

FILE NAME: Garlock (GAR)

DATE: 1986 Dec 4

DOC#: GAR001

DOCUMENT DESCRIPTION: Legal - Deposition of George Ellwood Houghton with Handwritten Notes

Elwood Houghton

12. plant engr. in ash. textiles worked for J-M in Manville
1927-1939
13. they used respirators in dustier areas
- 25 describes use of local exhaust vent. on carding equip.
- 27 K & M poorer dust control than J-M; R-M $\approx$ J-M
- 33 Went to Garlock in Palmyra NY 1939 - mfg. gaskets, plys, cloth
- 35 Garlock had started in the 1880's
- 36 used crocidolite in some gaskets for chem. resistance
- 39 dust control better at Garlock than J-M
- 40 Garlock used respirators for maintenance work, handling A fiber
- 48 Was unaware of 1940's gov't inspection recommendations re dust control
- 64 G.H. operated dust sampling & performed analyses.
- 78-79 (not sure if he ever saw warning labels) worked there until 1970
and consulted for Garlock until 1979. Unaware of any brochure
warnings to employees
- 79 Garlock has plants in France, Philippines & Spain
- 82-83 Attended 1956 ATI mtg. where K.W. Smith discussed Huper writings/Ca
- 89 Generally got ATI minutes 1 mo. after mtgs. & read minutes
Can't recall health discussions in 1956 or when he first
heard of A $\rightarrow$ Ca
- 90 recalls 1957 W. comp. claim by Grace Baylord for asbestosis.
- 92 attended ATI mtgs. 1956-1970 & rarely missed one.
- 100 rubber "carrier" material in gaskets would deteriorate before the A
- 105 Glasser refers to 1977 decision to put warnings on gaskets,
by Garlock's "product liability committee"

WITNESS CERTIFICATION

I, GEORGE ELWOOD HOUGHTON, do hereby certify that I have read the transcript of my testimony taken under oath on the 4th day of December, 1986;

that my testimony in the transcript herewith, pages 1 through 109 is a true, complete and correct record of what was asked, answered and said during the deposition;

and that the answers on the record as given by me are true and correct, except for anything duly noted on the attached errata sheet.

GEORGE ELWOOD HOUGHTON

Subscribed and sworn to before me
this ____ day of _____. 1986.

NOTARY PUBLIC

My Commission Expires:

March ___, 19__.

Garlock

CIRCUIT COURT OF THE CITY OF CHESAPEAKE, VIRGINIA

WILLIAM STACEY OVERBY,

Plaintiff,

versus

Docket No.

20555-M

GARLOCK INC. <

Defendant.

ELLWOOD

Deposition of GEORGE ~~ELLWOOD~~ HOUGHTON, held at 516 West Main Street, Palmyra, New York on December 4, 1986, commencing at 10:00 a.m.

APPEARANCES: GLASSER and GLASSER, ESQS.
Suite 400
125 St. Paul Boulevard
Norfolk, Virginia 23510
Appearing on behalf of the Plaintiff
By: RICHARD S. GLASSER, ESQ., of Counsel

DUANE and SHANNON, ESQS.
The Joynes House
209 West Franklin Street
Richmond, Virginia 23220
Appearing on behalf of the Defendant
By: JAMES C. SHANNON, ESQ., of Counsel

ALSO PRESENT: BERNARD L. LEVINthal, ESQ.
HELEN ZORNOW

REPORTED BY: CAROL P. RAES
Midtown Reporting Service
1100 Times Square Building
Rochester, New York 14614
(716) 325-2130

Midtown Reporting Service
501 Times Square Building
Rochester, New York 14614



I N D E X T O W I T N E S S E S

GEORGE ELWOOD HOUGHTON

Examination by Mr. Glasser	3 - 106
Examination by Mr. Shannon	106 - 107

I N D E X T O E X H I B I T S

<u>EXHIBIT NO.</u>	<u>DESCRIPTION</u>	<u>MARKED</u>
1	Four-page document; first page reading "Mr. Bristol" and "Important"	49
2	Asbestos Textile Institute minutes of June 19, 1946 meeting	59
3	March 13, 1946 Dust Control Meeting minutes	64
4	June 13, 1946 Dust Control Committee minutes	67
5	85 pages of documents; first document being "Report Preliminary Dust Investigation For Asbestos Textile Institute, June 1947"	75
6	Minutes of March 8, 1956 meeting of Asbestos Textile Institute	81
7	Minutes of March 7, 1956 meeting of Asbestos Textile Institute	81

MR. SHANNON:

There is one stipulation. I'll read it from a letter of September 5 to me from Robert Hatton. Paragraph 4 of that letter states, "The deposition of George ^{Ellwood}~~Elwood~~ Houghton will proceed at a time and place convenient to Garlock and the witness, within three weeks of this date and, of course, we have by agreement abrogated that particular date requirement. And upon completion of such deposition, it shall be placed under seal and not be used under evidence except in cases in which the law firms of Glasser and Glasser or Patten, Wornom and Watkins are counsel of record. This deposition will be noticed in a case in which Garlock is the only defendant and no defense counsel shall attend the deposition other than Garlock's counsel. However, in the event that such deposition reveals information which would be relevant and material to the liability of other defendants in asbestos products liability litigation, then in that event, Garlock agrees that the deposition may be

1 renoticed to permit defense counsel an
2 opportunity to participate in the deposition
3 and have it in a form that would be
4 admissible in litigation in which other
5 defendants were involved."

6 As a follow up to that letter of
7 September 5, I responded to Bobby Hatton on
8 September 18, and the following portion of my
9 letter of September 18 is also pertinent to
10 the taking of this deposition. "Also, I
11 understand that your agreement not to use
12 this deposition other than in a case in which
13 you are counsel of record refers to your
14 involvement as counsel who originated a
15 particular plaintiff's case. We do not
16 understand," we, being Garlock, "that we have
17 agreed that you are eligible to be associated
18 in other plaintiffs' lawyers' cases around
19 the country and use your status as counsel of
20 record to offer this deposition against
21 Garlock therein." So under those terms and
22 conditions we're here today to proceed with
23 Mr. Houghton's deposition.

1 MR. GLASSER: If I may make a preliminary comment,
2 as Jim Shannon is well aware, I am associated
3 with Bobby Hatton, and I am aware of both
4 Bobby's letter of September 5, 1986 and Jim
5 Shannon's response of September 18, 1986,
6 both of which you have accurately reported to
7 the record. I do want to make sure that my
8 feelings are known that the letter of
9 September 5, 1986 confirmed a settlement that
10 was made in ten cases in which Garlock was a
11 defendant. These ten cases were either
12 handled by my office or by Bobby Hatton's
13 office or by our offices jointly, and they
14 were pending either in the state of Virginia
15 or in the state of Texas. The provision
16 concerning Mr. Houghton's deposition and that
17 it be placed under seal and other provisions
18 calling for basically a temporary moratorium
19 in discovery were requested by Garlock, were
20 a part and parcel of the settlement
21 procedure, and as Jim has consented to so
22 that we could in fact resolve the differences
23 for the ten plaintiffs that we were

1 representing. They were consented to by the
2 plaintiffs; myself, included. I make this
3 statement because I'm not in favor of sealed
4 depositions. It was not my desire that it be
5 placed under seal, but it was, as Jim
6 reported, a part of the discussions that
7 ended with the resolution of ten cases. With
8 that comment, I'm prepared to proceed and I
9 would ask you please to swear the witness.

10 MR. SHANNON: We're reserving all objections except
11 as to the form of the question.

12 MR. GLASSER: That's correct.

13
14 G E O R G E ^{ELLWOOD} ~~E L W O O D~~ H O U G H T O N , called herein
15 as a witness, having first been duly sworn, was examined
16 and testified as follows:

17
18 EXAMINATION BY MR. GLASSER:

19 Q Before I ask you any formal questions, I just wanted to
20 let you hear my voice a little bit as I will be talking
21 to you once the formal questioning starts to make sure
22 that you can hear me and understand me. Do you
23 understand?

1 A Yes.

2 Q I notice that you're wearing two --

3 A I have it in both ears, yes.

4 Q -- two hearing aides, and you have told me before the
5 deposition started you might need questions repeated,
6 so if at any time you don't understand my question or
7 I'm not clear, please don't hesitate to ask me to
8 repeat or to rephrase.

9 A I won't.

10 Q And if at any time you want to take a break or a rest
11 for whatever reason, if you will tell us we will
12 promptly do so.

13 A Yes.

14 Q And we have here with us today at everyone's request
15 Helen Zornow who is a nurse and she'll also be looking
16 out for you.

17 THE WITNESS: You can see my eyes, all right?

18 MRS. ZORNOW: Yes.

19 Q You're comfortable and you're ready to begin?

20 A I'm relaxed.

21 Q Thank you, sir. Just so the record will be clear, Mr.
22 Houghton, would you state your full name?

23 A My full is name is George Elwood, E-l-w-o-o-d,

1 Houghton, H-o-u-g-h-t-o-n. I go by my second name,
2 Elwood.

3 Q And today is December 4th, 1986?

4 A Correct.

5 Q And we are at your home at 516 West Main Street in
6 Palmyra, New York.

7 A Yes, 14522.

8 Q Mr. Houghton, have you given any past sworn testimony
9 in any asbestos-related matter?

10 A Yes, we have had the investigations.

11 Q And what type of investigations were they?

12 A I'd say similar to what you're going to carry out.

13 Q And can you tell me about how many times you have had
14 testimony like this that you have given?

15 A I'd say similar. I've been asked questions.

16 Q Have they been with the presence of a court reporter?

17 A I don't recall any of that being done.

18 Q Were they involving only attorneys from Garlock or did
19 they also involve attorneys like myself who --

20 A It would be both.

21 MR. GLASSER: Off the record.

22 (Whereupon a discussion was held off the record.)

23 Q Have you ever been called upon to give any statements

1 to any legislative body or to any trade association
2 concerning asbestos?

3 A I was the representative from Garlock to Asbestos
4 Textile Institute.

5 Q I will discuss that with you later on in our
6 discussion. Have you ever written anything concerning
7 asbestos?

8 A My major writings have been regarding the asbestos
9 spinning operation.

10 Q And do you have copies of what you wrote concerning the
11 asbestos spinning operation?

12 A I might possibly have some, but they would be buried in
13 file papers. I'd have to search. I don't know.

14 Q Can you tell me during what time frame you did writings
15 concerning asbestos spinning?

16 A Well, that was while I was active with Asbestos
17 Textile Institute. I think it was probably about
18 1962 to 1970. Any report I might have made would
19 have been probably about 1968, in that neighborhood.

20 Q I'm going to drop back, Mr. Houghton, and ask you if
21 you will review for me your educational background.

22 A I graduated from Westtown's School in Pennsylvania in
23 1924. That was a college preparatory school. I

1 attended Philadelphia Textile -- Philadelphia Textile--
2 no, it was called -- Yes, Philadelphia Textile School
3 was the name of it. It was located at Broad and Pine
4 in Philadelphia at that time. It has been changed from
5 Philadelphia Textile to Philadelphia College of
6 Textiles and Science now.

7 Q How long did you attend there?

8 A That was a three-year course.

9 Q Did you learn anything during that schooling period
10 about the use of asbestos as a textile?

11 A No.

12 Q Did you graduate from the Philadelphia Textile School
13 approximately 1927?

14 A 1927.

15 Q And following your graduation, what was the first type
16 of employment that you had?

17 A I moved from school right to Johns-Manville Corporation
18 in Manville, New Jersey.

19 Q What was the nature of your employment at
20 Johns-Manville or field?

21 A I was in the asbestos textile manufacturing which
22 involved fiber preparation, spinning and twisting and
23 weaving asbestos cloths and yarns.

1 Q That was your specific responsibility?

2 A Yes, I was there for 12 years, and so I moved from
3 learning the trade and then up to you might say an
4 engineer of various operations. I had exposure to all
5 of the operations from the fiber preparation where
6 fibers were sold as such and spinning into asbestos
7 yarn, carding and twisting, weaving. I became
8 acquainted with braiding, which was in the neighboring
9 department, so I had a pretty broad education; also in
10 safety clothing manufacturing.

11 Q Primarily, if I understand you correctly, your
12 experience at Johns-Manville was with the manufacturing
13 of asbestos cloth and asbestos yarns?

14 A That's right.

15 Q How much occasion did you have to see and be around the
16 machines where the fibers were prepared, spun and
17 twisted in the manufacturing process?

18 A I'd say complete knowledge of the mechanical
19 processes. I was sent to set up textile and instruct
20 people on the handling of the equipment.

21 Q And did your job responsibility relate to the equipment
22 itself and how it should be set up from an engineering
23 standpoint?

1 A Yes.

2 Q Did you also have a role concerning how the dust would
3 be ventilated or controlled? I'm speaking of asbestos
4 dust that was generated during the various processes of
5 the manufacturing that you've described.

6 A Yes.

7 Q What was available in the 1927-1939 time frame to
8 enable you to help control asbestos dust?

9 A More or less your own ingenuity. I don't think we had
10 much in actual magnifications or dust-studying
11 equipment.

12 Q Did they have exhaust fans and ventilation?

13 A Yes.

14 Q Did they have hoods that could fit over dusty areas to
15 gather and remove the dust?

16 A That was particularly true in fiber preparation and
17 carding. Some hooding was applied to looms.

18 Q Did they also understand that you could separate or
19 isolate a dusty process so that the dust that was being
20 created would not go all over the work environment?

21 MR. SHANNON: I object to the leading of that
22 question.

23 A The hooding was designed for that, yes.

1 Q You were aware that in the 1927 to 1939 time frame
2 there were also respirators that were available?

3 MR. SHANNON: I object to the leading.

4 A We used respirators for the men that worked in the
5 dustier areas like fiber preparation and carding,
6 handling of stock, and so forth.

7 Q How were respirators used by the men who handled the
8 stock and were in the various manufacturing processes?

9 MR. SHANNON: I object to that. It mischaracterizes
10 his former testimony.

11 A It would be used because it was recognized as a dusty
12 area. There were limits set by the federal
13 government at that time where dust should be not
14 exceeding 5 microns per cubic foot, in the type of
15 studies that were done at that time. We had samples
16 sent away, we had some outside insurance companies come
17 in and make analyses, and our efforts were to try and
18 live under the federal requirements.

19 Q You mentioned 5 microns per cubic foot. Could that
20 have been 5 million particles per cubic foot?

21 A A micron, I think, is a ten thousandth of a
22 millimeter. I think. I'm not positive on that, but a
23 micron was a microscopic measurement.

- 1 Q I understand what a micron is. My question, Mr.
2 Houghton, is that the standard that you described?
3 Think back and say would you agree that that standard
4 was 5 million particles of total dust in a cubic foot?
- 5 A No, it would be 5 microns in an examination microscopic
6 examination area. I think the sampling was taken
7 against a glass plate, and that area was magnified, and
8 the particles are counted in a certain area on that
9 magnified sample.
- 10 Q Let me try to clarify. There was a standard that you
11 tried to stay within, and in determining size, there
12 were microscopes available in order to allow the dust
13 that had been gathered in testing to be counted.
- 14 MR. SHANNON: I object as the leading. He hasn't
15 testified to that.
- 16 A This measurement device I'm mentioning was not
17 available to me until I was at Garlock.
- 18 Q I understand, but at Johns-Manville, they were able to
19 take dust counts.
- 20 A The insurance company did that.
- 21 Q And when they took dust counts, they will then count
22 it under a microscope, is that correct?
- 23 A That's the way I understand they did it.

1 Q And they had a standard that they tried to stay within
2 when they were dealing with asbestos dust?

3 A Yes.

4 Q Why was there a standard for asbestos dust in the 1927
5 to 1939 time frame?

6 A That was in the hands of the insurance company and it
7 was not discussed with us.

8 Q Do you know whether the insurance company that handled
9 and studied Johns-Manville was the Metropolitan Life
10 Insurance Company?

11 A I can't answer that accurately. It may have been, but
12 it was not my knowledge.

13 Q Did you ever have occasion to meet Dr. Anthony Lanza?

14 A I don't remember that name.

15 Q You do recall, however, that the insurance companies
16 came into Manville and made studies and dust counts
17 concerning the asbestos textile operation?

18 A I think my answer would be I know they have come in.

19 Q Do you know, Mr. Houghton, whether the results of
20 those studies were ever published and made available
21 in the literature?

22 A Not that I could -- not that I was exposed to, no.
23 Folks up the ladder may have heard it, but I was down

1 approach as closely as possible to the movements that
2 were taking place to be effective.

3 Q And you wanted to remove the asbestos dust from the
4 work environment to avoid any hazards associated with
5 breathing too much asbestos dust?

6 MR. SHANNON: I object to the leading questions,
7 Richard. He hasn't said anything about
8 asbestos dust. He's talked about dust. If
9 you're going to ask why, ask him. Don't tell
10 him.

11 MR. GLASSER: I want to make it very clear that I
12 have a right to lead this witness, and that I
13 don't think an objection as to leading is
14 appropriate, and I feel that my questions are
15 proper as structured. I understand your
16 objection, and you may object as to form if
17 you feel it's appropriate, and obviously, I
18 would want to have an chance to rephrase it,
19 but I do feel that leading is permissible
20 here.

21 MR. SHANNON: I understand that under the conditions
22 we're working under today. I feel you might
23 be advised to be very circumspect in your

1 leading questions considering Mr. Houghton's
2 age and considering his hearing difficulties.
3 MR. GLASSER: I'm trying but I feel my questions are
4 proper in terms that he is a long-term
5 Garlock employee.

6 Q Don't you concern yourself with the lawyers talking.
7 We're talking to the judge who didn't want to come up
8 and brave the snow with us.
9 (Whereupon the reporter read back the pending
10 question.)

11 Q Do you remember my question that I asked before I
12 talked with Jim Shannon?

13 A I didn't have a machine like that, I know.

14 Q Let me repeat my question as best I can. We were
15 talking about the vacuum effect that was used on the
16 machines. The looms and the spinners were making
17 asbestos cloth, am I correct?

18 A The looms were making asbestos cloth.

19 Q And asbestos cloth was generally about 75 percent or
20 more asbestos fiber by weight, am I correct?

21 A Yes, that's correct.

22 Q And even higher running to 80 percent or 90 percent
23 asbestos percentage by weight.

1 A Sometimes 95 percent.

2 Q And the concern about the vacuum effect was to remove
3 as much of the asbestos dust as could be done so as to
4 reduce any hazard to the workers who would be breathing
5 the dust?

6 A Yes.

7 Q And that's because it was known that the breathing of
8 asbestos dust could be harmful to those who breathed
9 it?

10 MR. SHANNON: I object to that. I think it was
11 known that the breathing of any dust could be
12 harmful to those breathing it, as we know
13 that people who worked in cotton mills today
14 have brown lung and other diseases. I object
15 to your question as it implies special
16 knowledge that this man has about the hazard
17 of asbestos dust, and no such knowledge has
18 been established.

19 Q Mr. Houghton, wasn't it known by you in the 1930's that
20 it was important to limit the amount of asbestos dust
21 that a person breathed?

22 A You're looking at history where people have been
23 learning. We look back and we can see some things we

1 have been learning over the years; in other words,
2 we've made some sort of progress. We have not been
3 aware all that time of everything that we now know.

4 Q I understand, but they knew in the 1930's when you were
5 at Johns-Manville that it was important to try to
6 control and limit the amount of asbestos dust that the
7 manufacturing process was generating?

8 A Yes.

9 Q And part of your job as an engineer working in the
10 asbestos textile manufacturing was to help with the
11 design to limit the dust.

12 MR. LEVINTHAL: I object to that. It mischaracterizes
13 his prior testimony as to what involvement he
14 had with it.

15 MR. GLASSER: Jim and I are nodding at each other.
16 If we can have one, it will make the sides
17 fair and conform to our court rules.

18 MR. SHANNON: That's right. I will have to make
19 the objections. I will make that my
20 objection and we'll proceed.

21 (Whereupon the reporter read back the pending
22 question.)

23 Q Is that correct?

1 A That's one of the duties, yes.

2 Q What progress can you describe to me that was made in
3 limiting dust while you were at Johns-Manville? Did
4 you play any role in helping to reduce the dust of
5 the workers?

6 A I get confused with knowing that I did more actively
7 work here, but at Johns-Manville, my job was not
8 designing particularly for dust control.

9 Q And you say when you became more active "here," you
10 mean once you became an employee at Garlock?

11 A I was a superintendent here.

12 Q And "here" is the Garlock plant at Palmyra, New York?

13 A Yes.

14 Q While you were at Manville, was there any discussion
15 that you can recall concerning the hazard that could
16 occur to a person who breathed too much asbestos?

17 A To my position there, I think I did not get in on those
18 engineering discussions.

19 Q Can you tell me how you learned that there was a
20 standard that you should strive to stay within when
21 dealing with the quality of asbestos dust?

22 A I can't give you a good answer when I learned that it
23 would be best to keep it at a certain level. I think

1 probably casual discussions would be the best I could
2 say.

3 Q While you were at Manville?

4 A Johns-Manville.

5 Q While you were at Manville, did you have any occasion
6 to attend any meetings or educational seminars
7 concerning your engineering expertise relative to
8 asbestos textile manufacturing?

9 A No seminars. Practical experience on the job was
10 probably the major -- where I picked up information.

11 Q Who were, in your opinion, the most knowledgeable
12 people at Manville concerning the need to control dust
13 while you were there?

14 A I think Mr. Cannon, Phil Cannon was probably the
15 closest. I don't think you'd have much information
16 from him now.

17 Q He's deceased?

18 A Yes.

19 Q Did you know Clifford Sheckler?

20 A I think I know the name, but I don't think I associated
21 with him any.

22 Q Did they have a medical department at the Manville
23 plant?

1 A Later they worked into a need for a nurse, but when I
2 was there, they had a doctor, but most of the medical
3 treatments were made in the office of the factory;
4 very limited medical service at the beginning.

5 Q Were you aware as to whether there had been any
6 Workmen's Compensation suits filed against Manville in
7 the 1930's for asbestos disease?

8 A I was not aware of suits at that time.

9 Q You're aware now that they had suits in the 1930's?

10 A Yes.

11 Q Did you have occasion while you were working at
12 Manville to travel around to any other Manville plant
13 other than the textile manufacturing facility at
14 Manville, New Jersey?

15 A I only picked up equipment at the Waukegan factory
16 when -- This is 1933. I was asked to move equipment
17 from both Manville and Waukegan to the asbestos factory
18 at Asbestos, Quebec. Factory at Asbestos, Quebec was a
19 plant with a number of departments making similar
20 products to those at Manville.

21 Q They also had some mining facilities that Manville
22 owned in Asbestos?

23 A That was the major. What was going on there was ^{their} ~~there~~

1 mining, but they had set up a production plant there,
2 too, for Canadian product and I was sent up there when
3 they wanted to set up a textile plant, and so I went up
4 there with equipment from Manville and Waukegan, but I
5 saw very little of Waukegan's production. I was just
6 taking some machinery away.

7 Q Did you help in setting up the layout for the asbestos
8 textile manufacturing facility that was being set up in
9 Asbestos, Quebec?

10 A Yes.

11 Q And you were aware at that time it was important how to
12 lay it out and also to lay it out so that you could
13 control the dust that would be generated?

14 A Yes. We -- the cards already had hooding on them.

15 Q The carding machines?

16 A Yes, the carding machines had hooding, so I had them
17 lay out a dust recovery department with fans exhausting
18 the hoods of the cards and blowing into a recovery
19 system so that you weren't blowing the dust over the
20 countryside.

21 Q And in that fashion, you were able to remove much of
22 the asbestos dust from the work environment and then
23 capture it so it would not, like you say, be blown

1 outside the plant to the neighborhood?

2 A Yes, it was filtered.

3 Q How advanced was the thinking at Manville concerning
4 the need to control asbestos dust in the 1930's?

5 A They had made good advances. The old system was fans
6 on top of the building, not down where the dust are
7 generated. The dust was in the room. Then when I got
8 there, they had just installed 48 sets of cards with
9 dust recovery systems blowing into a filter house on
10 the roof.

11 Q And the dust recovery system on the cards was close to
12 the source where the dust was being generated?

13 A Yes, completely covering the hooding and the machine;
14 also drawing out from underneath the card, too.

15 Q Now, while you were at Manville, did you have occasion
16 to see any of their asbestos product manufacturing
17 facilities other than textiles, like the pipe covering?

18 A Yes.

19 Q And they also had a pipe covering facility right at
20 Manville?

21 A Yes.

22 Q And were they also using engineering devices for dust
23 control in the other operations, other than textile

1 manufacturing?

2 A There was some hooding where dry asbestos was handled
3 to feed into mixers. There was hoods over that area.
4 Mostly, though, the recovery systems were connected
5 with the cards and the looms.

6 Q Did you have occasion during your time at Manville ever
7 to see the manufacturing processes at another
8 manufacturer's plant?

9 A Yes.

10 Q Can you tell me whose plants you had occasion to visit?

11 A Keasbey & Mattison. That was I think at north -- or it
12 was in Pennsylvania, yes.

13 Q Was that Ambler, Pennsylvania?

14 A Yes. And it became -- They were purchased by American
15 Asbestos, so Keasbey & Mattison disappeared and
16 American Asbestos took it over.

17 Q Do you know whether Nicolet also purchased some of
18 Keasbey & Mattison?

19 A I never went to any Nicolet plant in Pennsylvania. I
20 went by the Nicolet mines in Canada, but I didn't visit
21 it.

22 Q You did not go into the Nicolet mines?

23 A No.

1 Q When you went to the Keasbey & Mattison textile plant,
2 how up to date as compared to Manville --

3 A The date?

4 Q No, how up to date, how advanced were they as compared
5 to Manville in their efforts to control asbestos dust?

6 A Keasbey & Mattison were not as advanced as
7 Johns-Manville.

8 Q What was the purpose of your going to Keasbey &
9 Mattison?

10 A They wanted me to take a job there as supervisor. I
11 didn't go.

12 Q Did you have occasion to go to any other asbestos
13 companies other than Keasbey & Mattison while you were
14 at Manville?

15 A There's one other I visited, may have been a Raybestos
16 division. I think it's a Raybestos factory but it was
17 owned -- it was a different name. It was in about
18 central Pennsylvania.

19 Q It was an asbestos textile facility?

20 A Yes.

21 Q How advanced, from what you could observe, was the
22 Raybestos-Manhattan facility?

23 A I think they were somewhat similar to Johns-Manville.

1 Q By similar, you mean that they had made some of the
2 same advances to control dust?

3 A Hooding and so forth, yes.

4 Q Did you ever have contact while you were at Manville
5 with anyone from Raybestos concerning asbestos or
6 engineering dust control measures?

7 A No. It was more observation of the unit. That's all.
8 Not dust control or problems.

9 Q Why did you go to the Raybestos-Manhattan facility?
10 Was that in the 1930's?

11 A It was in the 30's. I'm hazy on that. I was sent
12 there by Johns-Manville for some purpose. It may have
13 been for picking up cylinders or equipment. They may
14 have had something for sale, and so other than that, I
15 can't give you an answer.

16 Q Other than Keasbey & Mattison and Raybestos, do you
17 recall seeing any other asbestos manufacturer's
18 operation?

19 A I've seen several after being here, not at Manville.

20 Q Still at Johns-Manville, another question, did you ever
21 have a chance to see the gasket manufacturing operation
22 at the Manville facility?

23 A Yes.

1 Q Can you tell us what you observed concerning the gasket
2 manufacturing operation at Manville?
3 A Cloth from asbestos textile was shipped to them. There
4 were more than one operation. One was dipping, passing
5 the cloth through a gasoline rubber ^{solution} ~~shamoy~~ and then
6 passing it up through a drying ^{tower} ~~towel~~ to remove the
7 gasoline fumes, so fully impregnated asbestos cloth was
8 made as one of the products that's particularly used in
9 frictioning where two pieces of cloth are pressed
10 together in making a gasket. Then the other method was
11 frictioning and skimming by ^{calender} ~~calander~~, and a large
12 percentage of the cloth was used that way making
13 slabs. These slabs were used in cutting packing rings
14 for gaskets. ^{This was} ~~They were~~ a punch press type of
15 operation. More cloth was used in either impregnating
16 or in frictioning than used as dry cloth. Dry cloth
17 was used in their clothing manufacturing for safety
18 clothing. They had a plant at Johns-Manville for
19 making gloves and coats and pants for firefighting,
20 working in steel mills, where you were exposed to high
21 temperatures, that they made them.

22

23

(Whereupon a brief recess was taken.)

1 BY MR. GLASSER: (Continued)

2 Q Do you recall the names of any of the people you met at
3 the Raybestos facility?

4 A No. I might remember it if the names were recited to
5 me, but no, I wasn't particularly familiar with those
6 folks.

7 Q Do you remember any names from Keasbey & Mattison?

8 A That was 30 years ago. I'm poor on remembering names.

9 Q I'm going to shift over now, Mr. Houghton, to Garlock,
10 and I want to ask you first how did you come to be
11 employed by Garlock?

12 A In 1938, the superintendent of the textile plant was
13 Harry Elder and he died. I'm not sure why he died but
14 he died in '38, and they were in need of someone to
15 operate the department. They had at least a couple of
16 years of doing the best they could with what they had
17 or Owen Burns was one of the workers and he was in
18 charge when I came here, but Mr. Hubbard, Cecil Hubbard
19 was factory manager. He was later promoted to vice
20 president. George Abbott was president of the company,
21 and I came up here in March of that year and they told
22 me to -- I came in February and they told me to come up
23 in March, so I've been in here, made a good impression

1 on.

2 Q That was February, 1938 or 1939?

3 A It was '39 when I was called in February to examine the
4 place and I came to work in March the 13th.

5 Q How did you know about Garlock or how did Garlock know
6 about you?

7 A There was a fairly good relationship between Garlock
8 and Johns-Manville. There was an interchange. There
9 was some people that went from here to work at
10 Johns-Manville and some folks from Johns-Manville had
11 come here, so the companies knew each other. This was
12 in '39, tail end of the depression, and when I told my
13 superintendent, Mr. Cannon, that I had accepted a
14 position here as superintendent, Phil Cannon said to me
15 if there was anyplace other than Garlock, I'd advise
16 you not to go. This was a backside way of a compliment
17 of Garlock, so he didn't stand in my way, but I had
18 already told him I had accepted because I had had a
19 couple of other opportunities to leave and they told me
20 they were glad I stayed at Johns-Manville, so I didn't
21 like -- Usually, when something like that happens, you
22 got a little increase in pay, so I didn't like to keep
23 edging myself up by the saying I got another chance,

1 but anyway, he said if there was anyplace besides
2 Garlock, that I'd advise you not to go.

3 Q You mentioned that some of the people from Manville had
4 come to Garlock and some from Garlock to Manville. Can
5 you help me with any names of people who transferred
6 from one to the other?

7 A I know that there was a Bavis whose brother works here,
8 had gone from here to John Manville. He worked in the
9 packing department, then there was another mechanic
10 that moved down there. His name was -- Oh, nuts. He
11 was a very good mechanic. When I'm not thinking, I'll
12 remember it for you.

13 Q If you remember it, you just advise us of the name but
14 we'll keep going in the meantime. Had you ever visited
15 any facility owned by Garlock while you were at
16 Manville?

17 A No, I didn't know of Garlock until I heard that there
18 was an opportunity here. I may have heard the word but
19 I didn't really know much about it, but I never saw
20 Garlock until I came here to visit.

21 Q You started with Garlock in March 1939?

22 A Yes.

23 Q And that was in Palmyra, New York, where your home is?

1 A That's right.

2 Q What type of facility did Garlock have in existence in
3 1939? What did they produce in Palmyra?

4 A Well, they have about a dozen departments. They make
5 gaskets, folded gaskets, make gasket rings, ~~had pan-~~
6 ^{hole} ~~holed~~ gaskets for boilers and then they made varieties
7 of packings, rings and compressed asbestos sheet
8 gaskets. They sell sheeting, but they also punch out
9 millions of disk rings for valve stems or they make
10 felt packings for ball bearings. They make large
11 variety of molded parts in high temperature molding for
12 vulcanizing rubber. They make rubber sheets for sale.
13 They furnish cloth to others to make safety clothing.
14 They now make Teflon products.

15 Q If we can, going back to the 1939 time frame when you
16 came, were the gasket materials that you described
17 asbestos-containing gasket materials?

18 A Some.

19 Q The folded gaskets, did they contain asbestos?

20 A The folded gaskets were rubberized asbestos and then
21 folded together to make multiple-ply products, but
22 most of them were rubberized either by dipping or
23 frictioning, and then they might be made into

1 laminations.

2 Q And the compressed asbestos sheets, are they the sheets
3 from which gaskets can be cut to a specific size?

4 A Yes, most of them in single sheet from a 64th on up to
5 maybe as far as an 8th, and then they laminate if they
6 want to go thicker than ^{an} 8th.

7 Q And the folded gaskets and the compressed asbestos
8 sheets and the packings, did those contain or do you
9 know the percentage of asbestos by weight in those
10 products, the general range?

11 A Well, most of time used the commercial blend, which is
12 the 75 percent, and then there would be a good 50 or 60
13 percent rubber on top of that, so we're down now to
14 maybe 30 percent asbestos in some of these rubberized
15 products.

16 Q And the ones that did not have the rubber, then, would
17 more or less be like the commercial grade of asbestos
18 cloth, roughly about 75 percent asbestos by weight?

19 MR. SHANNON: I object. I don't think that he said
20 there were any that didn't have the rubber
21 that were used for gaskets.

22 A Well, others dipped in maybe Teflon. Again, they're
23 coated. A small percentage might be used in a dry

1 cloth, but mostly they're coated or impregnated.

2 Q Am I correct that Garlock Packing Company had been in
3 business for a good while before you came here in 1939?

4 A Yes, I guess Garlock was probably about 1880 or
5 somewhere around there.

6 Q 1887 sound about right?

7 A That's somewhere around when it started. I think it
8 started with rubberized fabric using somebody's rubber
9 boots for strings for making packing ^{for} power plants. The
10 fella was using anything he could get. Finally he used
11 this and it worked, so he moved from the power plant
12 over to making rubber slabs like rubber boots, and from
13 there he progressed into using other materials.

14 Q When you came to Palmyra, Mr. Houghton, can you tell me
15 overall about how many people were employed?

16 A Oh, I don't know, maybe less than 200. Maybe around
17 200.

18 Q Approximately how many of those 200 would have been
19 involved in manufacturing items that contained
20 asbestos?

21 A That's kind of a broad figure you're asking. I could
22 say maybe 35 to 38 making the asbestos parts, then the
23 other parts like high-pressure manufacturing and the

1 mill and ^{calender}~~colander~~, they all handled the products, maybe
2 another hundred there. You're now reaching out into a
3 range of products, so to give you an exact figure, I
4 couldn't do it.

5 Q The type of asbestos that was used was primarily the
6 chrysotile or the white asbestos?

7 A Mostly, yes.

8 Q And you also had some of the blue asbestos or the
9 crocidolite?

10 A A certain percentage of the crocidolite was used. We
11 didn't do any weaving or spinning of crocidolite. That
12 was purchased maybe from Germany.

13 Q Or Rhodesia?

14 A The Rhodesian would be the source but the spinning was
15 done maybe in Germany.

16 Q The crocidolite, was that used in products other than
17 gaskets or was it strictly used in gaskets?

18 A I think it was used where chemical resistance was a
19 major factor because crocidolite is better against
20 acids than the chrysotile.

21 Q Less corrosive when it comes in contact with --

22 A Yes, it would resist corrosion or resist decomposition
23 better than the crocidolite.

1 Q Than the chrysotile?

2 A ^{Chrysotile}~~Chrysotile~~. That would be damaged. The blue, which is
3 harsher and not as easy to handle, does resist chemical
4 action better than the --

5 Q From the engineering standpoint, what efforts did you
6 observe that Garlock was taking to control dust when
7 you first came aboard in 1939?

8 A Quite a lot of work had been done by Harry Elder in
9 improving the dust control over the carding machines.
10 He had done a major job of constructing hooding, but
11 then by the time I came here, Whiten Machine Works had
12 fabricated hoods, wooden hoods that fitted tightly
13 against the cards so the Whiten Machine Works had done
14 a lot of work in improving dust control for cards. In
15 removing dust, you take a lot of vacuum and that
16 actually removes a fairly high percentage of your
17 product, so in manufacturing, you do have to remove
18 quite a percentage. I believe 20, 25 percent has to go
19 up to the filterhouse just as a means of keeping it
20 clean.

21 Q And then you can recapture what you've got in the
22 filterhouse?

23 A The filter bags are shaken every day so that material

1 falls and is removed once a week.

2 Q And the hoods and the vacuum ventilation system that
3 you've described was basically to remove the asbestos
4 dust that was being generated in the manufacturing
5 process?

6 A That's right.

7 Q And you used the same type of engineering both for the
8 chrysotile and for the crocidolite?

9 A We did not process any crocidolite.

10 Q Through carding and through the looms.

11 A That's right. We didn't make any fabrics. We bought
12 some yarns for braiding, but those were dipped in oils
13 or greases and then braided.

14 Q What was your specific job responsibility as
15 superintendent when you started with Garlock in 1939?

16 A Run the plant, which included fiber preparation,
17 carding, spinning, twisting, weaving and upkeep of the
18 equipment, purchasing equipment to make repairs when
19 all of these machines subject to wear or breakdown,
20 lubrications, and so forth; you worked up schedules for
21 maintenance.

22 Q When you came to Garlock in 1939, was Garlock also
23 aware of the need to keep asbestos dust to a certain

1 level?

2 A I think the federal requirement was in existence at
3 that time.

4 Q Were there any laws that you were aware of from the
5 State of New York that related to the work site and
6 dust?

7 A I don't recall any New York State law.

8 Q How would you compare the knowledge concerning the
9 importance of controlling asbestos dust at Garlock to
10 what you had observed at Manville?

11 A I think we were better here than Manville. I think the
12 dust recovery system was functioning more efficiently.

13 Q Did your responsibilities as plant manager,
14 superintendent, include keeping an eye over how well
15 the dust control system was operating?

16 A I was probably the only one that was closely related to
17 these jobs. I would call the maintenance department
18 for cleaning up once a week or coming in to do any of
19 those operations to keep place working right. It was
20 my job.

21 Q Did Garlock have any respirators available for the men
22 who were working with and around the asbestos?

23 A Yes. Those people that worked for the maintenance

1 department had to wear the improved mine respirators
2 when they were cleaning up at the end of the week, when
3 they were removing dust from the filterhouses or from
4 cleaning up around the machinery. We used respirators
5 for those men that carried stock. We'd have those box
6 trucks and they would bring the material that had been
7 blended. Rayon and asbestos was loaded into these
8 trucks and brought up the elevator and then brought to
9 feed into the cards, so those men were required to wear
10 respirators during handling of stock by hand.

11 Q How much textiles were produced, asbestos textiles were
12 produced at the Palmyra plant of Garlock?

13 A Oh, I guess it was probably about two million pounds a
14 year.

15 Q And that was sold commercially?

16 A The highest percentage was used within the factory,
17 either in the dipping machines or in the high- pressure
18 manufacturing where they coated it with rubber.

19 Q So some of it --

20 A Most of it was that way. Then we shipped some rolls,
21 but the most of it was internally used.

22 Q And was any of the textiles that you have described
23 also used to make further products like the Garlock

1 gaskets?

2 A Yes. That was after the coating process. There is
3 very little requirement for asbestos just as a dry
4 cloth.

5 Q Once you had made a compressed asbestos sheet out of
6 which gaskets could be cut, you were able to print on
7 that compressed asbestos sheet, am I correct?

8 A They would put a label on it, yes.

9 Q And you could put Garlock's name on it?

10 A It might be a label, the brand, and a style number
11 might be on there, so it could be identified as a
12 Garlock product.

13 Q And that would be right on the product itself?

14 A That would be printed right on the sheet.

15 Q And Garlock made gaskets in various light and dark
16 colors?

17 MR. SHANNON: You're talking about compressed-
18 asbestos sheet gaskets?

19 Q Compressed-asbestos sheet gaskets, what colors did they
20 come in?

21 A Color?

22 Q Yes, sir.

23 A Oh, might be in a black, one a dark gray. They had

1 some in the white.

2 Q Would that be a white or a light gray?

3 A It would be off color white. Once you start using
4 white rubber on white asbestos, you come up with a
5 dirty gray, and they might have a -- I think they may
6 have used some blue and some red.

7 Q Now, the style number, does the number 7005 ring a bell
8 for you from the gasket materials?

9 A I was not majorly connected with that, so -- ^{7000's} ~~700's~~, I
10 heard those numbers, but I didn't handle them enough to
11 ^{have} ~~be~~ a good answer for you.

12 Q Am I correct that many of the gaskets produced by
13 Garlock, but not all, had the name of Garlock on the
14 material itself?

15 MR. SHANNON: Again, compressed-asbestos sheet
16 gaskets.

17 A Well, many of the products might have a number and then
18 be boxed in a Garlock-labeled box. I don't think the
19 word "Garlock" would show on everything that they made.

20 Q I understand, but the name was put on some of the
21 compressed-asbestos sheet gasket material?

22 A Oh, I guess the word "Garlock" showed on some of the
23 sheet, yes.

1 Q In the mid to late 40's, would it be fair to state that
2 Garlock's employees that were exposed to dust, asbestos
3 dust, were aware that asbestos could possibly be
4 harmful to them if they breathed it without necessary
5 protection?

6 A Most people do not live in a state of awareness of
7 danger hanging over their head all the time. We had
8 probably more long-term workers in textile than in most
9 of the other plants. There was no sense of fear in the
10 plant.

11 Q Was there awareness that it was important to keep the
12 ventilation and exhaust equipment working and to use
13 respirators when you were around asbestos dust?

14 A When you were working in a dusty area, yes. Generally,
15 we had a pretty clean department, so the respirators
16 were not worn by everybody. It was only where you were
17 handling dusty material like feeding a card or laying a
18 batch.

19 Q Were there any programs that you recall, Mr. Houghton,
20 at Palmyra to advise the employees of the importance of
21 keeping the ventilation and vacuum equipment working so
22 that the asbestos dust level in the air could be kept
23 low?

1 A That was responsibility of the supervision.

2 Q And what did the supervision do to make sure that the
3 men were aware of the importance of keeping the
4 asbestos content low?

5 A I don't think that generally people are aware of
6 details like that. They depend on their supervision to
7 keep things up to date and keep adjustments right.
8 Now, you make improvements, then it's up to us to see
9 that the improvements are kept in the proper shape, and
10 that was the foreman's job. The superintendent might
11 be checking by casual moving through the department to
12 see that it was being done, but you had foremen that
13 were also responsible.

14 Q How many buildings were there at Palmyra?

15 A Oh, the numbers were something like up to 25. Numbers
16 of buildings is kind of a hard thing to do because
17 here's a shed and it's given a number, so roughly,
18 there were around 25 different types of manufacturing
19 going on.

20 Q Who was Mr. Bristol?

21 A Bristol?

22 Q Yes, sir.

23 A He was in charge of the machine shop, and I guess he

1 had yard gang for maintenance of the whole factory
2 outside as well as the tinsmith and the electrical
3 departments were all under Bristol.

4 Q In some of the buildings, for example, Building 15, are
5 you able to identify what Building 15 was or what
6 service was performed there, do you recall, in the 1942
7 time frame?

8 A 15? I was in Building 7. 15 I don't think is clear
9 enough in my mind just which it was.

10 Q In Building 8 or Building 15, in June of 1942, I have a
11 paper which I will share with you, but I want to ask a
12 clarification first. A comment was made of the need to
13 remove fumes and impurities on the second floor that
14 were created, generated or released by filling bins
15 with powdered materials. Would the powdered materials
16 being referred to be asbestos?

17 MR. SHANNON: Why don't you let him see the
18 document? It might help. Are you talking
19 about Building 8 or 15? You said both at the
20 beginning of the question.

21 MR. GLASSER: There's a reference, Jim, and I think
22 I'll need his help to clarify it, but I have
23 extra copies of the same document.

- 1 Q This is the document, Mr. Houghton, I'm showing to
2 you. At the same time I've got another copy here for
3 your counsel. Let me turn to the first page. I'm
4 going to move back just for a second and it is marked
5 June 5, 1942. Do you see that, 6-5-42?
- 6 A Yes.
- 7 Q And it has "Mr. Bristol" then the word "important" and
8 it has some initials. Do you know whose initials those
9 are?
- 10 A I can see a C there, but that number 8 doesn't tell me
11 much. Let's see, I don't know whether that might be
12 C. R. Hubbard. C. R. Hubbard was the vice president in
13 charge of the factory, the molding department.
- 14 Q If you will turn to the next page --
- 15 A It looks like Frisbee Walborth.
- 16 Q That looks like who?
- 17 A This looks like Walborth.
- 18 Q This might be a signature from the industrial
19 commissioner. What I was questioning, if you look at
20 the paragraph numbered 1, it talks about the need to
21 "Provide an exhaust system to remove fumes or other
22 impurities from your factory on second floor, created,
23 generated or released by filling bins with powdered

1 materials." Do you see where I read that?

2 A Yes.

3 Q Is the powdered material that they're referring to
4 there asbestos?

5 A It sounds like it may be where they were making up
6 compounds, second floor.

7 MR. GLASSER: Jim, to answer your question, it says
8 Building 8 and 15.

9 A Manufacturing didn't do much blending on the second
10 floor. ^{There} ~~That~~ was blending in the basement.

11 Q Now, with regard to that on the basement, look with me
12 at paragraph marked number 2. Here the direction is to
13 "Construct and locate hood so that dust from grinding
14 gaskets will fall or be drawn into the hood," and then
15 it has a parenthesis, "(gasket grinding machine -
16 basement - building 8 and 15.)"

17 A They had a mill in the basement for re-- well, they
18 would chop up gasket trimmings to be reprocessed in the
19 mixing, gasket grinding. There might be some type of a
20 gasket tolerance that required a certain thickness, and
21 then they would put it through a grinder which would
22 have a surface grinding operation. That could make a
23 rubber dust and be a nuisance and it could be a fire

1 hazard if you didn't keep your machinery clean.

2 Q Do you have any recollection of a document such as
3 this being delivered to the Garlock Packing Company
4 by the Department of Labor?

5 A No. I being not connected with maintenance, I would
6 not see any report like this.

7 Q Can you identify the writing that appears on the left-
8 hand margin of page 2 of this exhibit?

9 A No.

10 Q If any direction or order were given to the plant to
11 collect certain fumes or grindings that were escaping
12 into the work environment, would those have generally
13 been brought to your attention?

14 A No.

15 Q Are you aware that in the 1942 time frame, there were
16 documents such as this received by the Garlock Packing
17 Company at its Palmyra plant?

18 A They wouldn't have come to me. I was not in the health
19 department. The problems of textiles would come to
20 me. In fact, only to me because it was -- if I needed
21 any help, I'd go to maybe Bristol for electrical or
22 other upkeep business, but for the maintenance of dust
23 control was mine, designing was mine.

1 Q Thank you, Mr. Houghton. I'm going to give this to the
2 court reporter and ask her to identify that please as
3 Houghton Number 1 so they can see what you and I were
4 sharing and talking about.

5 (WHEREUPON HOUGHTON EXHIBIT 1 - Four-
6 page document; first page reading "Mr.
7 Bristol" and "Important" - WAS MARKED FOR
8 IDENTIFICATION.)

9 Q When problems were brought to your attention that
10 needed correcting as it related to the vacuum system or
11 the need to keep asbestos dust low? What sources of
12 information did you have to turn to in addition to your
13 own past experience?

14 A We had a very good man, a John Kattenack, who was a big
15 help in designing dust recovery systems like a cyclone,
16 and he was the one I would go to, and he was very
17 helpful.

18 Q Is he available today?

19 A No, he's also in the ground.

20 Q Was there anyone at or available to you at Garlock who
21 kept up with industrial hygiene or medicine as it
22 related to the asbestos hazard?

23 A I think not.

1 Q My question is had you any time, say, in the 1930's,
2 while you were at Manville or in the early part of your
3 career at Garlock heard of Dr. Merewether over in
4 England and the studies that he had done on asbestos
5 textile plants over there?

6 A I think my answer is no.

7 Q I'm going to show you, and it's a thick document
8 consisting of 34 pages, but I'm showing it to you just
9 to see whether or not that in any way refreshes your
10 recollection. This is only a photocopy of what the
11 document was.

12 MR. SHANNON: Can we ^{identify} identified it for the record?

13 MR. GLASSER: For the record, I'm showing him the
14 "Report on the Effect of Asbestos Dust on the
15 Lungs and Dust Suppression in the Asbestos
16 Industry." It is a two-part paper by E.R.A.
17 Merewether and W.C. Price. It is dated 1930.

18 A One shilling, three pence. No, I did not know of him,
19 and the report that this covers did not come to me.

20 Q I thank you, and I will show you another report and ask
21 you whether you have seen or heard of this.

22 MR. GLASSER: For the record, this is an United
23 States Treasury Department Public Health

Report which was done by the United States Public Health Service. It is the January to June, 1935 volume, and specifically from that is an article which carries the date January 4, 1935 entitled, "Effects of the Infiltration of Asbestos Dust on the Lungs of Asbestos Workers." It is signed by Dr. A.J. Lanza. Now, one thing that I would show Mr. Houghton and ask him to read is the introduction or the introductory paragraphs on this article to see if that has any meaning to him.

MR. SHANNON: You're asking him whether he knew that in 1929 the Metropolitan Life Insurance Company was approached?

MR. GLASSER: I'm asking him basically does he have any familiarity with Dr. Lanza's 1935 study, and what I'm showing him which might tie in with what we've discussed on the record is whether or not the Metropolitan Life Insurance Company was the plant that studied Manville. The reference is made that this report emanated out of Manville studies, and

1 I believe also Raybestos-Manhattan studies.

2 A Well, this was not brought to my attention while I was
3 at Johns-Manville. It was not brought to my attention
4 at Garlock. It may be that most -- some of these
5 information were not -- That didn't excite people yet.

6 Q Let me ask was it known while you were at Manville in
7 the 1927-1939 time frame that if you and I went out for
8 the first time today and breathed asbestos, that it
9 would not hurt us or show up on our x-ray tomorrow or
10 next month or even next year but that it took time for
11 the injury which may result from asbestos to show up?

12 MR. SHANNON: Wait, Mr. Houghton. I object to that
13 question. I don't quite understand it, and
14 are you asking whether he knew in the 1930's
15 that there was a lag, that your question?

16 MR. GLASSER: I'll be happy to re --

17 Q Do you understand my question?

18 A I think so, and I don't think that then consciousness
19 of the industry had become too much aware of the
20 seriousness of it, and they weren't preaching to us who
21 were working in the factory you must get going on
22 this. It wasn't the same awareness that you have now
23 was not then.

1 Q I understand, but to clarify my question, were you
2 aware that the hazard of breathing asbestos fibers in
3 the 1930's was that over a period of time, it could
4 cause problems?

5 A No. We knew that some folks were sent to be checked by
6 x-ray, but it was not the same plantwide type of study
7 that was undertaken at Garlock. We were sent every two
8 years to Clifton Springs, all of us, for an x-ray
9 check.

10 Q Why?

11 A For an x-ray check.

12 Q Was there --

13 A There was no discussion to the individual why.

14 Q Did you understand why they were taking periodic chest
15 x-rays?

16 A I did, yes.

17 Q What was your understanding, Mr. Houghton?

18 A Well, the reports came back only to those that might be
19 cautioned you'd better move to another department.

20 Q And the reports would reflect that there were some
21 change on your x-ray that related to your breathing
22 asbestos dust?

23 A Not described as such, but we might assume that.

1 Q Let me show you still a third report that I will share
2 with your attorney.

3 MR. GLASSER: This is a report, for the record, from
4 the U.S. Treasury Department Public Health
5 Service, Public Health Bulletin No. 241,
6 dated August 1938, and this was a "Study of
7 Asbestosis in the Asbestos Textile Industry,"
8 and the primary author is Waldemar C.
9 Dreesen.

10 A Now, this bulletin did not come to my hand. It was
11 dated --

12 Q 1938.

13 A --'38.

14 Q Were you aware that the U.S. Public Health Service had
15 evaluated and reviewed four textile plants?

16 A We were aware that the insurance companies would make
17 periodic checks.

18 Q And the standard that you and I have described that
19 limited the quantity of asbestos dust, was that
20 developed, according to your understanding, by the
21 insurance company investigations?

22 A Well, there was a U.S. Bureau of -- I don't know
23 whether it's the Bureau of Safety or something that

1 issued their requirements. I'm not sure of the wording
2 of the department, but there was a Safety Department in
3 the U.S. Government that issued these health notices,
4 and that's the one that -- well, Public Health Service,
5 right in front of me. I don't think it was all from
6 the insurance company. I think the federal government
7 did it maybe because of the insurance company, but I
8 was not in on that kind of a discussion at all.

9 Q I understand. Let me try to find one thing in this
10 report. I'm reading on page 117, and I just wanted to
11 refer in line 3 to the wording where it says "Less than
12 5 million particles per cubic foot." Do you see that?

13 A Yes.

14 Q Was that standard 5 million particles per cubic foot?

15 A That was the top limit.

16 Q And that was the top limit, and if I understand, beyond
17 that limit, there was a recognized hazard to people
18 breathing asbestos?

19 A That was where you were supposed to use respirators.

20 Q And that --

21 A And it was our problem, to keep it below that.

22 Q And am I correct that it did not make any difference
23 where the person worked but if the air that he was

1 breathing had asbestos in it and the measurement was
2 greater than 5 million particles of total dust per
3 cubic foot, there was need for protection, regardless
4 of what his job was?

5 A That's true.

6 (Whereupon a brief recess was taken.)

7

8 BY MR. GLASSER: (Continued)

9 Q You mentioned earlier, Mr. Houghton, the Asbestos
10 Textile Institute. What was the Asbestos Textile
11 Institute?

12 A It was a membership of all asbestos manufacturing
13 companies as well as the different mining companies in
14 Canada. I guess you have one mining company in
15 Vermont, but it was made up of the manufacturing
16 companies as well as the mines.

17 Q And was it an organization formed to render service to
18 buyers and users and makers of asbestos textiles?

19 A Not so much for the users as the producers. I think it
20 was mainly for the manufactures to discuss problems.
21 Each might come up or bring to the organizations some
22 of their thoughts.

23 Q And it was also an organization where you could share

1 advancements, engineering advancements on matters like
2 dust control?

3 A Yes, you could share.

4 Q Now, you mentioned George L. Abbott as being a
5 president of the Garlock Packing Company.

6 A He was president.

7 Q Was he also the representative to the Asbestos Textile
8 Institute in the 1946 time frame for Garlock?

9 A He may have been brought in on some of their
10 organization's side of it, but mostly it would be maybe
11 a purchasing agent, or some other one of the group
12 would be sent to these meetings and I would be usually
13 the one.

14 Q Look with me, please, at the exhibit that I have passed
15 to you and, for the record, it is some minutes of the
16 Asbestos Textile Institute taken at the general meeting
17 held on June 19, 1946 at the Warwick Hotel in
18 Philadelphia, Pennsylvania. Have you seen minutes from
19 the Asbestos Textile Institute?

20 A Some. Those that I attended I would see them.

21 Q Is this in the general form of the minutes that you
22 attended?

23 A I don't remember Harris McKinney. This is back right

1 in the beginning stages, and so I recognize some of
2 these names like George Fabel.

3 Q And he was with Southern Asbestos Company?

4 A Yes.

5 Q And do you recognize any of the other names?

6 A Well, I think I remember Dillon of Johns-Manville.

7 Q What about Mr. Weaver of Raybestos Manhattan?

8 A I may have remembered him. Wakem, I remember, of
9 Johns-Manville.

10 Q That's Mr. Wakem, W-a-k-e-m, Frank J. Wakem?

11 A Yes.

12 Q What about Mr. Widmayer of Keasbey & Mattison?

13 A I don't remember him. I never really got closely
14 attached to --

15 Q What about Mr. J. A. Bettis of Raybestos-Manhattan?

16 A No, I don't remember him.

17 Q If you will, turn with me to page 4 of these minutes
18 that Mr. George L. Abbott attended for Garlock.

19 There's reference to a definition of the Institute, and
20 do these words, in your opinion, reflect the purposes
21 of the Asbestos Textile Institute? "The Asbestos
22 Textile Institute is a voluntary, non-profit
23 organization formed to render service to buyers and

1 users of asbestos textiles."

2 A They're saying users, then they plan to send out
3 bulletins to customers. I was not in on that.

4 Q I understand.

5 MR. GLASSER: I'm going to ask the court reporter if
6 she'd be kind enough to just mark this as
7 Houghton Exhibit Number 2.

8 (WHEREUPON HOUGHTON EXHIBIT 2 - Asbes-
9 tos Textile Institute minutes of June 19,
10 1946 meeting - WAS MARKED FOR
11 IDENTIFICATION.)

12 Q Are you aware as to whether or not some time during
13 1946 or maybe prior to 1946 a report from the Garlock
14 Packing Company relative to their dust control system
15 was prepared?

16 MR. SHANNON: What are you referring to there?

17 MR. GLASSER: Let me give you a copy. For the
18 record, I am looking at the reference to
19 appearance, and I have a copy for Mr.
20 Houghton, also, in the minutes of the dust
21 control committee meeting held on Wednesday,
22 March 13, 1946 at the Engineers Club in
23 Philadelphia, Pennsylvania of the Asbestos

1 Textile Institute.

2 Q On page 2 under paragraph numbered Number 5, there is a
3 statement that "The problem of reduction of dust at the
4 carding engines was then discussed. Mr. McKinney
5 presented a report from the Garlock Packing Company
6 relative to their dust control system." Did you see
7 where I read that?

8 A That's number 5?

9 Q Yes, sir.

10 MR. SHANNON: Your question is does Mr. Houghton
11 remember that report?

12 Q Do you remember a report prepared?

13 A No. There's a fair chance that I may have been asked
14 to prepare the report, but '46, I was there and nobody
15 else was working in a supervisory state in the textile
16 department but me, so I don't remember any report.

17 Q If a report had been prepared as this copy of the
18 minutes indicates, do you know whether a copy of the
19 report would still be available at Garlock?

20 A Well, they had copious storage of reports, but I don't
21 know anyone now over there that is responsible for such
22 a thing, but, you know, it might be the thing to do
23 would be to ask -- I don't know who over there, but

1 what's his name?

2 Q Is this the current management at Garlock?

3 A The current management and the manager -- president was
4 not closely connected with it at that time. We've had
5 several changes in the top. Dick Watson would probably
6 be able to dig in to whoever might be having knowledge
7 of times. The one in charge of files is dead. She was
8 a pretty good person to go to, but I think this would
9 have to be brought up to Dick. He would be a much
10 better one to go after than me.

11 MR. GLASSER: Let me make a request to the attorneys
12 that are here. I would request that you ask
13 Mr. Watson whether or not he knows of and can
14 produce a copy of the report from Garlock
15 Packing Company relative to their dust
16 control system that was presented to Mr.
17 McKinney, who is Harris D. McKinney, the
18 Institute Manager of the Asbestos Textile
19 Institute and discussed in these minutes of
20 March 14, 1946, and I have no reluctance, as
21 stated on the record, I have very high regard
22 for Jim Shannon, and if that inquiry can be
23 made, if you think it's more appropriate that

1 we file it with a more formal notice to
2 produce, I will do so, but I'm trying to
3 accomplish that more informally right now,
4 and if that's permissible to make that
5 request --

6 MR. SHANNON: We'll note your request and make your
7 request to Mr. Watson.

8 A This paragraph 2 refers to a Bausch & Lomb dust
9 counter, and we purchased a Bausch & Lomb dust
10 counter. That was in effect when you saw that 5
11 million particles reference. Well, that's when we were
12 using it, and we used it here. It was a device in
13 which there was a combination of a ^{magnifying} ~~magnified~~ device and
14 a cylinder with a plunger that would suck in a ^{sample} ~~cardium~~
15 of air and impinge that against a glass plate. We used
16 a piece of paper that we would moisten to give humidity
17 and we put that in the chamber, and when you pulled
18 that plunger, the air was slightly moistened and
19 particles would be lodged on that glass plate. Then
20 you simply pick the thing up and you -- the plate was a
21 disc and that sample would be a little band and you had
22 about 12 positions on that glass plate, so you could
23 make samplings at different places.

1 Q Looking through a microscope?

2 A Right, and then we would -- we had a numbering so we
3 had a record of where we had taken our samples and then
4 I would plug it into the -- There was a light on it and
5 you would count. It ^{had}~~was~~ a little grid. It ^{had}~~was~~ two
6 bars and some vertical marks, and in that area was the
7 equivalent of a reading of a cubic foot.

8 Q And you could determine, therefore, what the dust was
9 by making this counting and make a very good educated
10 guess as to what the dust concentration was in the
11 area?

12 A As you were counting maybe 40 particles on that little
13 plate, the 40 particles times a thousand would be forty
14 thousand. I'm talking a little bit out of the top of
15 my head, but --

16 MR. SHANNON: Mr. Houghton, excuse me, but don't
17 talk out of the top of your head. Wait for
18 Mr. Glasser to ask you a question and answer
19 what he asks you. If he wants to get more
20 information about this mechanism, I know he
21 will ask. Don't discuss, Mr. Houghton,
22 please do not discuss things he doesn't ask
23 you about.

1 Q Looking through a microscope?

2 A Right, and then we would -- we had a numbering so we
3 had a record of where we had taken our samples and then
4 I would plug it into the -- There was a light on it and
5 you would count. It ^{had} ~~was~~ a little grid. It ^{had} ~~was~~ two
6 bars and some vertical marks, and in that area was the
7 equivalent of a reading of a cubic foot.

8 Q And you could determine, therefore, what the dust was
9 by making this counting and make a very good educated
10 guess as to what the dust concentration was in the
11 area?

12 A As you were counting maybe 40 particles on that little
13 plate, the 40 particles times a thousand would be forty
14 thousand. I'm talking a little bit out of the top of
15 my head, but --

16 MR. SHANNON: Mr. Houghton, excuse me, but don't
17 talk out of the top of your head. Wait for
18 Mr. Glasser to ask you a question and answer
19 what he asks you. If he wants to get more
20 information about this mechanism, I know he
21 will ask. Don't discuss, Mr. Houghton,
22 please do not discuss things he doesn't ask
23 you about.

1 Q But I'm very interested and I take it from your
2 statements that you did some of the counting yourself.

3 A (No verbal response.)

4 Q You're nodding your head yes?

5 A Yes.

6 Q These countings were done at Garlock in the 1946 time
7 frame or earlier?

8 A The year we bought it I can't give you, but we had it.

9 MR. GLASSER: I'm going to ask please that this be
10 marked as Houghton Number 3, and specifically
11 they are the minutes of the dust control
12 committee meeting held March 13, 1946.

13 (WHEREUPON HOUGHTON EXHIBIT 3 - March
14 13, 1946 dust control meeting minutes - WAS
15 MARKED FOR IDENTIFICATION.)

16 Q I'm going to go back to what is marked Houghton Exhibit
17 Number 2, and this is the minutes of June 19, 1946
18 where Mr. George Abbott, George L. Abbott, attended for
19 Garlock. On paragraph Number 2, it states that one of
20 the activities that had been done during the last
21 quarter included the "notification to members and
22 nonmembers on O.P.A removal of ceiling prices." That
23 was one thing they did. Another thing was the

1 "distribution of the Garlock Dust Control System
2 report," and that's the report that I've asked you did
3 you specifically recall.

4 A I do not recall it.

5 Q Do you know whether it was the practice of the ATI to
6 keep not only members advised of what was going on but
7 also keeping nonmember companies informed of Institute
8 activities?

9 MR. SHANNON: Mr. Glasser, please, if you're going
10 to ask him a question, if he knows, ask him,
11 but I think the record should reflect you're
12 pointing out something on that document which
13 evidentially indicates what you've just
14 asked.

15 MR. GLASSER: I'm happy to confirm what I was
16 showing him when I asked the question is
17 paragraph number 3. In fact, let me read it
18 to the record, and I'm reading from Houghton
19 Exhibit Number 2, the minutes of general
20 meeting of June 19, 1946.

21 Q Was it your understanding that this was a regular
22 practice, namely, "The president brought up the matter
23 of keeping nonmember companies informed on Institute

1 activities." Do you know whether the Asbestos Textile
2 Institue not only tried to serve its members concerning
3 asbestos matters but also nonmembers?

4 A I don't know that.

5 Q Going back, Mr. Houghton, to the 1946 time frame,
6 again, the mid 40's, were you familiar with the
7 Industrial Health Foundation, the IHF?

8 A No, I was not kept up to date on that, no.

9 Q Do you recall whether or not a study was made of the
10 Garlock Packing Company's plant by a Mr. W.C.L. Hemeon
11 who was a chief engineer for the Industrial Health
12 Foundation in the 1947 time frame? Do you remember
13 people coming or Mr. Hemeon coming to the plant to
14 study and evaluate what you do with regard to dust
15 control?

16 A I can't give you an answer. No, I'd say no.

17 Q I will share some papers with you that may or may not
18 help let me ask this question first. Are you aware
19 that the Asbestos Textile Institute at its meeting as
20 reflected by the minutes of the subcommittee meeting on
21 dust control committee held June 13, 1946 at the
22 Engineers' Club in Philadelphia, was concerned and I'm
23 reading in paragraph 1A of those minutes, of the

1 "Importance of dust control problem to all member
2 companies and the need for immediate cooperative
3 action." My question: Were you aware that the
4 Asbestos Textile Institute was discussing the need to
5 gather information, facts, on dust determination and
6 control procedures in the various plants of its
7 members?

8 A I do not remember any report of that action.

9 Q Were you aware of any services that were available by
10 the Mellon Institute in Pittsburgh?

11 A I'm not aware now. No, I can't say I was aware.

12 Q And I might have asked this, but were you aware that
13 the Industrial Health Foundation operated out of
14 Pittsburgh and offered industrial hygiene, engineering
15 and medical advice to industry where it was sought?

16 A No.

17 MR. GLASSER: For the record, I will ask that this
18 be marked as Houghton Number 4.

19 (WHEREUPON HOUGHTON EXHIBIT 4 - June
20 13, 1946 Dust Control Committee minutes - WAS
21 MARKED FOR IDENTIFICATION.)

22 MR. GLASSER: Off the record.

23 (Whereupon a discussion was held off the record.)

1 Q I'm going to show you a thick document, and though it's
2 all one document, the copy that I give you is divided
3 by some loose pages and then there's a paperclipped
4 portion and then some more loose pages. I'm going to
5 ask the court reporter to mark this entire exhibit as
6 Houghton Number 5, and for the record, I will read it
7 with Mr. Houghton. This is a report of the Industrial
8 Hygiene Foundation of America, Incorporated out of
9 Pittsburgh. It is a "Report of the Preliminary Dust
10 Investigation for the Asbestos Textile Institute,"
11 dated June, 1947 by W.C.L. Hemeon, head engineer;
12 specifically, it's dated June 13? I think June 13,
13 1947. I'd like you to take a moment or as much time as
14 you need and look at that, and I don't want to speed
15 your taking the time. You take your time, but also let
16 me pull out for you the paperclipped portion, and the
17 paperclipped portion is dated July 11, 1947 and it's a
18 "Memorandum on the Plant of the Garlock Packing Company
19 Supplementing the General Report," and the general
20 report is the document that you have, and it identifies
21 that as the "Preliminary Dust Investigation For
22 Asbestos Textile Institute of June, 1947," and you
23 might look specifically at this three-page report to

1 see whether it has any effect on your memory concerning
2 a study that was done by Dr. Hemeon on the Garlock
3 Packing Company plant.

4 A "We rate this as average."

5 MR. SHANNON: Don't read out loud. She'll write it
6 down. Just read it to yourself.

7 MR. GLASSER: Off the record.

8 (Whereupon a discussion was held off the record.)

9
10 MR. GLASSER: While we were off the record, Mr.
11 Houghton had just a matter of several minutes
12 to look at the document, which is a rather
13 large document. We decided we're going to go
14 to lunch. I have told Mr. Houghton in the
15 presence of his counsel that when we return
16 from lunch, I will ask you him whether or not
17 the document has any effect on his memory,
18 whether or not he recalls this study being
19 made; specifically, whether he remembers or
20 recalls a study being made of the Garlock
21 facility, which is included in this report,
22 but in any event, we'll resume those
23 questions following the lunch hour.

1 (Whereupon a recess was taken at 12:50 p.m. and the
2 deposition reconvened at 1:50 p.m.)
3

4 MR. GLASSER: We have had a lunch break since
5 approximately an hour ago, and when we
6 returned, Mr. Houghton had not had an
7 opportunity to review the document that we
8 left with him, namely the ^{Hemen}~~Hemen~~ document
9 which we marked as Houghton Exhibit Number
10 5. Since we've been back ten minutes or so,
11 he has had time --

12 MR. SHANNON: Five.
13

14 BY MR. GLASSER: (Continued)

15 Q You've had some time, Mr. Houghton, to review the
16 large document and the three-page paperclipped
17 portion?

18 A I've gone in ^{detail}~~detail~~ on the one Garlock.

19 Q Do you have any recollection of an examination or
20 evaluation having been made by the representatives of
21 the Industrial Hygiene Foundation of America around the
22 1947 time frame as a part of an investigation of
23 approximately ten plants that the Asbestos Textile

1 Institute was overseeing?

2 A I can recall making studies myself and insurance
3 companies have also examined it, but as for tying it to
4 a definite report, I cannot accurately say. I know
5 that.

6 Q As I understand your testimony, were there reports or
7 evaluations made of the Palmyra plant in the mid
8 1940's?

9 A Since you say in the area of the 40's, yes.

10 Q What you don't have any specific recollection of Dr.
11 Hemeon coming through and reviewing your plant and
12 writing this report.

13 A No.

14 Q Did Garlock have a rather unusual interplant heating
15 system where extra heat from one plant was carried over
16 to another plant?

17 A Heating?

18 Q Heating or excess hot air removal.

19 A Each plant had its own heating system from the power
20 plant's supply of steam. Our own thermostat would take
21 care of our unit. Each building was a unit, but there
22 was no pumping of air around. It was steam heated by
23 independent heating units.

1 Q Staying with the period around the date of this report,
2 namely, July 1947, were you aware that there was
3 concern in the Asbestos Textile Industry to try to
4 determine or verify whether the 5 million level was in
5 fact a safe or sure level?

6 A No.

7 Q Were you aware that there were efforts among the
8 various asbestos textile manufacturers through the
9 Asbestos Textile Institute to exchange information on
10 how to improve things?

11 A I think it was an independent effort to improve your
12 particular unit. We weren't -- I was not concerned
13 with other units.

14 Q But if you had good information, you were willing to
15 share it through the Asbestos Textile Institute with
16 others?

17 A Willing. I was always willing but there was not a
18 constant feeding from one to another.

19 Q Was it your understanding in the mid 1940's that the 5
20 million particle standard that we have discussed was
21 not positive insurance that no disease would occur, it
22 was more of a goal to strive for, is that correct?

23 A It was more as a goal, yes, that's -- I was not in the

1 health department.

2 Q As an engineer, were you aware that there was the
3 electron microscope was in existence in the 1946-1947
4 time frame?

5 A To answer that question, I couldn't say -- no, I was
6 not aware that it was available for our use.

7 Q But were you aware that it had been invented?

8 A Oh, I think I may have heard that they had developed
9 the microscope.

10 Q The electron microscope?

11 A The electron microscope, yes.

12 Q Am I correct that the electron microscope had an
13 ability to see things at a far greater magnification
14 than a regular light microscope?

15 A Yes, I've heard that.

16 Q Were you aware that there was concern expressed in the
17 1947 time frame that the light microscope was not a
18 good device for counting very small asbestos fibers?

19 A No, I didn't hear that.

20 Q Did you know the difference between a fiber and a
21 particle?

22 A I think the definition was a fiber was of some 5
23 microns or over; a particle was a spot.

1 Q Would it be fair to say that a fiber was three times
2 longer than it was wide and a particle was more of a
3 rounded shape.

4 MR. SHANNON: I object to that.

5 A No, I can't say that.

6 MR. SHANNON: He hasn't testified to anything like
7 that.

8 A I can't say that.

9 Q I'm showing you a page that comes out of the Hemeon
10 report, Houghton Number 5, that has a copy of what
11 purports to be a photomicrograph. Do you see where I
12 show that?

13 A Yes.

14 Q Have you ever seen in the 1947 time frame pictures or
15 studies of asbestos that were produced under an
16 electron microscope?

17 A No.

18 MR. GLASSER: I am going to request the court
19 reporter to confirm that this has been marked
20 as Houghton Number 5 and pursuant to my off-
21 the-record discussion with Jim Shannon, I am
22 going to give you today the cover sheet of
23 that exhibit, and I'll discuss it on the

1 record. My notations were basically my own
2 cues that give me an abbreviated portion of
3 the text. I really don't have an objection
4 to that being filed. I think it would be
5 nicer to have a nice clean copy, but rather
6 than run the risk I'm going to leave her this
7 copy and then if I can supply her with a
8 clean copy, then it will be substituted. The
9 copy of the text is identical.

10 MR. SHANNON: I don't have any objection of what-
11 ever you want to do. If you want to supply
12 her with a clean copy at a later time, that's
13 perfectly all right.

14 MR. GLASSER: Pursuant to that I'm going to add to
15 page one the rest of this bulk.

16 MR. SHANNON: Off the record.

17 (Whereupon a discussion was held off the record.)

18 (WHEREUPON HOUGHTON EXHIBIT 5 - 65
19 pages; first document being "Report of
20 Preliminary Dust Investigation For Asbestos
21 Textile Institute, June 1947 - WAS MARKED FOR
22 IDENTIFICATION.)

23 Q Mr. Houghton, did you have any occasion, sir, in the

1 1940's to attend any of the meetings of the Asbestos
2 Textile Institute?

3 A I have no record that I know of of my attending in the
4 40's. I think my start was in the 50's.

5 Q Was it Mr. Abbott who attended ATI for Garlock in the
6 1940's?

7 A He probably did. When I attended, he did not.

8 Q When he attended in the 40's, did he ever report to you
9 what had been discussed?

10 A I cannot recall any reports from him.

11 Q Do you know to whom he would ordinarily report in the
12 1940's?

13 A It might have been through the various different
14 factory managers, Cecil Hubbard for a number of years,
15 and my memory is poor, but there were probably a period
16 of not more than five or six years of any one of the
17 various managers when something took place and they
18 would change or they died.

19 Q Mr. Hubbard, you told me, is no longer available?

20 A He's dead. I guess he's been dead for 20 years.

21 Q Do you know whether any of the managers of any of the
22 asbestos-producing Garlock plants from the 1940's are
23 still alive and available?

1 A I don't think so. ~~Mc~~Mullen is dead and oh, fella that
2 lived down here, he's dead. No, there aren't many of
3 them alive. All along the line, they've dropped off,
4 and they didn't work in the asbestos plant.

5 Q We have talked about various dust counting techniques
6 that were used within the plant on the carding and
7 other dust-producing operations. To your knowledge,
8 did Garlock ever run tests to determine the dust count
9 of how the product would act when it was being used by
10 the user?

11 A Not that I know of, no.

12 Q To your knowledge, did Garlock ever publish any booklet
13 or put down in a report for its customers what
14 precautions should be taken when people, users, were
15 using asbestos containing products from Garlock?

16 (Whereupon a discussion was held off the record.)

17 Q Were you shaking your head before we went off the
18 record?

19 A I can't give you any positive answer, no.

20 Q To your knowledge, at any time while you were with
21 Garlock, did they ever place a warning on their
22 asbestos-containing materials to warn people of any
23 hazard that might be associated with the use of the

1 products?

2 A It was not my job. I don't know of anyone doing that,
3 but I can't give you an answer.

4 Q How long did you remain in the employ of Garlock?

5 A Thirty-one years on salary there, nine years as a
6 consultant after retirement.

7 Q And if my mathematics is correct, then, you would have
8 worked for Garlock from 1939 until 1970?

9 A That's right.

10 Q On salary?

11 A On salary.

12 Q And then, are served in a consultant capacity from
13 1970 to 1979?

14 A Yes.

15 Q And your answer about never having seen any warnings
16 on any of the asbestos-containing products --

17 A No.

18 Q -- that would be true from 1939 to 1979?

19 MR. SHANNON: That also assumes that he would have
20 had an opportunity to observe. You didn't
21 ask him where he might have served as a
22 consultant. My father is a consultant now in
23 his old firm, and he hasn't been in the firm

1 for years.

2 Q Am I correct that you never from 1939 to 1979 saw any
3 warning on the asbestos-containing materials
4 manufactured by Garlock?

5 A No. (In errata, states his answer should be "Yes.")

6 Q What was the nature of your consultant work from 1970
7 to 1979 for Garlock?

8 A Some was development work in the factory. Mainly
9 concerned with graphite, yarn and Teflon. Some of it
10 has been in foreign countries. I was sent to set up
11 braiding plant and instruct the weavers -- the
12 operators on making braided packings, both in France
13 and in the Philippines. For one period, I examined a
14 textile plant reporting back conditions I found in that
15 plant in Spain.

16 Q Were these all Garlock plants?

17 A All Garlock plants.

18 Q Has Palmyra always been its primary manufacturing site
19 for gaskets and textiles?

20 A Its primary, yes.

21 Q Did Garlock, to your knowledge, ever share any of the
22 information it had about the importance of reducing
23 dust where asbestos dust was being generated? Did it

1 share that information with any of the users or
2 purchasers of its product?

3 A I was not in on any of that, no. As for Garlock doing
4 it, I can't give you an answer.

5 Q When did you first become aware of any association
6 between the ^{inhalation} ~~infiltration~~ of asbestos fibers and any
7 form of cancer?

8 A You say when? That I can't give you a good answer.

9 Q I have a paper that I will be discussing with you in a
10 matter of moments from March of 1956 where the records
11 indicate you attended an ATI meeting, but I want to ask
12 some leading questions first. When did you first start
13 attending ATI meetings?

14 A Probably about 1960.

15 Q But if a record indicates that you had attended
16 earlier, could you have attended as early as March of
17 1956?

18 A Basing on memory, possibly. In Philadelphia.

19 Q That's correct, that's correct. Did you know the name
20 in the 1950's of the Saranac Laboratories in Saranac,
21 New York?

22 A I think I'll have to say no.

23 Q Did you know the name as best you can recall, Mr.

1 Houghton, of Dr. Garrett Sceepers?

2 A No.

3 Q Did you know the name of Dr. Wilhelm Hueper?

4 A I'll have to say no.

5 Q Let me show you the document that I had reference to
6 and I'm going to show you and your attorneys two
7 different documents which I am going to mark numbers
8 Houghton Number 6 and Houghton Number 7. Houghton
9 Number 6 will be the minutes of the general meeting of
10 the Asbestos Textile Institute held March 8, 1956 in
11 Philadelphia, Pennsylvania, and Houghton Number 7,
12 though inconsistent chronologically, will be the
13 minutes of the meeting of the Board of Governors of the
14 Asbestos Textile Institute held on March 7, 1956 in
15 Philadelphia, and let me give a copy of these to
16 counsel.

17 (WHEREUPON HOUGHTON EXHIBITS 6 and 7 -
18 Minutes of March 8, 1956 and March 7, 1956
19 meetings of the Asbestos Textile Institute,
20 respectively - WERE MARKED FOR
21 IDENTIFICATION.)

22 Q Mr. Houghton, I'm turning to now what the court
23 reporter has marked as Houghton Number 6, and in terms

1 of the general form, can you identify this form as
2 being what you recall the Asbestos Textile Institute
3 minutes generally to look like?

4 A Well, it looks like the type of report that we
5 received.

6 Q And do you see your name on page 1?

7 A Right here, there and here. (Indicating.)

8 Q And so that the record is clear, the two places that
9 you referred to, number one was on the list of those in
10 attendance over on the right-hand side of the page in
11 the middle, in all caps it says, "Garlock Packing
12 Company," and it says G. E. Houghton, that's you, is
13 that correct, sir?

14 A Yes.

15 MR. SHANNON: Attending as a guest.

16 MR. GLASSER: Attending as a guest, that's right.

17 Q And the second place where your name is listed is in
18 paragraph number one where it states in the next to
19 last line of that paragraph that Mr. G. E. Houghton,
20 Garlock Packing Company, and Frank Gatke, Asbestos
21 Textile Company were in attendance at the meeting and
22 also were in attendance at the Air Hygiene meeting on
23 March 7th, okay?

1 A All right.

2 Q If if you turn over to pages 2, in paragraph number 6,
3 it indicates that at the meeting on March 7th, the day
4 before, that one of the matters that was fully
5 discussed were the comments of Dr. Smith, that's
6 Kenneth Wallace Smith of the Johns-Manville
7 Corporation, which related to the report issued by Dr.
8 Hueper, who was with the National Cancer Institute, on
9 a subject relating asbestosis with lung and heart
10 disease was discussed at great length. Do you see
11 where I'm reading that?

12 A I see where you're reading it, yes, but I was not at
13 that earlier meeting. This was an earlier meeting,
14 wasn't it?

15 Q I understand but if you will turn back with me and see
16 whether this refreshes your recollection. In paragraph
17 number 1 it states, and I'll read it in its entirety
18 and you read with me, "The meeting was called to order
19 by President Wakem and an address of welcome extended to
20 all of the members present. Recognition and welcome
21 was also extended to representatives of two former
22 member companies who attended the meeting of the Air
23 Hygiene Committee on March 7 and were also in

1 attendance at this meeting, namely, G. E. Houghton,
2 Garlock Packing Company, and Mr. Frank Gatke, Asbestos
3 Textile Company." Do you see where I've read that?

4 A This apparently my first meeting with the ATI.

5 Q But the question is raised concerning the meeting on
6 March 7th, and for that I would ask that we turn to
7 the other exhibit that I gave you which you now have in
8 front of you, and this is the one for March 7th, and do
9 you see -- and I'd like you to look at paragraph 2A,
10 and take a ^{moment} ~~moment~~. It's difficult to read. I'll be
11 happy to read it with you. Can you read it? Sir,
12 while you're flipping on the light to see better, do
13 you remember Dr. Kenneth Wallace Smith from the
14 Johns-Manville Corporation?

15 A I cannot give any accurate remembrance of this man.

16 Q Are you able to read it, Mr. Houghton?

17 A Most of the words I can understand.

18 MR. SHANNON: Off the record.

19 (Whereupon a discussion was held off the record.)

20 Q You and I will read it together. I'm going to read it
21 and she'll take it down so the record is clear.
22 Starting on A, it says, "The Air Hygiene Committee
23 report was presented by two representatives from that

1 committee, Dr. Kenneth Smith and Mr. D.R. Holmes,
2 chairman of the committee. Dr. Smith addressed the
3 meeting first with remarks directing attention to a
4 report issued by Dr. Hueper titled 'Public Health
5 Monograph #36, A quest into the environmental causes of
6 cancer of the lung.' Much of the information set forth
7 in this report is unsubstantiated and is in variance
8 with established understanding and knowledge of
9 informed men in the medical profession; however, this
10 article is apparently assumed to be the only authentic
11 treatise today available which may be used as a
12 reference for court action involving asbestosis and its
13 relationship to heart disease and lung cancer. Dr.
14 Smith strongly recommended that the Institute initiate
15 a program of investigation and publicity to counteract
16 the unfavorable publicity presently directed to the
17 asbestos industries as a result of the work of Dr.
18 Hueper. It was recommended that the Industrial Air
19 Hygiene Foundation be engaged to collect the necessary
20 information to publicize the results so obtained." Did
21 I read that correctly?

22 A Yes.

23 Q Do you recall the presentation by Dr. Kenneth Smith

1 concerning the article that had been written by Dr.
2 Hueper associating asbestosis and lung cancer?

3 A If I had seen that, it would have been from a report
4 because I wasn't at that meeting.

5 Q If you will turn back with me to Houghton Number 6, do
6 you recall being at the meeting on March 8, 1956?

7 A Yes.

8 Q Do you recall at that meeting as is reflected by Number
9 6 of those minutes that the report concerning Dr.
10 Hueper's article was discussed at the meeting that you
11 were in attendance at on March 8, 1956? Do you
12 remember any discussion such as is reflected by Number
13 6 of the minutes?

14 A To recall? No.

15 Q Do these minutes, and take your time and review them,
16 and see whether any of the matter the discussed help to
17 serve or refresh your recollection.

18 MR. GLASSER: Off the record.

19 (Whereupon a discussion was held off the record.)

20 MR. GLASSER: Jim Shannon has pointed out to me
21 that in Houghton Number 6, the minutes from
22 March 8, 1956 that there is a very obvious
23 deletion of four or five inches or so in the

1 middle of page 2 of those minutes. There is
2 a partially visible 5 in the left-hand margin
3 apparently marking paragraph 5 which has been
4 blocked out. My best knowledge is that this
5 is a copy of what we have in our office
6 expressly, so that no question is raised, it
7 is nothing that we have blocked out, and yet
8 I leave open the fact that should anyone be
9 able to produce a ^{bona fide} ~~bonified~~ copy of the
10 minutes of this meeting, that we will be
11 happy to receive that as an exhibit or
12 perhaps a supplemental exhibit which we could
13 mark 6A for whatever value that is. My copy
14 does not reflect paragraph 5, and I have no
15 information as to what it is or how it got
16 blocked out.

17 A I remember being at this meeting, but then you asked me
18 do I recall these various items. My answer would be
19 no.

20 Q My concern, Mr. Houghton, is to determine do you
21 recall any mention associating asbestos or asbestosis
22 with lung cancer from the meeting?

23 A Oh, I think I've absorbed that over the years.

1 Q What about in the time frame around March of 1956? Do
2 you recall having looked at this, and I don't mean to
3 try to ask do you remember everything, but I'm trying
4 to determine do you have any recollection as to whether
5 you had heard anything concerning the association of
6 asbestosis and lung cancer in the 1956 time frame?

7 MR. SHANNON: I object to the question because it's
8 been asked and answered at least two or three
9 times now, and the continued repetition of it
10 is beginning to suggest an answer to him.

11 MR. GLASSER: I don't mean for it to do so.

12 MR. SHANNON: I know you don't mean it. It's going
13 to have that effect if you keep asking it of
14 him.

15 Q Do you understand my question?

16 A I understand do I have that knowledge, but not -- I
17 don't recall when I got the knowledge.

18 Q Do you recall whether or not you would have received a
19 copy of the minutes of the meeting that you attended?
20 Wasn't that generally the practice of --

21 A The practice would be about a month after the meeting.

22 Q And was it your personal practice with regard to
23 meetings that you had attended to read or review the

1 minutes that were sent to you?

2 A Yes.

3 Q And is it not more likely than not that you would have
4 received a copy of these minutes, and I'm referring to
5 Houghton Number 6 which has your name mentioned?

6 MR. SHANNON: I object. That calls for complete
7 speculation. He's he told you that he
8 remembers being at the meeting, but he can't
9 remember the specific topics. Now you're
10 asking if he remembers receiving the
11 document.

12 Q That's a different question, but do you recall
13 receiving a copy of these minutes?

14 A I recall receiving copies of minutes, yes. This
15 particular one, I can't give you a positive answer.

16 Q Customarily when you did receive minutes, you would
17 review them?

18 A Yes. Years have gone by.

19 Q I understand that, I really do, Mr. Houghton, and I
20 know that the question is tough. You never had
21 occasion in reading minutes that you received from
22 ATI meetings to say well, that's wrong, that didn't
23 happen or make any correction to any minutes?

1 A No.

2 Q Going to a different topic, Mr. Houghton, are you aware
3 that in 1957 on November 14, 1957 a Worker's
4 Compensation claim was filed by a lady by the name of
5 Grace Baylord claiming that she had either pulmonary
6 fibrosis or pulmonary asbestosis and her job or work
7 place was the textile department where she had been
8 employed intermitently for 22 years during the 1923 to
9 1957 time frame? Do you remember or know Grace
10 Baylord?

11 A Yes. That was her married name.

12 Q Was she a worker under your supervision?

13 A Yes.

14 Q Were you aware that in 1957 she filed a Worker's Com-
15 pensation claim against Garlock for pulmonary
16 asbestosis?

17 A I think my answer would be yes.

18 Q And you're aware that she was paid funds then?

19 A I don't recall seeing that report, but I know she
20 filed a claim.

21 Q Was she the first claim for asbestosis that you are
22 aware of at Garlock or were there ones earlier than
23 1957?

- 1 A I can't answer that.
- 2 Q You don't recall any before 1957?
- 3 A No, I don't recall any.
- 4 Q Do you know what her job was in the textile department?
- 5 A I think she was a twister operator. Twister means a
6 machine that combines two or more threads together and
7 twists it. She was a twister operator.
- 8 Q Did the twister have a local exhaust ventilation
9 system?
- 10 A No. The yarn is spun so it doesn't produce much dust,
11 so the twister is relatively a clean machine. The
12 spinning frame produced dust. That's the one I put
13 machine dust recovery equipment on.
- 14 MR. GLASSER: Off the record.
- 15 (Whereupon a discussion was held off the record.)
- 16 Q What period of time did you attend the ATI meetings
17 yourself?
- 18 A Most of the meetings from that date there.
- 19 Q From 1956?
- 20 A '56. Most of time I attended up to 1970. I think that
21 there were not many that -- I didn't attend one.
22 There's one I did not attend was down in South
23 Carolina. It was at a Hilton Head.

1 Q They had approximately how many meetings a year?

2 A It was two, sometimes three.

3 Q Did you serve on any committees?

4 A Oh, yes, we would break up into committees, but I
5 haven't clear-cut records of committees I served on,
6 but we would have a general meeting, then we would meet
7 in groups, probably mostly reflecting that sections we
8 were involved in.

9 Q Did anyone else attend meetings with you from Garlock?

10 A Yes.

11 Q Who generally would attend with you or in addition to
12 you?

13 A It was not always the same one. I can't give you
14 those names. I'd have to work on my memory, which
15 isn't very good. I can't give you a list of names. I
16 know that ^{Sudhakar Dixit} ~~Sedella Dixon~~ went with me in the latter part
17 because he came with us in 1967.

18 MR. SHANNON: Off the record.

19 (Whereupon a discussion was held off the record.)

20 Q I understood your testimony that starting with 1956 and
21 continuing through 1970 that you attended many of the
22 meetings yourself and you rarely missed any.

23 A Yes.

1 Q The one that you missed was in Hilton Head, that your
2 aware of?

3 A That's the only one that stands out in my mind.

4 Q And in addition to your attending, there were other
5 people who would, on occasion, attend from Garlock?

6 A Yes, there would be frequently there would be one
7 other.

8 Q Mr. Kuzmuk?

9 A Kuzmuk.

10 Q Did Al Dayton ever go?

11 A I don't think I remember Al Dayton being with me. He
12 was on the safety committee.

13 Q Did you go to any meetings of the ATI after 1970?

14 A I think not.

15 Q When you went to meetings of the ATI between 1956 and
16 1970 and returned to Palmyra, to whom would you report
17 what had happened at the meeting?

18 A It would only be the factory manager. Factory manager
19 sometimes was the vice president, but it would be the
20 factory manager that I would directly report to.

21 Q And your position, Mr. Houghton, when you came in, you
22 were initially, I believe you told us, a superintendent
23 in the textile department?

1 A Up until 1958 and then they wanted me to go in the new
2 missile department, so I was moved over to the
3 engineering department from then on, I worked in the
4 missile department and then ^{we} ~~he~~ worked on development
5 for Chevron and other products, probably mainly
6 Chevron.

7 Q Did you continue to have contact with those plants
8 that were making asbestos-containing materials?

9 A When an Asbestos Textile meeting would take place,
10 they'd ask me if I could go.

11 Q And you would attend for the company?

12 A Yes. I was the -- up until -- now, that was -- yes,
13 1970. From then on, I didn't attend, but that was 1960
14 that I started working on engineering, but I was still
15 more or less related to the textile departments, more
16 or less consultant for textile problems.

17 Q And still attending the Asbestos Textile Institute
18 meetings?

19 A Yes.

20 Q Is it fair to state that one of the topics that was
21 discussed at many meetings was the health effect
22 associated with exposure to asbestos and ways to
23 control it dust?

1 A Some, not all.

2 Q It was discussed at some meetings but not all meeting.
3 Did there come a time where you heard any discussion at
4 the Asbestos Textile Institute about the need to place
5 warnings on asbestos-containing products?

6 A I recall no discussion on warnings.

7 Q After 1970, when you were no longer on the payroll but
8 were serving as a consultant to Garlock, were you
9 kept abreast as to dust counts that were going on at
10 the plant and what the asbestos levels were in those
11 dust counts?

12 A Only in discussions. We had developed a new plant and
13 I was following that, Out in Sherbrooke. I was aware of
14 what was happening there.

15 Q Did you know who Mr. H.R. Hughes was?

16 A Hughes? That's not clear in my mind.

17 Q Do you know who Mr. L.A. Green was?

18 A Green?

19 Q Yes, sir.

20 A No.

21 Q Are you aware as to whether or not Garlock was cited
22 for any occupational safety and health violations in
23 the 1972 time frame under the new OSHA law?

1 A I didn't hear of it.

2 Q In your experience as an engineer, did you ever have
3 occasion to use yourself or to hear of anyone else who
4 used a ^{Tyndall}~~tindle~~-beam lamp to help visual observation of
5 dust movements, and what I'm showing Mr. Houghton as I
6 speak is a letter dated August 18, 1972 from Turner
7 Brothers Asbestos Company Limited to a Mr. D.J. ^{Camille}~~Kamel~~,
8 Vice president International Operations, Garlock Inc.,
9 1250 Midtown Tower, Rochester, which has a Garlock
10 "received" stamp on it of August 31, 1972 with the
11 notation "vice president engineering." You see the
12 reference on page 2 of this letter?

13 A I do not remember hearing of that. I knew that ^{Camille}~~Kamel~~
14 was president, but I did not hear of that.

15 Q You never had occasion in evaluating any dust to use a
16 ^{Tyndall}~~tindle~~ light --

17 A No.

18 Q -- to help you to see the dust or the fibers?

19 A Only this Bausch & Lomb.

20 Q The Bausch & Lomb counter that you described?

21 A That one.

22 Q Mr. Houghton, when you were with Garlock, even in the
23 very late 1930's and 1940's, were you aware that the

1 Garlock asbestos-containing products were going to be
2 used by various mechanics, asbestos workers, insulators
3 as a part of their day-to-day jobs?

4 A The products we made were not of the insulation type.
5 We made packing rings, gaskets.

6 Q But you were aware that Garlock gaskets, for example,
7 would be used on ships to work with flanges and valve
8 covers?

9 A Yes.

10 Q Were you aware that Garlock gasket materials were being
11 sold to the government for use aboard ships?

12 A When you ^{say were you} ~~way you were~~ aware, I was not connected with
13 the sales department. I knew gaskets were being made.

14 Q And did you know that gaskets were or some of the
15 gaskets would be used aboard ships?

16 A Well, just in conversation I would say I would assume
17 they would be, but I was not connected with sales.

18 Q Were you also aware that other materials, perhaps from
19 your days at Manville, were being used to go on pipes
20 and boilers, turbines and heat-generating equipment?

21 A That type of product was made by Johns-Manville.

22 Q I understand.

23 A I knew that that was being made for boilers and

1 turbines.

2 Q And did you also know that some of the gaskets that
3 were being made by Garlock would also end up being used
4 on boilers and turbines?

5 A Not then. I didn't even know who Garlock was.

6 Q Let me clarify. Once you came to work for Garlock and
7 you knew that they were making compressed gasket
8 sheeting and gaskets, you were aware that some of the
9 Garlock gaskets would be used on boiler and turbine
10 couplings and on pipes leading off of boilers and
11 turbines?

12 A List of names did not come to me in the textile
13 department, but I knew Garlock was making gaskets. It
14 was up to the sales department where they were to go
15 to.

16 Q And you knew that the Garlock gasket materials
17 foreseeably could be used on all of these hot machine
18 processes?

19 A My answer is yes.

20 Q You also knew, did you not, that the gasket materials
21 that Garlock was making, though new at the time that
22 you manufactured them, ultimately had a limited life
23 span when they were subjected to the high temperature

- 1 heats for which they were ^{intended?} ~~intendeded?~~ They would not
2 last forever.
- 3 A Oh, I know that replacements are needed.
- 4 Q You would be out of business if they did didn't need
5 some replacements.
- 6 A I was not a maintenance man.
- 7 Q I understand, but you knew that the materials were
8 ultimately to be replaced with new ones.
- 9 A That's almost an axiom.
- 10 Q I agree, and you knew that where there were boilers or
11 turbines that were insulated that not only would the
12 insulation have to be replaced but that the gasket
13 fittings would also have to be replaced.
- 14 A Nobody ever discussed that with me.
- 15 Q But you are aware of that?
- 16 A No, I wasn't aware of it. I wasn't even thinking about
17 it. How could I be aware of it when I didn't know
18 where it was being used?
- 19 Q What I'm trying to clarify is that you knew that the
20 products, the gasket materials that Garlock was making
21 ultimately would have to be replaced.
- 22 A Well, you said those words.
- 23 Q Do you agree with me that --

1 A I agree that generally things have to be replaced.

2 There's nothing that we make that's permanent.

3 Q Are you aware that once a gasket had been subjected to
4 the intense heat of a boiler --

5 A What is intense heat?

6 Q I can use a number of 600 pounds pressure upwards.

7 A What is the temperature?

8 Q 600 degrees upwards.

9 A The asbestos would stand that, maybe not the rubber.

10 Q Well, that's helpful. Once your gasket material that
11 Garlock made the asbestos containing gaskets, whether
12 it was rubber coated or however it was coated, once it
13 had been subjected to high temperature, there would be
14 some deterioration of the carrier product, am I
15 correct?

16 A Probably.

17 Q Are you aware as to how mechanics in the field would
18 remove a worn out or burnt out or gasket that needed to
19 be replaced? Are you aware that they would use knives?

20 MR. SHANNON: I object now. Richard, you asked him
21 a question, now you're trying to go back and
22 give him the answer.

23 MR. GLASSER: I have a right to ask questions as I

1 see fit and you have a right to object.

2 Q Are you aware or did you understand that once gasket
3 materials had been used and subjected to heat and had
4 to be replaced, that workers sometimes would have to
5 scrape or file or cut the gasket from the pipe or
6 turbine --

7 A I might ask you that question. How would you answer
8 it?

9 Q My question for you, Mr. Houghton, is were you aware of
10 how the mechanics installed your product in the field?

11 A No.

12 Q Were you aware of how they removed your products in
13 the field?

14 A No.

15 Q All you were aware of is that ultimately they would
16 need replacement, am I correct?

17 A Placed another order. No, that kind of a question is
18 not -- Most of us aren't concerned with that, then you
19 say am I aware. No I wasn't aware, but I know that
20 we've got a replacement order. That's up to the
21 customer not me.

22 Q I understand, I understand. The point I'm trying to
23 get to, if we can assume that there would be a hazard

1 when the person who went to scrape an asbestos-
2 containing gasket off of a hot pipe had to remove the
3 old gasket so a new one with a good hot seam could be
4 replaced, whose concern was it at the Garlock
5 organization to make sure that the hazard was reduced
6 or that the people who would be remove the asbestos
7 gasket would be advised of the hazard? Whose
8 responsibility was that in the Garlock organization as
9 you remember it?

10 MR. SHANNON: I object to that question because it
11 implies that someone had a specific respon-
12 sibility as you have exactly described it.

13 MR. GLASSER: Then I would amended my question.

14 Q Whose responsibility, if anyone, was that at Garlock?

15 A Not Garlock. How he gets it off there is not Garlock's
16 responsibility and who was it deciding that it was
17 hazardous? If it's hazardous, why wasn't his director
18 taking care of it?

19 MR. SHANNON: He has to ask the questions and you
20 just have to respond.

21 A I'll leave you to think it out.

22 (Whereupon a brief recess was taken.)

23 BY MR. GLASSER: (Continued)

1 Q Mr. Houghton, to your knowledge, did Garlock ever go in
2 and take any dust sample or dust counts of any of its
3 asbestos-containing gasket material after it had been
4 on a hot turbine or boiler for a long period of time
5 for the purpose of determining how much asbestos dust
6 was generated trying to remove and clean the pipe
7 flange?

8 A I, not being in the sales department or where things
9 were used, I couldn't answer that accurately. I don't
10 remember anything like that being done, but as far as
11 any report to me goes --

12 Q Who would be the best person whose available today for
13 me to ask that question to?

14 A I don't know many people over there now. Sit down with
15 Dick Watson and see if he can give you some guidance.
16 He's closely associated with the people over there. He
17 would be able to help you.

18 Q Are you aware in the 1973 time frame of any surveys
19 that were done either at Garlock or made available to
20 Garlock concerning the awareness and attitude towards
21 use of asbestos?

22 A No.

23 Q This has, and I'm showing you a copy and your counsel,

1 a received stamp from Garlock Inc. of June 11, 1973
2 with the stamp of vice president of engineering and
3 it's dated May 10, 1973. Have you ever seen this
4 document or can you identify what that document is?

5 A I've never seen this kind of a report. I don't think
6 there's ^{any} ~~no~~ occasion for anyone to bring that report to
7 me.

8 Q I'm going to shift questions now to the state of
9 Virginia. Do you know which salesman or sales
10 representatives from Garlock had various or various
11 distributors as their customers?

12 A No.

13 Q Do you know the names of any distributors of Garlock
14 products for the state of Virginia?

15 A No.

16 Q Do you know who at Garlock was in charge of sales to
17 the United States Government?

18 A When was that?

19 Q At any time from 1939 to '79.

20 A Sales, our president was connected with sales and
21 service, that was -- he died -- but he's dead.

22 Q Is that Wes Wright?

23 A What?

- 1 Q Is that Wes Wright?
- 2 A Wes --
- 3 Q Wright?
- 4 A Oh, Wright? I don't remember that name.
- 5 Q George Townsend?
- 6 A Yes, he became president of the company. He was -- he
- 7 had several jobs here at Garlock. If you could locate
- 8 him, he could tell you some things.
- 9 Q Are you aware, Mr. Houghton, that in 1977 a decision
- 10 was made at Garlock by the product liability committee
- 11 to put a warning on the asbestos-containing gasket
- 12 materials?
- 13 A No, I was not in that phase of the company, so I was
- 14 not aware of what warnings were being proposed.
- 15 Q Am I correct that in the field of compressed-gasket
- 16 sheeting, that Garlock was one of the major
- 17 ~~manufactures~~ ^{manufacturers} in the United States of compressed-gasket
- 18 sheeting?
- 19 A I can't say I was aware of that, but I just by my own
- 20 judgment, I would say that's probably so. Johns-
- 21 Manville was a producer of compressed sheet, too, but
- 22 Garlock probably is a larger producer than
- 23 Johns-Manville of that item.

1 Q And Nicolet was a producer of that item, also?

2 A Probably, yes.

3 Q Do you have an opinion as to whether Garlock was also
4 larger than Nicolet?

5 A I'm not aware of that, because I don't know how big
6 Nicolet was.

7 Q Have you heard of or had any dealings with Carm Mango?

8 A No.

9 Q Kenneth Bowen?

10 A Don't know the name.

11 Q A Mr. C.C. Whiteside from the Department of Labor?

12 A No.

13 MR. GLASSER: I have no further questions and I want
14 to thank you for being so patient with me.
15 I'm very grateful. They might have some
16 questions for you, but I do want to thank
17 you.

18

19 EXAMINATION BY MR. SHANNON:

20 Q I just have one question. Am I correct that you never
21 did work directly in the making of compressed-asbestos
22 sheet at any time during your career with Garlock?

23 A For about less than two years, I was given the job as--

1 for want of a better name--supervisor of the general
2 packing division, and then after I had been in that,
3 [?]
4 ~~examine~~ covered compressed-asbestos sheet and high-
5 pressure manufacturing, I was moved to the engineering
6 to start missile filament winding, and so I know what
7 they do there, but didn't stay with it very long, but
8 as you work in a plant for 40 years, you begin to get
9 acquainted with the whole works.

9 MR. SHANNON: That's all I have.

10 MR. GLASSER: And I have no further questions.

11 MR. SHANNON: We're going to ask that he read and
12 sign it so we won't have a waiver of
13 signature.

14 This young lady is going to type this
15 up in a little booklet of what we've said
16 today, and she's going to send it to you, and
17 we want you, if you would to be kind enough,
18 to be sure that she has typed it up
19 accurately.

20 THE WITNESS: She will read it to me?

21 MR. SHANNON: Send it to you and you'll read it, and
22 when you've read it, if she's made any
23 mistakes, you'll have a sheet that you can

1 make notes of the mistakes that she may have
2 made. You cannot change your answers, but if
3 she typed something down wrong, you can
4 change that. After you've done that, you
5 need to sign it in the presence of a Notary
6 and have it sent back, and I'm sure Garlock
7 can provide you with a Notary.

8 THE WITNESS: Who would I return it to, Dick Watson?

9 MR. SHANNON: That will be fine, and he can send it
10 back to her.

11 MR. GLASSER: Can you indicate responding for
12 yourself on the record approximately how long
13 it would take for the record to be prepared
14 without any extra charges?

15 THE REPORTER: It depends on if you're going to want
16 me to send your copies out at the same time
17 or if you want me to hold all of them until
18 he sends his back.

19 MR. GLASSER: I would request that you do
20 exactly as you've indicated, namely, to send
21 a copy of the transcript once it's prepared
22 to be sent to Mr. Houghton to me, and I
23 understand Jim Shannon and to Mr. Levinthal

1 at that stage, and then if there are any
2 errata changes that you feel are appropriate,
3 you can send us a copy of the errata sheet
4 once that's returned and perhaps a signed
5 cover sheet, signed by Mr. Houghton so that
6 we'll have an opportunity to review our copy
7 instead of waiting until everything is done
8 at your end.

9
10 * * *

WITNESS CERTIFICATION

I, GEORGE ELWOOD HOUGHTON, do hereby certify that I have read the transcript of my testimony taken under oath on the 4th day of December, 1986;

that my testimony in the transcript herewith, pages 1 through 109 is a true, complete and correct record of what was asked, answered and said during the deposition;

and that the answers on the record as given by me are true and correct, except for anything duly noted on the attached errata sheet.

GEORGE ELWOOD HOUGHTON

Subscribed and sworn to before me
this ____ day of _____. 1986.

NOTARY PUBLIC

My Commission Expires:

March ___, 19__.

E R R A T A S H E E T

Page	Line	
84	10	Fourth word should be - moment -
87	9	Fifth word should be two words - bona fide -
89	15	Fourth word should be - can't -
89	18	Fourth word should be - gone -
92	16	Third and fourth words should be - Sudhakar Dixit
94	4	Fifth word should be - we -
95	13	Seventh word should be - Sherbrooke -
96	7&13	Last word of each line should be - Camille -
96	4&16	Words three and one should be - Tyndall -
97	12	Third to sixth words should be - say "were you aware" -
99	1	Sixth word should be - intended -
99	7	I believe - were - should be inserted at the end of the line.
104	6	Second word should be - any -
104	6	Fourth word should be - for -
105	7	First word should be - had -
105	17	First word should be - manufacturers -
107	3	The word "examine" does not make sense - I do not recall what was said.
79	2-5	Upon literal review of the question as transcribed, I believe that my proper answer would have been "Yes". I did not see warnings on Garlock products between 1939 and 1979.
		GEORGE ELLWOOD HOUGHTON
		Dated this _____ day of _____, 19____.

E R R A T A S H E E T

<u>Page</u>	<u>Line</u>	
3	4	(and several other places) My middle name is Ellwood.
23	23	Last word should be - their -
29	5	Seventh word should be - solution -
29	6	Seventh word should be - tower -
29	11	Fifth word should be - calender -
29	14	Third and fourth words should be - this was -
33	5	Words seven and eight should be - and hand -
33	6	First word should be - hole -
34	4	Tenth word should be - 64th -
34	5	Sixth word should be - 8th -
34	6	Sixth word should be - an 8th -
35	9	End of sentence should read - packing for power plants.
36	1	Third word should be - calender -
37	2	First word should be - Chrysotile -
42	9	The numeral should be - 7,000's -
42	11	First word should be - have -
45	3	First word should be - departments -
47	10	Second word should be - There -
50	12	Third word should be - identify -
61	23	Seventh word should be - appropriate -
62	13	Eighth word should be - magnifying -
62	14	Last word should be - sample -
63	5	Fifth word should be - had -
63	5	Tenth word should be - had -
63	5	Eleventh word should be deleted.
70	8	Sixth word should be - Hemeon -
70	18	Fourth word should be - detail -
75	1	First word should be - record -
77	1	Fifth word should be - McMullen -
80	6	Believe that third word was - inhalation -
		GEORGE ELLWOOD HOUGHTON
		Dated this _____ day of _____
		_____, 19____.

E R R A T A S H E E T[illegible]

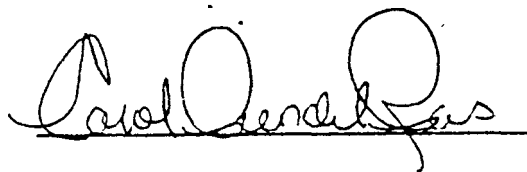
STENOGRAPHER'S CERTIFICATION

I, CAROL PIENDEL RAES, do hereby certify that I am a
Court Reporter in Rochester, Monroe County, New York;

that I reported in Stenotype shorthand the proceedings
held on December 4, 1986 at the home of GEORGE ELWOOD
HOUGHTON, 516 West Main Street, Palmyra, New York in the
matter of William Stacey Overby, Plaintiff versus Garlock
Inc., Defendant;

that the witness, GEORGE ELWOOD HOUGHTON, was duly sworn
by me;

and that the transcript herewith numbered 1 through 109
is a true, accurate and correct record of said shorthand
notes.



CAROL PIENDEL RAES

Dated at Rochester, New York
this 16th day of December, 1986.

LAWYER'S NOTES

[illegible]

M

Midtown Reporting Service

K

S

1100 TIMES SQUARE BUILDING
ROCHESTER, NEW YORK 14614
(716) 325-2130 (716) 325-2131

FED. I.D. #16-1135023

WILLIAM A. MAY, C.S.R.
DAVID E. FITCH, C.S.R.
RICHARD N. SUTERA, C.S.R.

December 15, 1986

RAYMOND A. MICHEL
DONALD R. FIORINI, C.S.R.
SEYMOUR DISRAELY, C.S.R.
RONALD J. TETTE, C.S.R.

George Elwood Houghton
516 West Main Street
Palmyra, New York 14522

Re: Transcript in the matter of William Stacey Overby, Plaintiff
versus Garlock Inc., Defendant.

Dear Mr. Houghton:

Enclosed is the original copy of the transcript of the
deposition which you gave on December 4th, 1986 regarding the
above-captioned litigation.

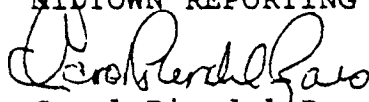
Please review your testimony found on pages 3 through 109
noting any changes or corrections on the attached errata sheet,
found after page 110, your witness certification sheet. Also
sign all three (3) witness certification pages, as well as the
one enclosed in the transcript.

After doing so, please return the transcript to me at
the above address.

Thank you for your consideration in this matter.

Very truly yours,

MIDTOWN REPORTING SERVICE


Carol Piendel Raes

Enclosures

cc: J. Shannon, Esq.
R. Glasser, Esq.
B. Levinthal, Esq.