
10 Dow, sir, are you?

11 MR. ALMQUIST: I'm asserting
12 privilege on behalf of Dow.

13 MR. BLANKS: Oh. Well, then are
14 you instructing him not to answer,
15 Mr. Almquist?

16 MR. PIERCE: I have raised the
17 attorney-client objection to this

18 communication. I believe it is a
19 privileged communication.

20 (By Mr. Blanks).

21 Q. Okay. So, Mr. Rowe, there is no issue
22 between you and your attorney, I believe, in terms of
23 privileged communications yet.

24 MR. PIERCE: I'm going to direct
25 my client not to answer things that are

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1 obviously privileged whether it's a
2 privilege between myself and Dr. Rowe
3 or in respect to Dow. What is improper
4 is improper; and I as his attorney know
5 it's improper, as you do or should.

6 MR. BLANKS: I know there's
7 something improper here, sir. We're
8 trying to get to the root of it for the
9 jury's benefit.

10 MR. ALMQUIST: I object to that
11 statement and ask that it be stricken
12 from the record as an argumentative
13 speech.

14 (By Mr. Blanks)

15 Q. Dr. Rowe, are either of these two gentlemen
16 seated on your right, Mr. Almquist or Mr. Stuart, here as
17 your attorneys today?

18 A. Are they what?

19 Q. Are they your attorneys? Have you hired
20 either of these two young lawyers to your right to

21 represent you today, sir?

22 A. No, sir.

23 Q. When did you first meet the gentleman to
24 your - to your right - I'm sorry - to your left who's
25 here as your attorney today?

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1 A. I don't remember.

2 Q. Can you tell us what his name is, sir?

3 A. His name is Stanley Pierce.

4 Q. When did you -- When did you hire Mr. Pierce
5 to represent you, sir?

6 A. I didn't.

7 Q. All right, sir. And who did hire him to
8 represent you, The Dow Chemical Company?

9 A. No, sir.

10 Q. Did anybody hire him to represent you?

11 A. I hired nobody to represent me.

12 Q. So, this gentleman is not your attorney,
13 then, sir; is that right?

14 MR. PIERCE: Did you ask that I
15 represent you here, Dr. Rowe?

16 MR. BLANKS: Excuse me, sir.
17 You'll have the opportunity to
18 cross-examine.

19 (By Mr. Blanks)

20 Q. So, you're not paying Mr. Pierce to
21 represent you?

22 A. No, sir.

23 Q. And you did not hire him?

24 MR. ALMQUIST: I'm going to object

25 to any questions as to who is paying

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1 Mr. Pierce as being improper
2 questions.

3 Q. I'm sorry. Dr. Rowe, you're not paying this
4 gentleman to be here as your attorney, are you, sir?

5 MR. PIERCE: I direct him not to
6 answer that.

7 A. Yes.

8 Q. Do you understand, sir, that Dow Chemical
9 may be paying this man to appear here? Sir?

10 A. It was my understanding.

11 Q. Okay. Do you also understand that this
12 Mr. Pierce is a - frequently an attorney who
13 represents - or frequently represents Dow Chemical
14 Company in litigation?

15 A. I know he has.

16 Q. And do you know that - what city he's from?

17 A. Yes.

18 Q. He's from New York, isn't he?

19 A. Yes.

20 Q. Do you know how you came to make his
21 acquaintance at all?

22 A. No.

23 Q. Are you being hired by Dow to be a
24 consultant in any of this litigation we're here to
25 testify about today?

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1 A. I presume so.
2 Q. Have you made an arrangement with them to
3 pay you for your time, sir?
4 A. They have offered to do that.
5 Q. Are you going to let them do that?
6 A. Yes.
7 Q. And how much are they paying you for your
8 time?
9 A. I would believe that would be a personal
10 question that is probably not anybody's business.
11 Q. Well, you know, I might be inclined to agree
12 with you; but nonetheless the jury has a right, I
13 think, to know what you're being paid by Dow to
14 consult with them, sir.
15 A. There have been no agreements made.
16 Q. So, you haven't given them any figure; and
17 they haven't suggested one?
18 A. Pardon?
19 Q. You haven't told them - given them a rate,
20 and they haven't suggested one?
21 A. I have not.
22 Q. You're still receiving a pension from Dow,
23 are you not?
24 A. Yes.
25 Q. Do you own any Dow stock?

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1 A. Yes.
2 Q. Okay. How much?

3 MR. PIERCE: Look, I'm going to --
4 I'm going to direct you not to answer.
5 I don't see what the relevancy
6 is. He told you he owns Dow stock.
7 That's sufficient. I think we're going
8 way overboard in asking him those kinds
9 of things about his personal finances.
10 You really have the information you
11 need when you know he owns some Dow
12 stock.

13 MR. BLANKS: You know, that
14 thought just occurred to me, too.

15 (By Mr. Blanks)

16 Q. My apologies, Dr. Rowe. Dr. Rowe, I'd like
17 you to tell me about the conversations you've had with
18 Mr. Pierce concerning this litigation and this
19 deposition.

20 MR. PIERCE: I direct you not to
21 answer as attorney-client privilege.

22 MR. BLANKS: Dr. Rowe has already
23 stated you are not his attorney, sir.
24 You may be Dow's attorney but you are
25 not in a position to instruct this

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1 witness and you do so at Dow's peril,
2 sir.

3 MR. PIERCE: No. I'm going to
4 instruct this witness. This witness
5 has specifically asked for me to
6 represent him here. And because you've

7 confused him in some of the questions,
8 I'm not going to change that
9 relationship. I direct the witness not
10 to answer that question.

11 (By Mr. Blanks)

12 Q. Dr. Rowe, are you refusing, then, sir, to
13 tell me about what Mr. Pierce told you to say or not
14 say or what might be asked or not asked in this
15 deposition?

16 MR. PIERCE: I object. I direct
17 the witness not to answer, and I also
18 object to your saying anything in
19 respect to what I've told the witness
20 to say as outrageous statement on your
21 part.

22 Q. Dr. Rowe, when did you learn that Dow was
23 going to arrange for this New York lawyer to appear
24 here at this deposition allegedly to represent you,
25 sir?

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1 MR. PIERCE: Well, first of all,
2 I'd like to object to the
3 characterization of me as a "New York
4 lawyer." I certainly am familiar with
5 Dr. Rowe. Dr. Rowe asked that I
6 represent him. And I am not a New York
7 City lawyer, just - just for your own
8 edification, Mr. Blanks.

9 Q. Sir, are you going to answer me or not?

10 MR. PIERCE: Let's hear that
11 question again, please.
12 Q. The question was, when did you learn that
13 Dow had arranged for Mr. Pierce to appear here at this
14 deposition for you, sir? - to be with you.
15 A. I believe it was on Monday this week.
16 Q. And you hadn't asked to have an attorney
17 represent you at the deposition, had you, sir?
18 A. I expected to have an attorney representing
19 me, yes.
20 Q. And did you expect Dow to provide one of
21 their lawyers to represent you?
22 A. I didn't know how they were going to handle
23 it. I'm only an instrument.
24 Q. All right, sir.
25 MR. HOBSON: We need to change the

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1 tape (directed to Mr. Blanks).
2 MR. BLANKS: Okay. Change --
3 MR. PIERCE: Wait. Leave
4 that -- Are you -- Is that the end of
5 the tape now? Leave it on for a
6 second.
7 If that is the end of the tape,
8 let me say that this deposition is now
9 concluded. You've had the amount of
10 time agreed upon. And with all due
11 respect and admiration which I happen
12 to have for Herschel Hobson: This has
13 been a travesty these two days of
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14 irrelevancies and redundancies and
15 constant asking of leading and compound
16 questions; and we have now concluded
17 this matter.

18 (By Mr. Blanks)

19 Q. Dr. Rowe, are you available to continue
20 tomorrow or Monday, sir?

21 MR. PIERCE: Dr. Rowe is not
22 continuing. This deposition is at an
23 end right now. Thank you. You can go
24 to the Court for relief.

25 MR. BLANKS: Mr. Almquist, are you

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1 going to terminate this deposition at
2 this point?

3 MR. ALMQUIST: I believe that the
4 deposition has been terminated.

5 MR. BLANKS: We are prepared to
6 continue pursuant to the notice either
7 tomorrow or on Monday at Dr. Rowe's
8 convenience and would like to know what
9 your pleasure is.

10 MR. ALMQUIST: I will be in trial
11 in Conroe, Texas, on Monday,
12 Mr. Blanks. So, my pleasure has been
13 preordained.

14 Q. Dr. Rowe, will you --

15 MR. PIERCE: Come (directed to the
16 witness).

17 Q. -- be available, sir, at some --

18 MR. PIERCE: Let's go, Dr. Rowe.

19 Q. -- point in time...

20 (AT THIS TIME MR. PIERCE AND THE
21 WITNESS LEAVE THE ROOM.)

22 MR. BLANKS: Let the record
23 reflect that Mr. Pierce, the New York
24 lawyer, has instructed Dr. Rowe, who
25 has said he is not represented by

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1 Mr. Pierce, to leave the deposition and
2 walk out without answering the
3 questions; that counsel present are
4 prepared to either continue at this
5 time, depending upon the comfort and
6 convenience of Dr. Rowe, or to continue
7 tomorrow morning at his pleasure or on
8 Monday or at such time as soon
9 thereafter as is convenient to the
10 witness; and that all other parties are
11 present - remain present and apparently
12 are awaiting their opportunity to
13 cross-examine this witness.

14 Mr. Almquist, is it the position
15 of Dow Chemical that Dr. Rowe --

16 MR. ALMQUIST: I have nothing to
17 say on the record, Mr. Blanks. You can
18 understand --

19 MR. BLANKS: I'm sorry. Sir?

20 MR. ALMQUIST: I have nothing more

21 to say on the record.

22 MR. BLANKS: Well, it's my
23 understanding that you had presented
24 this man and requested us not to have
25 him served with a subpoena, which we

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1 were certainly happy to do, based upon
2 your representation that he would be
3 available, that we were going to limit
4 the time we spent each day to a couple
5 hours in the morning and in the
6 afternoon because of the gentleman's
7 reputed ill health and his admitted
8 age. And we have done that out of
9 consideration to him. And we want to
10 finish our deposition. And as you
11 tendered him voluntarily and
12 courteously, we think we're entitled to
13 an answer on what your intentions are
14 as to the completion of this
15 deposition.

16 MR. ALMQUIST: And I have nothing
17 more to add at this point, Mr. Blanks.
18 I'm not going to get into a discussion
19 like this on the record.

20 MR. BLANKS: Mr. Stuart, you are
21 here as a counsel for Dow. I beg you
22 for some indication of what Dow's
23 intentions are with respect to the

24 conclusion of this gentleman's
25 deposition, sir.

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1 MR. STUART: (No response)

2 MR. BLANKS: We're respectful of
3 his time and his condition if, indeed,
4 he does have a health problem; but
5 we've relied on the representations of
6 your counsel and through him of your
7 company to appear under these
8 circumstances and on this schedule.

9 MR. ALMQUIST: The representations
10 of which you speak, I believe, are
11 probably in writing and will speak for
12 themselves; so, needless to say, I
13 think we can stop this young lady's
14 incessant work on the keyboard at this
15 point.

16 MR. BLANKS: Then I take it
17 Mr. Stuart has no comment; and I'd
18 like the record to reflect that, as
19 well.

20 For the record, I want to attach
21 the remaining documents that were
22 brought to the deposition in response
23 to the subpoena duces tecum; and we'll
24 take this opportunity to go through
25 them and describe them with the labels

1 that we've placed on them.

2 Mr. Hobson, do you have those
3 papers?

4 MR. HOBSON: Yes.

5 MR. BLANKS: And I also would
6 suggest to Mr. Almquist that if we
7 can't resolve this amicably that we
8 will be forced to go before the Court
9 and regretfully ask for sanctions and
10 expenses in connection with this,
11 particularly with the flagrant
12 misconduct of - what appears to be that
13 of the outside counsel Dow has hired
14 here who purports to represent
15 Mr. Rowe.

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18 (PLAINTIFFS' EXHIBIT 760600 DOW
19 WAS MARKED FOR IDENTIFICATION
20 PURPOSES. SAME WILL BE FOUND IN
21 THE EXHIBIT VOLUMES ATTENDANT TO
22 THIS DEPOSITION.)

23 We've labeled as Document 760600
24 DOW the --

25 MR. HOBSON: Can we do without the

1 video recording?

2 MR. BLANKS: Yes. We'll turn off
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3 the video now so we can get through
4 this business.

5 -- (continuing) the document
6 brought by Dr. Rowe titled, "A
7 historical Account of Dow's
8 Environmental Stewardship," by Eugene
9 E. Kenega, K-e-n-e-g-a, said to be from
10 an internal report of Dow Chemical
11 U.S.A., comma, June 1976.

12 (PLAINTIFFS' EXHIBIT 740000 WHO
13 546 WAS MARKED FOR IDENTIFICATION
14 PURPOSES. SAME WILL BE FOUND IN
15 THE EXHIBIT VOLUMES ATTENDANT TO
16 THIS DEPOSITION.)

17 We've labeled as Exhibit 740000
18 WHO 546 a document brought by Dr. Rowe
19 entitled, "Assessment of the
20 Carcinogenicity and Mutagenicity of
21 Chemicals," said to be the report of a
22 W.H.O., World Health Organization,
23 scientific group from 1974 and being
24 four pages in length.

25 (PLAINTIFFS' EXHIBIT 780814 DOW,

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1 WAS MARKED FOR IDENTIFICATION
2 PURPOSES. SAME WILL BE FOUND IN
3 THE EXHIBIT VOLUMES ATTENDANT TO
4 THIS DEPOSITION.)

5 Labeled as Exhibit 780814 DOW, a

6 document titled, "'Clinical Toxicology'
7 Viewed from an Industrial Setting," by
8 P. J. Gehring, G-e-h-r-i-n-g, of the
9 Toxicology Research Laboratory, Health
10 and Environmental Research, Dow
11 Chemical Company in Midland, Michigan,
12 being a symposium on clinical
13 toxicology apparently presented at the
14 Joint Fall Meeting of the American
15 Society of Pharmacology and
16 Experimental Therapeutics and Society
17 of Toxicology, Houston, Texas,
18 August 14th, 1978, bearing some
19 handwritten notes of unknown origin but
20 likely of Dr. Rowe.

21 (PLAINTIFFS' EXHIBIT 790518 DOW
22 WAS MARKED FOR IDENTIFICATION
23 PURPOSES. SAME WILL BE FOUND IN
24 THE EXHIBIT VOLUMES ATTENDANT TO
25 THIS DEPOSITION.)

1 Exhibit 790518 DOW is a document
2 titled, "Dedication Address,"
3 Northwestern University Cancer Center,
4 by Philip Handler, President of the
5 National Academy of Sciences, on
6 May 18th, 1979, showing it was received
7 at C.M.S.A. on July 16th of 1979, and
8 indicating carbon copies to a variety
9 of persons on the front page and having
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10 some underlines at different places in
11 the text as it was given to us by
12 Dr. Rowe yesterday afternoon.

13 (PLAINTIFFS' EXHIBIT 740919 DOW
14 WAS MARKED FOR IDENTIFICATION
15 PURPOSES. SAME WILL BE FOUND IN
16 THE EXHIBIT VOLUMES ATTENDANT TO
17 THIS DEPOSITION.)

18 Labeled as Plaintiffs' Exhibit
19 740919 DOW is a document titled, "Some
20 Basic Concepts of Toxicology and Some
21 Thoughts about the Development and Use
22 of Toxicological Information," authored
23 by V. K. Rowe as director,
24 Toxicological Affairs, Health and
25 Environmental Research, Dow Chemical

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1 U.S.A. And at the bottom of this page,
2 it notes that it was for presentation
3 at the National Paint and Coatings
4 Association Meeting at The Homestead,
5 Hot Springs, Virginia, September 19th,
6 1974.

7 (PLAINTIFFS' EXHIBIT 751021 DOW
8 WAS MARKED FOR IDENTIFICATION
9 PURPOSES. SAME WILL BE FOUND IN
10 THE EXHIBIT VOLUMES ATTENDANT TO
11 THIS DEPOSITION.)

12 Labeled as Plaintiffs'

13 Exhibit 751021 DOW is a document
14 titled, "Concerns of Industry Related
15 to Carcinogenic Hazards," authored by
16 P. J. Gehring, D.V.M., Ph.D., and V. K.
17 Rowe, Sc.D. It appears this paper, as
18 adapted by V. K. Rowe for presentation
19 at the Sixth Annual Conference on
20 Environmental Toxicology was presented
21 at a meeting held at the Biltmore
22 Towers Hotel in Dayton, Ohio, on
23 October 21st through 23rd, 1975, notes
24 the original paper in its entirety was
25 presented by P. J. Gehring at the

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1 National Meeting of Comprehensive
2 Cancer Centers of the United States, at
3 Duke, in Durham on April 10th, 1975.

4 MR. ALMQUIST: Not having seen the
5 document, to the extent that there is
6 editorial comments added by Mr. Blanks,
7 I would object to those and state that
8 the document will speak for itself.

9 MR. BLANKS: The face of the
10 document certainly speaks for itself;
11 but I thought for your convenience,
12 Mr. Almquist, I'd have a little excerpt
13 from the face of it in the text so you
14 wouldn't have to go looking for it in a
15 long volume.

17 1594 WAS MARKED FOR IDENTIFICATION
18 PURPOSES. SAME WILL BE FOUND IN
19 THE EXHIBIT VOLUMES ATTENDANT TO
20 THIS DEPOSITION.)

21 Labeled as Plaintiffs'
22 Exhibit 780000 NIH is a photocopy of a
23 booklet Dr. Rowe brought from his
24 personal files entitled, "Asbestos
25 Exposure: What It Means, What To Do,"

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1 and appearing on its face to be a
2 Department of Health, Education, and
3 Welfare Publication No. (NIH) 78-1594.

4 Let's change this exhibit number
5 to 780000 NIH 1594 to be consistent
6 with the title that's been put on it.

7 (PLAINTIFFS' EXHIBIT 780421
8 WAS MARKED FOR IDENTIFICATION
9 PURPOSES. SAME WILL BE FOUND IN
10 THE EXHIBIT VOLUMES ATTENDANT TO
11 THIS DEPOSITION.)

12 Plaintiffs' Exhibit 780421 DOW is
13 titled, "Overview -- Science Society
14 and Health Risk Control," authored by
15 V. K. Rowe and, according to the
16 document, was presented at the American
17 Bar Association Institute Program on
18 Law, Science, and Technology and Health
19 Risk Regulation April 20th and 21st at

20 the Mayflower Hotel, Washington, D.C.
21 (PLAINTIFFS' EXHIBIT 780900 NIOSH
22 WAS MARKED FOR IDENTIFICATION
23 PURPOSES. SAME WILL BE FOUND IN
24 THE EXHIBIT VOLUMES ATTENDANT TO
25 THIS DEPOSITION.)

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1 Plaintiffs' Exhibit 780900 NIOSH
2 is a two-page excerpt from a document
3 titled, "NIOSH/OSHA Pocket Guide to
4 Chemical Hazards," brought by Dr. Rowe
5 from his personal library and appearing
6 on its face to have been published in
7 September of 1978 by the U.S.
8 Department of Health Education and
9 Welfare and the U.S. Department of
10 Labor.

11 MR. HOBSON: Mr. Almquist told us
12 that he copied only the first couple of
13 pages of this because it was in the
14 public domain.

15 (PLAINTIFFS' EXHIBIT 790423 C&EN
16 WAS MARKED FOR IDENTIFICATION
17 PURPOSES. SAME WILL BE FOUND IN
18 THE EXHIBIT VOLUMES ATTENDANT TO
19 THIS DEPOSITION.)

20 MR. BLANKS: The next is
21 Plaintiffs' Exhibit 790423 C&EN, being
22 pages 23 through 50 of what would
23 appear to be articles from the
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24 publication Chemical and Engineering
25 News.

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1 (PLAINTIFFS' EXHIBIT 790900 DOW
2 WAS MARKED FOR IDENTIFICATION
3 PURPOSES. SAME WILL BE FOUND IN
4 THE EXHIBIT VOLUMES ATTENDANT TO
5 THIS DEPOSITION.)

6 The next document is Plaintiffs'
7 Exhibit 790900 DOW titled, "Industrial
8 Hygiene - Truly an Interdisciplinary
9 Science, authored by V. K. Rowe, and
10 appearing in the American Industrial
11 Hygiene Association Journal in 1979.

12 (PLAINTIFFS' EXHIBIT 791004 DOW
13 WAS MARKED FOR IDENTIFICATION
14 PURPOSES. SAME WILL BE FOUND IN
15 THE EXHIBIT VOLUMES ATTENDANT TO
16 THIS DEPOSITION.)

17 Plaintiffs' Exhibit 791004 DOW is
18 the document brought by Dr. Rowe,
19 titled, "Environmentally Induced
20 Cancer... Separating Truth from Myth,"
21 appearing to be a talk by Dr. Harry
22 Demopoulos of the New York University
23 Medical Center, presented to the
24 Synthetic Organic Manufacturers
25 Chemical Association October 4th, 1979,

1 in Hasbrouck Heights, New Jersey.

2 (PLAINTIFFS' EXHIBIT 801013 DOW
3 WAS MARKED FOR IDENTIFICATION
4 PURPOSES. SAME WILL BE FOUND IN
5 THE EXHIBIT VOLUMES ATTENDANT TO
6 THIS DEPOSITION.)

7 Plaintiffs' Exhibit 801013 DOW is
8 a ten-page set of papers stapled
9 together, as it was produced by the Dow
10 attorneys, bearing on the cover page a
11 date of October 13th, 1980, on a Dow
12 letterhead, and being a letter from
13 John R. Venable, V-e-n-a-b-l-e, M.D.,
14 to Peter F. Infante, I-n-f-a-n-t-e, at
15 the U.S. Department of Labor,
16 Occupational Health and Safety
17 Administration, followed by other
18 correspondence, a photocopy of an item
19 from a newspaper, and a two-page item
20 from some other publication, the
21 Current Report from the B.N.A.; and,
22 finally, a photocopy of a form bearing
23 the title "Who's Who in Science and
24 Engineering" with what would appear to
25 be a signature of V. K. Rowe, dated

1 6-29-91, and setting out apparently his

2 professional credentials.

3 MR. ALMQUIST: And let me just say
4 on the record that Mr. Blanks
5 characterized that as a document
6 produced by Dow's attorneys. That was
7 a document that Mr. Rowe had provided
8 in response to the subpoena duces
9 tecum. It's not being produced by Dow
10 or Dow's attorneys.

11 MR. BLANKS: Well, my apologies.
12 It was, in fact, handed to me by the
13 Dow attorney; and I understood it to be
14 produced by Mr. Rowe, as Mr. Almquist
15 stated.

16 And to be certain, we've marked
17 as Exhibit 141005 ROWE V. K. the
18 curriculum vitae brought by Dr. Rowe.

19 (PLAINTIFFS' EXHIBIT 810000 FCT
20 WAS MARKED FOR IDENTIFICATION
21 PURPOSES. SAME WILL BE FOUND IN
22 THE EXHIBIT VOLUMES ATTENDANT TO
23 THIS DEPOSITION.)

24 Exhibit 810000 FCT is a collection
25 of material brought by Dr. Rowe that is

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1 titled, "Twenty Years of Toxicology,"
2 and indicates contents of various
3 articles on the topic of toxicology,
4 not all of which are included in the
5 package, but most of which are.

6 (PLAINTIFFS' EXHIBIT 801100 ACSH
7 WAS MARKED FOR IDENTIFICATION
8 PURPOSES. SAME WILL BE FOUND IN
9 THE EXHIBIT VOLUMES ATTENDANT TO
10 THIS DEPOSITION.)

11 Plaintiffs' Exhibit labeled as
12 801100 ACSH is a photocopy Dr. Rowe
13 brought of what appears to be an issue
14 of the American Council on Science and
15 Health News and Views shown to be a
16 addressed to Dr. John A. Zapp, Jr., a
17 consultant in toxicology and industrial
18 hygiene in Kennett Square,
19 Pennsylvania, and showing on its face
20 to be Volume I, No. 6, from November
21 and December of 1980 of News and
22 Views.

23 (PLAINTIFFS' EXHIBIT 820200 OH&S
24 WAS MARKED FOR IDENTIFICATION
25 PURPOSES. SAME WILL BE FOUND IN

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1 THE EXHIBIT VOLUMES ATTENDANT TO
2 THIS DEPOSITION.)

3 Plaintiffs have labeled as
4 Exhibit 820200 OH&S, being pages 30
5 through 34 of what appears to be the
6 February 1982 issue of a publication
7 called Occupational Health and Safety.
8 And the article is entitled,

9 "Untangling the Asbestos Mess."

10 MR. HOBSON: I'm trying to catch a
11 plane.

12 MR. BLANKS: Are you leaving me?
13 Well, okay. It's been nice seeing you,
14 Herschel. Stop around some time.

15 (PLAINTIFFS' EXHIBIT 840209 NIOSH
16 WAS MARKED FOR IDENTIFICATION
17 PURPOSES. SAME WILL BE FOUND IN
18 THE EXHIBIT VOLUMES ATTENDANT TO
19 THIS DEPOSITION.)

20 Plaintiffs' have labeled as
21 Exhibit 840209 NIOSH a document brought
22 by Dr. Rowe titled, "Current
23 Intelligence Bulletin 41," on
24 1,3-Butadiene, appearing to be
25 published by the U.S. Department of

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1 Health and Human Services.

2 (PLAINTIFFS' EXHIBIT 841017 DOW
3 WAS MARKED FOR IDENTIFICATION
4 PURPOSES. SAME WILL BE FOUND IN
5 THE EXHIBIT VOLUMES ATTENDANT TO
6 THIS DEPOSITION.)

7 Labeled as Plaintiffs'
8 Exhibit 841017 DOW is a document
9 brought by Dr. Rowe, titled,
10 "Toxicology in Michigan Today, Risk
11 Assessment in Toxicology: Yesterday,
12 Today and Tomorrow," with a date of
Page 305

13 October 17th, 1984, and showing on the
14 program within a presentation by
15 Dr. Verald K. Rowe titled, "From the
16 Past: Experience in Toxicological
17 Hazard Evaluation," followed by
18 material prepared on a typewriter and
19 with handwritten notes thereon.

20 (PLAINTIFFS' EXHIBIT 841018 DOW
21 WAS MARKED FOR IDENTIFICATION
22 PURPOSES. SAME WILL BE FOUND IN
23 THE EXHIBIT VOLUMES ATTENDANT TO
24 THIS DEPOSITION.)

25 Plaintiffs' Exhibit 841018 DOW is

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1 a document produced by Dr. Rowe titled,
2 "'Experimentation, Experience, and the
3 Media,'" a Symposium of Media, Science,
4 Industry and Public Officials," held in
5 Midland, Michigan, on October 18th,
6 1984, sponsored by The Dow Chemical
7 Company and indicating the subjects on
8 which talks were given and appearing to
9 contain three pages listing symposium
10 attendees including V. K. Rowe and
11 other Dow Chemical Company employees.

12 So, I would ask that you attach
13 all of these, Ms. Reporter, as exhibits
14 to the deposition arranging them in the
15 numerical order in which they've been

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MR. ALMQUIST: And we will probably have substantive objections to some of those in terms of their being hearsay in nature. I just want to preserve that for the record.

I just would point out that I'm still here, the attorney for Dow Chemical, at the conclusion of the record here today.

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Mr. Blanks, I believe that you will find in your files a letter from me where on behalf of Dow we agreed to make Mr. Rowe available on October 1st and 2nd for two hours in the morning and two hours in the afternoon. We've not retained Mr. Rowe as an expert witness in this case to give trial testimony. We are seeking his testimony as a fact witness. We have agreed to compensate him for his time to come here today to give that testimony. Beyond that we have no control over Mr. Rowe, and we have been informed in no uncertain terms that Mr. Rowe has an attorney, Mr. Pierce. And Mr. Pierce will not listen to what we have to say.

MR. BLANKS: Well, I do not have

20 any knowledge of the letter, although I
21 certainly can't imagine that you would
22 misspeak about its contents. And the
23 matter of Mr. Pierce remains, of
24 course, to be brought before the Court,
25 and likely will be. Thank you for your

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1 courtesy and your silence.
2 Are we are off the record now?
3 Do you have anything to say?
4 MR. RUSSELL: No. Just that I'm
5 also still here and that I object to
6 the early termination without any
7 notice or opportunity for people to ask
8 questions and that if the matter is
9 brought before the Court, I'd like to
10 request that whoever is sanctioned will
11 have to pay for all of us to come back
12 out here and resume the deposition.

13 I'm leaving.

14 MR. BLANKS: Good bye.

15 Okay, guys.

16 (AT THIS TIME, APPROXIMATELY,
17 3:05 P.M., THE PROCEEDINGS OF
18 OCTOBER 2, 1992, WERE CONCLUDED.)
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1 THE STATE OF ARIZONA

2 COUNTY OF :

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4 I, VERALD K. ROWE, hereby certify that I
5 have read the foregoing transcript of my testimony
6 given in the foregoing numbered and styled case, and
7 that same is true and correct to the best of my
8 knowledge and belief.

9 I further certify that any and all
10 corrections have been made on a separate page and
11 initialed by me.

12 This day of , 19 .

13

14

15 VERALD K. ROWE

16 SWORN TO AND SUBSCRIBED BEFORE ME this

17 day of , 19 .

18

19 NOTARY PUBLIC

20 My Commission Expires:

21

22

23

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1 THE STATE OF TEXAS :

2 COUNTY OF JEFFERSON:

3 I, SANDRA S. SULLIVAN, a Certified Shorthand
4 Reporter for the State of Texas, hereby certify
5 pursuant to the Texas Rules of Civil Procedure and/or
6 agreement of the parties present to the following:

7

8 That this deposition transcript is a true
9 record of the testimony given by Verald K. Rowe, the
10 Witness named herein, on October 1, 1992, and
11 October 2, 1992, after said Witness was duly sworn by
12 me.

13

14 SWORN TO AND SUBSCRIBED by me on the
15 23rd day of October, 1992.

16

17

18 SANDRA S. SULLIVAN, CSR, RPR

19 Certification No.: 2411
20 Expiration Date: 12-31-93

21 Business Address: Charlotte Smith Reporting, Inc.
22 235 Orleans
23 Beaumont, Texas 77701

24 Telephone: (409) 839-4407

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