

FILE NAME: Owens Illinois (OWILL)

DATE: 1980 Aug 19

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DOCUMENT DESCRIPTION: Legal - Deposition of Everett C. Shuman

IN THE DISTRICT COURT IN AND FOR THE
COUNTY OF BOULDER
STATE OF COLORADO

PATTON B. GILMORE,
Plaintiff

v.

JOHNS-MANVILLE PRODUCTS
CORPORATION, et al,
Defendants

CIVIL ACTION NO. 77-2012-1

Deposition of:

Everett C. Shuman

Taken by :

Defendant, Owens-Corning
Fiberglass Corporation

Before :

Helena L. Bowes, Notary Public

Date :

August 19, 1980, 10:00 a.m.

Place :

Sheraton Inn,
State College, Pennsylvania

COUNSEL PRESENT:

J. CONARD METCALF, Esquire

For - Plaintiff

DAVID B. HIGGINS, Esquire

JOSEPH A. STANCATI, Esquire

For - Defendant, Owens-Corning
Fiberglass Corporation

1 COUNTY OF DAUPHIN :

2 COMMONWEALTH OF PENNSYLVANIA :

3
4 I, Helena L. Bowes, Reporter-Notary, authorized
5 to administer oaths and take depositions in the trial of
6 causes, and having an office in Harrisburg, Pennsylvania,
7 do hereby certify that the foregoing is the testimony of
8 Everett C. Shuman

9 taken by Deft. Owens-Corning Fiberglass at the office of
10 Sheraton Inn, State College, Pennsylvania

11 I further certify that before the taking of said
12 depositions, the witness(es) was duly sworn; that the
13 questions and answers were taken down in stenotype by the
14 said Helena L. Bowes, a Reporter-Notary Public, approved
15 and agreed to, and afterwards reduced to typewriting under
16 the direction of the said Reporter.

17 I further certify that the proceedings and evidence
18 are contained fully and accurately in the notes taken by
19 me on the within deposition(s), and that this copy is a
20 correct transcript of the same.

21 In testimony whereof, I have hereunto subscribed
22 my hand this 26th day of August 1980.

23
24 Helena L. Bowes, Reporter-Notary
25

1 EVERETT C. SHUMAN, called as a witness, being duly
2 sworn, testified as follows:

3 DIRECT EXAMINATION

4 BY MR. HIGGINS:

5 Q Will you state your full name for the record, please.

6 A Everett C. Shuman.

7 Q How old are you?

8 A 77.

9 Q Where do you presently reside?

10 A I live in State College, Pennsylvania.

11 Q What is your present occupation?

12 A Retired.

13 Q How long have you been retired?

14 A 12 years.

15 Q What is the general state of your health at the present
16 time?

17 A Fairly good for the age.

18 Q Are you married?

19 A Yes.

20 Q Do you reside with your wife at the present time?

21 A Yes.

22 Q What is the state of her physical and mental health?

23 A She's been mentally ill for about four years and is
24 incapable of doing anything for herself.

25 Q Who takes care of her?

1 A I do.

2 Q What does your care entail?

3 A Practically everything that needs to be done. She
4 can't feed herself and I have to take care of her personal needs
5 and dress her and undress her and do anything that you would for
6 example to an 18 month old child.

7 Q Is it your testimony then that she requires constant
8 supervision?

9 A Constant supervision. I could leave her as now for
10 about two hours or so without too much trouble.

11 Q Would your responsibilities for her care make it
12 impossible for you to testify at the trial in this case on
13 September 2nd, 1980?

14 MR. METCALF: I object to the form of the question.

15 MR. HIGGINS: Let me restate the question.

16 BY MR. HIGGINS:

17 Q Does your involvement in the care and treatment of your
18 wife restrict your travel capabilities in any way?

19 A Yes, it does.

20 Q In what respect?

21 A As it was mentioned I can't leave her for more than
22 about two to two a half hours then I have to go back, attend to
23 her needs at that time. This goes on 24 hours a day.

24 Q Given the facts that the trial in this case will proceed
25 on September 2nd, 1980 in the County of Boulder, State of

1 Colorado, would it be possible for you to testify at that trial?

2 A I don't see how.

3 MR. HIGGINS: I have no further questions.

4 MR. METCALF: I have no questions on that aspect.

5 MR. HIGGINS: Let's go off the record.

6 (Discussion held off the record.)

7 MR. HIGGINS: This is taken sort of pursuant to agree-
8 ment this deposition. The ground rules are that no objections
9 will be reserved and that all objections will be made contempo-
10 raneously as we proceed through this deposition.

11 MR. METCALF: I agree with the fact that the deposition
12 will be made contemporaneously and no objections are being re-
13 served.

14 MR. HIGGINS: Do you have an objection to the taking
15 of the deposition, Mr. Metcalf?

16 MR. METCALF: I have no objection to Mr. Shuman's
17 deposition being taken today or it being taken to preserve its
18 testimony for Owens-Corning Fiberglass only. I do object to a
19 video tape deposition in the absence of an order of court permitting
20 a video taped deposition being taken of Mr. Shuman.

21 The Colorado Rules of Civil Procedure require that an
22 order of court be obtained before a video tape be taken.
23 Plaintiff stands by and relies on that rule. And by participating
24 in Mr. Shuman's deposition today Plaintiff in no way waives or
25 intends to waive the requirement that a court order be obtained

1 for the taking of a video taped deposition.

2 I also want to reserve my right to cross examine the
3 witness in case we run short of time today in view of the
4 physical and mental condition of Mr. Shuman's wife.

5 MR. HIGGINS: Objection so noted.

6 MR. HICKERNELL: This is reel number one in the depo-
7 sition of Everett C. Shuman, P.E. The camera operator is Larry
8 Hickernell, the stenotype reporter is Helena Bowes, both of the
9 firm of Geiger and Loria Reporting Service, Harrisburg, Pennsyl-
10 vania.

11 Today is Tuesday, August 19th, 1980 and the time is
12 10:17 a.m. We are assembled at the Sheraton Inn in State College,
13 Pennsylvania, for the purpose of taking the deposition of Everett
14 C. Shuman, P.E., Professional Engineer for the Defendants in the
15 matter of Patton B. Gilmore versus Johns-Manville Products
16 Corporation, et al.

17 Counsel will now identify themselves on camera.

18 MR. HIGGINS: My name is David Higgins and I represent
19 Defendant Owens-Corning Fiberglass Corporation.

20 MR. METCALF: My name is Conard Metcalf and I repre-
21 sent the Plaintiff, Patton B. Gilmore in this case.

22 And I suggest also that the video tape operator might
23 make an alternative introduction of the caption being Patton
24 Gilmore versus Owens-Corning Fiberglass in view that the motion
25 is granted.

1 MR. HIGGINS: Why don't we start over again.

2 MR. HICKERNELL: This is reel number one in the depo-
3 sition of Everett C. Shuman, P.E. The camera operator is Larry
4 Hickernell, the stenotype reporter is Helena Bowes, both of the
5 firm of Geiger and Loria Reporting Service, Harrisburg, Pennsyl-
6 vania.

7 Today is Tuesday, August 19th, 1980, and the time is
8 10:20 a.m. We are assembled at the Sheraton Inn in State
9 College, Pennsylvania for the purpose of taking the deposition of
10 Everett C. Shuman, Professional Engineer for the Defendant in
11 the matter of Patton B. Gilmore versus Owens-Corning Fiberglass
12 Corporation.

13 Counsel will now identify themselves on camera.

14 MR. HIGGINS: My name is David Higgins. I represent
15 the Defendant, Owens-Corning Fiberglass Corporation.

16 MR. METCALF: My name is Conard Metcalf. I represent
17 the Plaintiff, Mr. Patton B. Gilmore.

18 BY MR. HIGGINS:

19 Q Mr. Shuman, will you state your full name for the
20 record, please.

21 A Everett C. Shuman.

22 Q What is your present address?

23 A State College, Pennsylvania.

24 Q How old are you?

25 A 77.

1 Q Are you presently employed?

2 A I'm retired.

3 Q How long have you been retired?

4 A 12 years.

5 Q Mr. Shuman, would you describe for us your educational
6 background, please.

7 A Grade school and high school were in Milwaukee,
8 Wisconsin. Attended the University of Wisconsin at Madison and
9 obtained a degree in civil engineering in 1924 and a master's
10 degree in civil engineering in 1926.

11 Q While in college did you work other than going to
12 school, were you employed at any time during that period?

13 A I had worked prior to the university for a civil
14 engineer by the name of H. C. Webster.

15 Q In what capacity?

16 A I was an assistant to the surveying crews.

17 Q Upon graduation from the University of Wisconsin did
18 you become employed?

19 A Yes. I was employed by the Portland Cement Association,
20 Research Laboratory, Chicago.

21 Q Would you summarize for us your employment history
22 from the time of your graduation from the University of Wisconsin
23 to your retirement?

24 A From 1926 to 1938 with an interruption in between I was
25 in the research laboratory of the Portland Cement Association as

1 research engineer doing research on concrete and Portland cement.
2 And was also in charge of equipment and facilities for the
3 laboratory.

4 After 1938 I was head of civil engineering at Louis
5 Institute in Chicago until 1941. This was a full course civil
6 engineering curriculum.

7 In '41 I joined the research laboratory of North Atlantic
8 Division of Army Engineers at West Point. After Pearl Harbor
9 the laboratory was moved from West Point since it was not
10 literally a part of West Point but merely another part of the
11 Army Engineers to Mount Vernon, New York, where we continued
12 research in concrete as applied to the war effort.

13 In 1941 I joined Owens-Illinois Glass Company at
14 Berlin, New Jersey as a research engineer in the development of
15 calcium silicate thermal insulation.

16 Q What year was that?

17 A 1944 I joined Owens-Illinois.

18 Q Go ahead.

19 A And so from 1944 to about 1950 I was located at the
20 Berlin plant engaged in research and development of calcium
21 silicate.

22 In 1950 I was moved to the home office in Toledo where
23 I was a director of research of the division where I continued
24 this. And was employed there also as a consultant to the sales
25 department until 1958 when the division, Kaylo division was bought

1 by Owens-Corning Fiberglass Corporation.

2 So from 1958 until '61 I was employed one year in
3 Toledo and two years in New York by Owens-Corning Fiberglass.

4 Then I joined the Pennsylvania State University in
5 1961 in the Institute for Building Research in the College of
6 Engineering where I remained until retirement at age 65 in 1968.

7 Q Where is Pennsylvania State University located?

8 A In State College, Pennsylvania.

9 Q As I understand your testimony you were employed by
10 Owens-Illinois Glass Company from 1944 until 1958, is that
11 correct?

12 A That's correct.

13 Q Then you were employed by Owens Fiberglass Corporation
14 from 1958 until 1961?

15 A That's right.

16 Q Were you ever employed by either of those two companies
17 at any time other than what you testified to?

18 A No.

19 Q To your knowledge is there any corporate association
20 between Owens-Corning Fiberglass Corporation and Owens-Illinois
21 Glass Company?

22 MR. METCALF: Object to lack of foundation.

23 BY MR. HIGGINS:

24 Q If you have any knowledge go ahead and answer the
25 question.

1 A My understanding is they're two entirely separate
2 companies.

3 Q Mr. Shuman, when did you first become aware of thermal
4 insulation that contained asbestos?

5 A Well, quite early because pieces of equipment that I
6 would build it involved insulation were insulated with the
7 materials that were on the market at that time. Primarily 85
8 percent mag which is the trade name for that material and so it
9 contained asbestos.

10 But my first awareness of asbestos was when my parents
11 built a house in Milwaukee and the heating system was insulated
12 and asbestos was used in that process. But so far as using it
13 commercially myself it wasn't until later when I was involved
14 in insulating heated equipment.

15 Q When did you become involved in insulating of heating
16 equipment?

17 A At the Portland Cement Association was the first time
18 in which I was insulating a dryer for the drying of concrete
19 aggregates.

20 Q You testified that you started working for Owens-Illi-
21 nois Glass Company in 1944. Do you know whether or not -- first
22 of all, what did the Kaylo division of Owens-Illinois Glass
23 Company do, what was the function of that division?

24 A That division was making thermal insulations and
25 associated products with calcium silicates.

1 Q Did these insulations contain asbestos?

2 A Yes, they did.

3 Q Do you know how long before you became employed at
4 Owens-Illinois Glass Company in 1944 that Owens Illinois was in
5 that business of making asbestos containing insulation products?

6 MR. METCALF: I am going to object, there's no
7 foundation, means of knowledge.

8 BY MR. HIGGINS:

9 Q If you know.

10 A It was my understanding they started in 1943.

11 Q How did you learn of that?

12 A By the man who had hired me for Owens-Illinois, John
13 Seldon.

14 Q John Seldon?

15 A S-e-l-d-o-n.

16 Q How did he relate to you this information?

17 A This was during the interviews in which he was hiring
18 me and giving me kind of background in what they were doing and
19 the kind of work I might be interested in doing.

20 Q Would it be fair to say then that as far as you know
21 Owens-Illinois began to make asbestos containing insulation
22 approximately a year before you came employed by Owens-Illinois?

23 MR. METCALF: Object to the form of the question as
24 leading.

25

1 BY MR. HIGGINS:

2 Q Go ahead, answer that.

3 A As far as I know it was in 1943, about a year before.

4 Q What were the circumstances surrounding your being
5 interviewed and subsequently becoming employed by Owens-Illinois?

6 A As I testified I had worked for a number of years in
7 the research laboratory of the Portland Cement Association.
8 And Portland cement is a complex calcium silicate. And Mr.
9 Seldon was aware of the work I had done there and so he phoned me
10 while I was in Mount Vernon, New York and asked whether I would
11 be interested in coming with them to make this new hydrous
12 calcium silicate thermal insulation.

13 MR. METCALF: Move to strike hearsay statements.

14 BY MR. HIGGINS:

15 Q You may proceed.

16 A So then it was at that time he had given me the
17 background of how they had gotten into the operation.

18 Q What was your job title when you first became employed
19 at Owens-Illinois?

20 A Research engineer.

21 Q In that capacity as a research engineer for Owens-
22 Illinois did you become aware of other asbestos containing insu-
23 lation products that were on the market at that time?

24 A We of course were aware of whatever thermal insulations
25 were on the market and would get samples or would have people

1 get us samples. And then from those we found out that several
2 of them did contain asbestos.

3 Q Would you describe for me, please, what those other
4 asbestos containing thermal insulation products were that were
5 on the market either by trade name or by characteristics?

6 A The principal one was 85 percent magnesia which was
7 shortened to 85 percent mag and there were several manufacturers
8 who made that product such as Johns-Manville, G. B. Madison,
9 Ehret and others. There were two others that we were aware of
10 that made calcium silicate. One was Pabco in California and
11 Ruberoid which is located in Gloucester, New Jersey. Then there
12 was another one that made their insulation out of almost entirely
13 Africian asbestos under the trade name of Unibestos.

14 Q Did you ever come to learn how much asbestos any of
15 these products contained?

16 MR. METCALF: I am going to object to this line of
17 questioning as being irrelevant.

18 MR. HIGGINS: In response to that is it's most relevant
19 because one of the issues in this case is your client's prior
20 exposure to asbestos containing products. And here's a man who
21 has personal knowledge of what products were in the market as
22 early as 1944. So I think it's most relevant.

23 MR. METCALF: Fine, if you can lay a foundation that
24 Mr. Shuman has knowledge of what products Mr. Gilmore worked then
25 it becomes relevant otherwise I stand on the objection.

1 MR. HIGGINS: That will be established through other
2 witnesses.

3 MR. METCALF: Then I object.

4 BY MR. HIGGINS:

5 Q Mr. Shuman, did you come to learn how much asbestos
6 these other products contained?

7 A We analyzed them roughly, not down to precise values to
8 find out about how much asbestos they were using because we were
9 using asbestos too. And most of their's as I recall were on the
10 order of 20 percent by weight of asbestos fiber.

11 Q What products had 20 percent by weight of the asbestos
12 fiber?

13 MR. METCALF: Can I have a continuing objection to this
14 line of questioning so I don't have to repeatedly interrupt after
15 each question.

16 MR. HIGGINS: Again would you state the grounds for the
17 objection.

18 MR. METCALF: The objection is that it is totally
19 irrelevant to the issues remaining in this case as to what other
20 products may or may not have been on the market, what asbestos
21 contents they had without some foundation at the minimum that
22 this witness has knowledge of whether or not Mr. Gilmore worked
23 for these products at any time or whether or not these products
24 were either the sole cause of Mr. Gilmore's asbestosis or that
25 there's some reasonable medical basis for a portionment of his

1 injury between exposure to Kaylo and exposure to other products.

2 MR. HIGGINS: I stand on my earlier response to your
3 objection and I will allow a continuing objection.

4 BY MR. HIGGINS:

5 Q Again, Mr. Shuman, to your knowledge which products
6 contained something in the neighborhood of 20 percent asbestos
7 fiber?

8 MR. METCALF: I object to the form of that question.
9 You said by weight, there may be a difference if you're talking
10 about ~~way of~~ ^{weight or} volume.

11 BY MR. HIGGINS:

12 Q Will you describe what you mean by 20 percent?

13 A The usual way of describing it is such and such a per-
14 cent by weight of the product. So that if we're broken down
15 into components the asbestos will be in the neighborhood of 20
16 percent by weight of the total product.

17 Q What products on the market at that time had asbestos
18 with 20 percent asbestos by weight?

19 A The one that we were familiar with were the 85 percent
20 mag, a high density diatomaceous earth material which I think
21 had the trade name Super X. Unibestos which of course was very
22 high in asbestos content, probably 80 to 90 percent. But those
23 were the principals ones.

24 Q Are you familiar with the term asbestos cement?

25 A Well, asbestos cement is a dry product that is made

1 with asbestos fibers and Portland cement and maybe some other
2 minor constituents to which water is added to form what the
3 trade usually calls a mud which is used to fill in cracks and
4 crevices or to form around irregular shapes.

5 Q During the 1940's when you were working for Owens-
6 Illinois Glass Company did you have occasion to see asbestos
7 products being used at the work place, asbestos containing?

8 A I was out in the field from time to time and actually
9 saw the material being used.

10 Q Did you ever see asbestos cement being used?

11 A Yes.

12 Q Could you describe how it was used?

13 A Well, it usually came in bags so that a bucket of water
14 was filled by grabbing hand fulls of cement or either shaking it
15 into the bucket and stirring it to make the consistency that
16 the applicator wanted to use so that it had good adhesion and
17 yet was tenacious enough so that it wouldn't slip off. And so
18 then this was used to fill the cracks between the thermal insu-
19 lation that had been applied preformed and also to form it around
20 irregular shapes such as elbows and T's and other fittings.

21 Q Did you have occasion to observe whether or not dust
22 would be generated by this process using asbestos cement?

23 A There was a certain amount of dust that would arise
24 when the material was taken out of the bags and either dropped
25 into or shaken into the bucket of water.

1 Q Did Owens-Illinois manufacture asbestos cement?

2 A No, we did not.

3 Q Did you ever have occasion to see 85 percent mag
4 thermal insulation being used in the field during the 1940's?

5 A Yes.

6 Q Could you describe how it was used?

7 A 85 percent mag is a preformed product so it's formed
8 into pipe insulation which is half sections that would fit around
9 a piece of pipe or into block which is 36 inches long and of
10 several thicknesses and usually about six inches wide. And so
11 those were applied by various means, wires, sometimes by welding
12 on little logs and so on to hold the material on to the vessel.

13 Q Did you ever have occasion to observe whether or not
14 any dust was generated pursuant to the use of 85 percent mag?

15 A There would be dust, particularly if the piece had to
16 be sawed to fit the particular length. And this was done with
17 an ordinary hand saw.

18 Q To your knowledge was Owens-Corning Fiberglass Corpo-
19 ration in existence at this time?

20 A Yes.

21 Q Talking now in the period of the 1940's?

22 A Yes, it was.

23 Q Do you know whether or not they were making any
24 asbestos containing insulation products at that time?

25 A I don't know of any.

1 Q Do you know whether or not they were making any?

2 A No, I don't know if they were making any at all. Their
3 product was primarily glass fiber.

4 Q You indicated that when you began working for Owens-
5 Illinois Glass Company the only product that was being made by
6 the Kaylo division was Kaylo?

7 A Yes.

8 Q Would you describe what Kaylo is and what it was at
9 that time?

10 A You mean process?

11 Q No, it's components, what it's made up of.

12 A The components are primarily lime and a siliceous
13 material which was usually diatomaceous earth.

14 Q What does siliceous mean?

15 A Silica. Diatomaceous earth and then asbestos fibers
16 and water which is mixed in a slurry.

17 Q You stated that it contained asbestos. Do you know
18 what kind of fiber was used, what kind of asbestos fiber was
19 used?

20 A It was primarily chrysotile.

21 Q What is chrysotile?

22 A That's a geologic name for a formation of asbestos.

23 Q Are there more than one formations of asbestos to
24 your knowledge?

25 A Yes, there's several.

1 Q What was the percentage of asbestos in the Kaylo in
2 this period of time?

3 A Over a period of time I would say it was on the order
4 of 18 percent by weight.

5 Q Was this percentage of asbestos by weight more or less
6 than the percentage of asbestos by weight in other products such
7 as 85 percent mag?

8 A From the samples we tested this was a little bit less
9 than what they were using.

10 Q What was the process at Owens-Illinois by which Kaylo
11 was made during the time that you worked at the Kaylo division
12 of Owens-Illinois?

13 A The procedure is after this slurry is made and of course
14 the amount of water determined the end product density, the
15 material is then put into an autoclave which is a high pressure
16 cylinder. And so the reaction then between the lime and the
17 silica takes place at these elevated temperatures, it would not
18 take place at room temperature.

19 After the material is in the autoclave long enough for
20 a reasonably complete reaction of lime and silica it's removed.
21 Of course it comes out wet and it has to be dried. And after
22 drying it would be sized so that it could be cartoned for
23 shipping.

24 Q How would the asbestos be added to this slurry that
25 you described?

1 A Asbestos came in bags and they would be preweighed for
2 the size of the batch and then just dumped into the mixer.

3 Q When you started working for Owens-Illinois to your
4 knowledge was Kaylo being produced in commercial quantities?

5 A That's difficult to say because I think they were
6 making it enough so that it could be -- that it was sold but more
7 or less only for short distances. Like for example to con-
8 tractors in Philadelphia and nearby Pennsylvania areas and New
9 Jersey.

10 Q You called this a calcium silicate product?

11 A Yes, it's usually referred to in the industry as
12 hydrous calcium silicate.

13 Q What is unique about a hydrous calcium silicate product
14 as compared to something like 85 percent mag?

15 MR. METCALF: Object to the form and object to the
16 basis of no foundation.

17 MR. HIGGINS: Let me restate the question.

18 BY MR. HIGGINS:

19 Q Kaylo was a hydrous calcium silicate product. Do you
20 know what 85 percent mag was?

21 A It's primarily magnesium carbonate plus asbestos
22 fibers.

23 Q What is the difference between a magnesium carbonate
24 thermal insulation and a hydrous calcium silicate thermal insula-
25 tion?

1 A Thermally they'd perform about the same. But one of
2 the large advantages of the calcium silicate is that it is
3 suitable to much higher service temperatures. 85 percent mag
4 has usually been considered to be suitable to around 450 degrees.
5 Whereas the calcium silicates go up to about 1,200 degrees.

6 So that for equipment that would operate at temperatures
7 above 450 it would require some other material in conjunction
8 with the 85 percent mag so you'd have to use two different
9 materials at the same time. Whereas with calcium silicate you
10 could do it all with one. Another advantage of the calcium
11 silicate was that by being suitable up to 1,200 degrees the
12 material that was used in conjunction with the 85 percent mag
13 was much higher density so the diatomaceous earth block might
14 have a density on the order of 20 or more pounds per cubic foot.
15 So that on vessels where tonnage was important the saving in
16 weight by the use of calcium silicate was important.

17 Q When you're talking about hydrous calcium silicate
18 Kaylo was a hydrous calcium silicate product?

19 A Yes.

20 Q Did Kaylo have the same advantages that you just des-
21 cribed generally for calcium silicate products?

22 A Yes, I think that in general all the calcium silicate
23 products are about the same in properties.

24 Q Were hydrous calcium silicate thermal insulation
25 products developed before or after magnesium carbonate products?

1 A After.

2 Q As I understand your testimony when you joins Owens-
3 Illinois they were just then in the process of developing and
4 commercially marketing Kaylo, is that correct?

5 MR. METCALF: Object to the form and object to counsel
6 summarizing testimony.

7 BY MR. HIGGINS:

8 Q Go ahead and answer the question.

9 A Well, repeat it, please.

10 Q What was the extent of the sales and marketing of
11 Kaylo at the time you joined Owens-Illinois, if you know?

12 A The sales was a minor operation at the time because
13 they were just trying to get the volume of the production at the
14 plant up so that you could fill orders because it's well known
15 that you have to have the capacity to supply all the needs for
16 a particular job because it's usually undesirable to have
17 different materials on the same job. You have contractors, it
18 becomes a headache to them. So they would prefer to buy -- if
19 they have contracted for a product that that product be in
20 sufficient supply that they could do the job. So at the outset
21 we could do only enough to do small jobs.

22 Q At the time you joined Owens-Illinois in 1944 what was
23 the most used asbestos containing thermal insulation, if you
24 know?

25 A I would say 85 percent mag.

1 Q What was the extent of the development of the Kaylo
2 as a commercially feasible product when you joined Owens-Illinois
3 in 1944?

4 A They were already making a product and of course as
5 part of research the product was improved as more and more was
6 learned about chemical reaction. But to all intents and purposes
7 the calcium silicate product had the properties that were pre-
8 sented to purchasers insofar as thermal performance is concerned
9 and the handability density.

10 Q What if any other advantages did Kaylo have over say
11 magnesium carbonate products?

12 MR. METCALF: Object to the form.

13 A Well, one of the advantages that we learned from the
14 field was that in cutting and handling it it made less dust just
15 by the inherent properties of calcium silicate.

16 BY MR. HIGGINS:

17 Q What inherent properties are there about calcium
18 silicate that makes it less dusty than other products?

19 A I think it's a stronger product so that it wasn't as
20 friable as the other materials.

21 Q Would you explain to the court and jury what friable
22 means?

23 A It means that it's rather brittle and it would break
24 easily or the edges would rub off easily which is always a part
25 of the handability.

1 Q Were you aware in the 1940's when you worked for Owens-
2 Illinois what the friability of other asbestos containing insula-
3 tion products?

4 A Only in general terms because at that time there was no
5 tests for that product, later on the test procedure developed by
6 the Naval laboratory of Annapolis. It became an ASTM standard
7 test.

8 Q Would you describe for the court and jury what ASTM means?

9 A ASTM stands for the American Society for Testing and
10 Materials.

11 Q Did you ever have occasion to witness an example of
12 friability of say something like 85 percent mag?

13 A In my own experience they were saying when they would
14 insulate the outside of dryers which were round and circular
15 vessels three or four feet in diameter and ten feet long again
16 the handability particularly when you're trying to get it to fit
17 around irregular surfaces and fittings meant that you had to be
18 careful or it would break.

19 Q Where did Owens-Illinois obtain the asbestos that it
20 used in the fabrication of this Kaylo product?

21 MR. METCALF: Object to relevancy.

22 A Most of it was purchased from Johns-Manville Corporation.
23 BY MR. HIGGINS:

24 Q Where was the remainder purchased, if you know?

25 A Well, there were times when we had tried some other

1 asbestos from other sources but they were so minor they were
2 abandoned so it was practically all Johns-Manville material.

3 Q While you were at Berlin at the Berlin plant from 1944
4 to 1949 were you ever made aware of any health hazard associated
5 with the insulation of asbestos fibers?

6 A Nope.

7 Q During the period from 1944 to 1949 was anyone else
8 making a hydrated calcium silicate asbestos containing thermal
9 insulation?

10 A Ruberoid and Pabco were. Those are the only two that
11 I was aware of.

12 Q After 1949 did any other manufacturer commence to manu-
13 facture --

14 A Somewhere in there and I don't know the precise year
15 Johns-Manville also made a hydrous calcium silicate --

16 MR. METCALF: Again I am going to object to this line
17 of questioning on the basis for relevancy as earlier stated.

18 BY MR. HIGGINS:

19 Q What is the trade name for the hydrous calcium silicate
20 product that Johns-Manville manufactured?

21 A I think it's Thermobest.

22 Q Mr. Shuman, you indicated that on various occasions
23 while you worked for Owens-Illinois you would be out in the field
24 examining and watching the workers using various asbestos thermal
25 insulation products, is that correct?

1 MR. METCALF: I object to the form of that question.
2 And I object to counsel's summarization and object to counsel's
3 characterization of the other testimony.

4 MR. HIGGINS: I will restate the question.

5 BY MR. HIGGINS:

6 Q While you were working for Owens-Illinois did you ever
7 have occasion to be out in the field observing installers install
8 asbestos containing thermal insulation products?

9 A Yes.

10 Q Did you observe the tools of trade that were used by
11 the insulators?

12 A These were the tools of the trade that had been invoked
13 for many, many years which would be knives and small saws pri-
14 marily.

15 Q Was there anything unique about Kaylo that required
16 different tools of the trade?

17 A They used the same tools of the trade.

18 Q What about the installation method, were they the same
19 for Kaylo as for other asbestos containing thermal insulation?

20 A Yes, they were the same.

21 Q While you were at Owens-Illinois was there ever any
22 attempt made to find a substitute for the asbestos in Kaylo?

23 A Yes, there was because asbestos is the highest priced
24 ingredient and as any production person would be trying to get
25 the cost down without sacrificing properties. And so while there

1 was no one person assigned to the product any time anyone had some
2 idea to what might be used in place of asbestos it was looked
3 into.

4 Q Was there an ongoing effort to change or improve the
5 produce in any way?

6 MR. METCALF: Object to the form.

7 MR. HIGGINS: I will restate the question.

8 BY MR. HIGGINS:

9 Q What if any efforts were being made on the part of
10 Owens-Illinois to change, modify or improve the product in any
11 way?

12 A The principal angle of course would be to get the
13 thermal conductants or the thermal resistance as low as possible
14 and maintain the handability and to accomplish this at a low of
15 cost as possible. So the changes that were made in investigating
16 of raw materials were for the purposes of ending up with the
17 highest qualify calcium silicate at the lowest price. So this
18 was going on all the time while there was some possiblity of
19 finding other raw materials that might be suitable.

20 Q What other raw materials were used or did Owehs-Illinois
21 attempt to use as a replacement for asbestos?

22 A Well, we used first of all the glass fibers since glass
23 fibers are silicate but they didn't work because the lime
24 attacked the silica of glass just like it would the silica that
25 had been added and so the fibers had lost their strength so the

1 glass fibers wouldn't work. Then mineral wool was also tried
2 but their fibers were too thick and they didn't disburse very
3 well in the slurry.

4 And then organic materials were used such as bagasse
5 and wood fibers such as might be used in papers as organic
6 material. All of these were tried to see what kind of product
7 would result.

8 Q While you were at Owens-Illinois was an adequate or
9 reasonable substitute ever discovered --

10 MR. METCALF: Object to the form.

11 BY MR. HIGGINS:

12 Q -- for replacing the asbestos fiber?

13 A If you would accept that the materials were non-
14 mineral then some of the organic fibers would make a suitable
15 product. But if the user for example would prefer that it be
16 all mineral then of course asbestos was the only one that would
17 work. But we knew if there ever was a time that we'd have to
18 abandon the asbestos that organic fibers would work.

19 Q Were you aware of the fact that in 1958 the Kaylo
20 division of Owens-Illinois was acquired by Owens-Corning Fiber-
21 glass Corporation?

22 A Well, I heard it on the radio.

23 Q Did you have any involvement in the decision, in the
24 acquisition at all?

25 A None at all.

1 Q In 1958 you became employed by Owens-Corning Fiberglass
2 Corporation, is that right?

3 A Right.

4 Q Would you describe what the nature of your job was
5 for Owens-Corning?

6 A Well, I was used in the sales department as a consultant
7 to help the sales people and of course with the acquisition many
8 of the sales people weren't entirely familiar with Kaylo and its
9 properties. So I would help any of the sales people or the sales
10 offices that requested help as a consultant.

11 Q Did your job duties at Owens-Corning include any
12 research or engineering?

13 A No.

14 Q You said that the sales people would contact you?

15 A Yes.

16 Q Would they be privy to information about what was going
17 on on the job site to your knowledge or what would be the nature
18 of their contact, what would they discuss with you?

19 A In general a salesman would be contacting contractors
20 and if the contractor were to ask questions that were technically
21 a little above them then they would merely say to the contractor
22 we'll get someone that would help and I would be called.

23 Q Would you ever contact or have communications with the
24 contractors directly?

25 A If the salesman wished it, yes.

1 Q Would you field complaints about the product, about
2 Kaylo and about its servicability and usefulness on particular
3 jobs?

4 A If that came up as a question from the field it would
5 be relayed to me and then either I would answer it directly to
6 the salesman or if it was important enough then I would go with
7 the salesman out into the field.

8 Q Did you ever in your capacity as "manager of engineering
9 services" for Owens-Corning Fiberglass Corporation did you ever
10 receive any complaints about the dustiness of Kaylo products?

11 A No.

12 MR. HIGGINS: Could we go off the record for a second.

13 (Discussion held off the record.)

14 BY MR. HIGGINS:

15 Q Mr. Shuman, in your experience as a civil engineer
16 are you familiar with the concept of solubility as it relates to
17 asbestos containing thermal insulation?

18 A Of course, solubility is the chemical term and you're
19 familiar with it in that sense.

20 Q How is the term solubility used in connection with
21 the asbestos insulation business?

22 A The solubility enters in from the standpoint of so-
23 called accidental service, that is accidental wetting of the
24 material. A material that has lower negligible solubility can
25 be wet and of course it loses its thermal value at the time then

1 if it dries out of course it still will perform. Whereas other
2 materials that are partially soluble may actually disintergrates
3 enough so that they do not remain on the line.

4 Q Is solubility an important concept in the field of
5 asbestos thermal insulation?

6 MR. METCALF: Object to the form.

7 A Well, it's important from the standpoint of servicability
8 under the so-called accidental conditions because in large
9 industrial plants you can never tell when something may happen
10 that will wet the lines. And if the material is insoluble why
11 no particular harm is done, whereas if it is soluble the
12 material may have to be replaced.

13 BY MR. HIGGINS:

14 Q During the 1940's while you were employed at Owens-
15 Illinois did you have occasion to make any comparisons in solu-
16 bility between a product like hydrous calcium silicate and a
17 product like 85 percent mag?

18 A Yes, because we would wet both of them to see what
19 their reactions were. In fact in the field it was characteristic
20 to take the 85 percent mag and break it up into chunks in a
21 bucket of water and make so-called mud which is then the
22 material that was put on as I said before in filling cracks and
23 crevices.

24 Q What if anything does that say about the solubility
25 of the 85 percent mag?

1 A It was much higher than calcium silicate would be.

2 Q What would the calcium silicate product do upon exposure
3 to say water in a bucket as was described?

4 A Well, of course it would absorb a large amount of
5 water because its density is only about 12 pounds per cubic foot.
6 But if you take it out and dry it you'd still have the product
7 back.

8 Q You would not have this crumbling effect as you just
9 described?

10 A No, in fact at one time a plant was inundated in a
11 flood and pieces of the calcium silicate was dug out of the mud
12 and were washed off and dried and they were just as they had
13 been before.

14 Q You were testifying about the concept of friability and
15 I think I misunderstood your testimony.

16 Did you have occasion during the 1940's to compare the
17 friability of a product like Kaylo, calcium silicate, hydrous
18 calcium silicate product like Kaylo to a product like 85 percent
19 mag?

20 A This was part of handability. In other words, if you
21 handle it and we actually would put pieces on pipes in the plant
22 merely as training of salesmen for one thing but in order to get
23 some sense of handability of the materials. And of course then
24 the difference between the friability of calcium silicate which
25 was very low and the higher friability of 85 percent mag was

1 rather evident.

2 Q Is that to say that one product crumbles more readily
3 than the other?

4 A Yes.

5 Q Which crumbles more readily?

6 A The 85 percent mag would crumble more easily than the
7 calcium silicate.

8 MR. HIGGINS: Off the record again.

9 (Discussion held off the record.)

10 MR. HIGGINS: Thank you, Mr. Shuman. I have no further
11 questions.

12 CROSS EXAMINATION

13 BY MR. METCALF:

14 Q Mr. Shuman, my name is Conard Metcalf, I represent
15 plaintiffs in this lawsuit whose name is Patton B. Gilmore.
16 I will be asking you some questions today, if I ask a question
17 you don't understand ask me to rephrase it. If I ask you a ques-
18 tion that you don't hear please ask me to repeat it so that when
19 you give an answer why we all know that you've heard and under-
20 stood the question.

21 Is that fair enough?

22 A Yes.

23 Q Because I've not had a chance to take what we lawyers
24 call a discovery deposition to find out what your testimony is
25 going to be my questions today may be somewhat groping and slow

1 paced so I hope you'll bear with me.

2 A Certainly.

3 Q Mr. Shuman, let me go back initially to the time you
4 joined Owens-Illinois. Do I understand that was in 1944?

5 A That's right.

6 Q At that time your office was at the Owens-Illinois
7 manufacturing facility in Berlin, New Jersey, is that correct?

8 A That's right.

9 Q What was your title?

10 A When I started it was research engineer.

11 Q As research engineer to whom did you report, Mr. Shuman?

12 A To start it out to this Mr. John Seldon whom I had
13 mentioned before and then he got different assignments and later
14 on it was to U. E. Bowes who was director of research of Owens-
15 Illinois.

16 Q State for us to the best of your recollection, Mr.
17 Shuman, when you first began reporting to Mr. U. E. Bowes?

18 A This is just a few months after I had come there in
19 1944.

20 Q Then before 1945 you were reporting as a research
21 engineer to Mr. Bowes?

22 A Right.

23 Q Mr. Bowes' position was director of research?

24 A Of Owens-Illinois Glass Company, the whole company.

25 Q Director of reserach for Owens-Illinois Glass Company?

1 A Right.

2 Q For what period of time did you report to Mr. Bowes?

3 A Continually until he became ill and I can't remember
4 the year, so that this would be later in the '40's. And I think
5 then Mr. Tom Collins became in charge of the Kaylo division and
6 then I reported to him.

7 Q Where were Mr. Bowes' offices located?

8 A Toledo, Ohio, main office.

9 Q Then do I understand from about sometime in 1944 until
10 the late 1940's you reported directly to Mr. Bowes and got the
11 assignments directly from Mr. Bowes?

12 A Yes.

13 Q Did your position change from research engineer in
14 1944 at any time before 1958?

15 A Yes, from 1947 to '49 I was plant manager. So I was
16 in charge of the laboratory and the plant operation.

17 Q When you say plant manager you're talking about the
18 Berlin, New Jersey?

19 A Berlin, New Jersey plant from 1947 to 1949.

20 Q After 1949 what was your title?

21 A I of course had been in effect director of research all
22 the time, so then since I was moved to Toledo in 1955 I merely
23 used the title director of research.

24 Q Was that in 1950 when you went to Toledo as director
25 of research were you director of research for the entire Owens-

1 Illinois Company or was that director of research for the Kaylo
2 division of Owens-Illinois?

3 A For the Kaylo division for Owens-Illinois.

4 Q In 1950 was there a director of research for the entire
5 Owens-Illinois Company?

6 A Yes, I'm trying to think of his name but I can't right
7 at the minute. But there was a director of research who took the
8 place of Mr. Bowes.

9 Q From 1950 until 1958 while you were employed by Owens-
10 Illinois did your position change from director of research?

11 A No, because this also included my consulting to the
12 sales department. So that the work which was done in the division
13 laboratory at Berlin that still continued so I would travel to
14 Berlin from time to time as necessary.

15 Q Approximately how often would you travel from Toledo,
16 Ohio to Berlin, New Jersey in a given year between 1950 and 1958?

17 A I would say roughly twice a month, it would vary, some
18 months less and of course some months more but it was on that
19 order.

20 Q Are you familiar with an entity known as Saranac
21 Laboratory, in Saranac, New York?

22 A Yes.

23 Q When did you first become familiar with Saranac
24 Laboratory?

25 A I can't remember the year but it was explained to me

1 that the company had a policy of being careful in its plant to
2 avoid any hazards that it could avoid. So they employed the
3 so-called Saranac Laboratory which as I understand a large in-
4 dustrial research laboratory that looked into hazards in plants.
5 And Owens-Illinois had employed them for a number of years as
6 I understood it.

7 Q Did you yourself have any direct contact with Saranac
8 Laboratory or representatives or employees of Saranac Laboratory?

9 A Only in the secondary way when they asked for a sample
10 of Kaylo dust that I then as plant manager arranged for that to
11 be sent to them. But I never went to the Saranac Laboratory.

12 Q At some point between 1947 and 1949 you caused Kaylo
13 dust to be sent to Saranac Laboratory?

14 A That's right.

15 Q Did you ever obtain or see any results of any analysis
16 done on the Kaylo dust that you sent to Saranac Laboratory?

17 A Not until a recent deposition I was shown the ones.
18 The only thing I ever heard was verbal.

19 Q When you heard verbal reports of the results of analysis
20 or testing of dust you sent from whom did you hear those reports?

21 A I think from Mr. William Hazard, I think he was health
22 physicist or some name like that, I don't know his official title.

23 Q Was Mr. William Hazard an employee of Owens-Illinois?

24 A Yes.

25 Q Was he an employee of Owens-Illinois as long as you

1 were an employee of Owens-Illinois to the best of your knowledge?

2 A To the best of knowledge that the whole period he was
3 in the same activity of checking on plant operations.

4 Q Did Mr. Hazard come to the Berlin plant while you were
5 officed there between 1944 and 1949?

6 A Yes.

7 Q About how often did Mr. Hazard travel or visit the
8 Berlin, New Jersey plant between that time?

9 A It varied because he didn't have any so-called set
10 schedule, it was more a case of if there was something that
11 needed to be looked at. Or for example if he suggested that some
12 changes be made in the plant then he would come back to see that
13 we had made them and the results suited what his analysis had
14 dictated.

15 Q Did he between 1944 and 1949 make suggestions with
16 regard to installation of ventilation or exhaust equipment along
17 the Kaylo production line in the Berlin, New Jersey plant?

18 MR. HIGGINS: Object to the question, it's outside the
19 scope of direct examination, it's hearsay, it requires a hearsay
20 response based on hearsay. And it's totally irrelevant to the
21 issues in this case.

22 MR. METCALF: I'm willing to give you a continuing
23 objection to hearsay.

24 BY MR. METCALF:

25 Q Do you remember the question?

1 A Only partially.

2 Q My question was whether Mr. Hazard to your knowledge
3 between 1944 and 1949 made any suggestions with regard to instal-
4 lation of ventilation equipment in the Berlin, New Jersey plant
5 along the Kaylo production lines?

6 MR. HIGGINS: And the same objection.

7 A Well, Bill Hazard's function wasn't to tell us how to
8 do it but what he was concerned with was the result. If he felt
9 that the condition in a certain area was undesirable then he
10 would say this, it would have to be changed. And then we would
11 change it and he would check to see if we had the change. But
12 the facilities, that was the mechanical facilities was not of
13 his concern.

14 BY MR. METCALF:

15 Q As a result of any particular visits that Mr. Hazard
16 made to the Berlin, New Jersey plant between 1944 and 1949 did
17 you cause ventilation or exhaust equipment to be installed along
18 the Kaylo production lines in the Berlin, New Jersey plant?

19 MR. HIGGINS: Same objection. May I have a continuing
20 objection to all questions concerning the Kaylo production line.

21 MR. METCALF: Sure.

22 BY MR. METCALF:

23 Q You can answer.

24 A Would you mind repeating.

25 MR. METCALF: Could you repeat the question.

1 (Question read back by stenographer.)

2 A We were enlarging the plant continually and of course
3 equipment then would be installed and so that it was only after
4 something had been running that Mr. Hazard would then check to
5 see that it was suitable. Then he would comment it was acceptable
6 or not as the case may be. But the installations we were doing
7 all along because again that was part of the plant as to minimize
8 the amount of dust that was in the area.

9 BY MR. METCALF:

10 Q What was the purpose for trying to minimize the amount
11 of dust in the area?

12 A This was just policy that the company had was that the
13 dust should be down at low levels because it was recognized in
14 the industry that dust was a hazard regardless of what the dust
15 might be.

16 Q Did Owens-Illinois have a production facility at
17 Sayreville, New Jersey?

18 A Yes, it did.

19 Q What was produced at Sayreville, New Jersey Owens-
20 Illinois plant?

21 A That was a calcium silicate of heavy density that was
22 used as roof tile. That was different than the material produced
23 in Berlin which is thermal insulation.

24 Q Mr. Higgins asked you about what the process was for
25 producing the Kaylo in the Berlin, New Jersey plant.

1 What was the process for producing the material that
2 was produced in Sayreville, New Jersey?

3 A Same process.

4 Q In other words it was a wet slurry?

5 A A wet slurry that was indurated and then dried.

6 Q By the way, have you ever seen 85 percent mag insulation
7 being manufactured?

8 A No.

9 Q Do you have an understanding that it's manufactured
10 by a wet slurry premolded process?

11 A I understand it's by a wet slurry process.

12 Q In the Berlin, New Jersey plant where Kaylo was made,
13 Mr. Shuman, let me see if I understand this first. There's a wet
14 slurry that was injected into a mold, is that correct?

15 A More or less poured into a mold.

16 Q Then while the slurry was in the mold it was heated?

17 A Then it was run into the autoclave. Sometimes there
18 was a holding time because enough cars would have to be filled
19 before they would be put into the autoclave. But that was very
20 often done in the deep tunnel to keep it from cooling and then
21 a so-called load would be run into the autoclave as I've said
22 before and then later dried.

23 Q An autoclave is a --

24 A High pressure steam cylinder.

25 Q That would heat the product that was in the mold?

1 A And that would induce the reaction between the lime
2 and silica, that wouldn't occur at ordinary temperature.

3 Q Would it be fair to say that the reaction that occurred
4 in the autoclave had no effect on the composition or structure
5 of the asbestos that was in the product?

6 A No, the asbestos that's in there is a reinforcing.

7 Q The asbestos that went into the product at the mixing
8 end was the same as the asbestos that came out of the product
9 at the finished end, is that fair to say?

10 A I think that's a fair statement.

11 Q After the Kaylo slurry was autoclaved what was the next
12 step in the process?

13 A Drying.

14 Q How and where did the drying take place?

15 A The material was taken from the autoclave and run into
16 a dryer. And then from the dryer it was then sent into the
17 finishing room so-called where it was sized and packaged.

18 Q Could you tell me where, at what stage in the process
19 the Kaylo was taken out of the mold?

20 A At the end of the dryer.

21 Q Did the dryer heat the product?

22 A Yes. It was in effect an oven in ordinary language.

23 Q Was there a person whose job it was to remove the
24 Kaylo from the mold?

25 A This was a line operation and people would remove the

1 material from the mold and send it in whatever line it was to
2 finish and then the molds would go back into production.

3 Q When the product was taken out of the mold was it put
4 on a conveyor?

5 A At one time of course much of this was done by hand,
6 it would be put on cars and carts and then just hauled over.
7 But later on conveyors were installed.

8 Q Do you remember about when the conveyors were installed?

9 A Well, on the order of 1948-'49, somewhere along there.

10 Q The people whose job it was to handle the product,
11 either taking it from the mold after the drying to the finishing
12 area or placing it on a conveyor belt, were they given respirators
13 to wear?

14 MR. HIGGINS: Same objection.

15 A Respirators were available if it was felt that it was
16 dusty. This was before we would get the dust collecting equip-
17 ment operating like it should, respirators were available all
18 throughout the plant.

19 BY MR. METCALF:

20 Q Handling the tiles, the men handling the tiles, after
21 they were taken out of the molds and either carried to the
22 shaping room or put on a conveyor belt, that handling process
23 created dust from the product, did it not?

24 A To a small extent because you see the product then
25 had been reacted so it wasn't dusty in the sense of a cloud of

1 dust because there were no loose fibers or maybe I should say
2 loose particles that would create dust. But like everything else
3 if you bumped it a little particles of dust might fly out. But
4 it was not considered to be a dusty operation.

5 Q Were you able to see dust in the air at that point of
6 the operation?

7 A Only momentarily if something had happened to bump it.

8 Q Did you ever have occasion to visit the Sayreville,
9 New Jersey Owens-Illinois facility?

10 A Yes.

11 Q Did you have occasion to observe that production line
12 in operation?

13 A Yes.

14 Q Approximately when did you first visit the Sayreville
15 facility?

16 A While it was being built. See, they were building the
17 Sayreville plant while the Berlin plant was improving its
18 facilities to make pipe insulations. So during that whole
19 interval until the Sayreville plant was operating I would go
20 up occasionally.

21 Q After the Sayreville plant was in operation and on
22 line did you have occasion to periodically visit the plant and
23 observe the production process?

24 A Yes.

25 Q You've already said the production process was

1 essentially the same as it was for the Kaylo process in Berlin,
2 New Jersey?

3 A In principal they were identical.

4 Q At Sayreville I take it then there were also workers
5 whose job it was to remove the product from a mold after it was
6 dried and then carry or convey the product to a shaping room?

7 A But they had more so-called mechanical handling
8 facilities than what we had at Berlin so it was much more
9 mechanized.

10 Q At that point of the operation when the product was
11 being handled by workers after removal from the mold would you
12 say there was more dust or less dust generated than the equiva-
13 lent process at the Berlin, New Jersey plant?

14 A I would say less.

15 Q At the Berlin, New Jersey plant we've been talking
16 about a shaping room, is that correct?

17 A It really was given the name finishing room, meaning
18 that you would take the product as it came from the molds and
19 then do whatever was necessary to end up with the sizes that were
20 desired and then it was packaged in cartons for shipping.

21 Q This all took place in the finishing room?

22 A That's what was called the finishing room.

23 Q How was the product manufactured into the desired
24 size in the finishing room?

25 A For example the block would come out 18 inches wide

1 and 36 inches long of various thicknesses. If the desired
2 width was 12 inches of course it would be cut into that size.
3 If the desired width was six inches it would be cut into that
4 size or sometimes it was cut into three inch blocks by almost
5 on special order because that was not common.

6 The six inch width was a very common size and of course
7 it was trimmed to the end for the standard of the industry 36
8 inches. And if necessary for thinwear it would be split so that
9 for example you might have one inch thickness or an inch and a
10 half thickness or two inch thickness or three inch thickness and
11 so the sizes then would be made in accordance with what the
12 anticipated sales demand would be and then it would be cartoned
13 and marked and ready for shipment from the warehouse.

14 Q Did this cutting of the product though, was that done
15 with a pocket knife?

16 A This was all done mechanically by saws. Maybe I should
17 say saws and sanders to even or smooth the top surface.

18 Q When the product was sawed did that generate any dust?

19 A That would and that's where we were installing dust
20 collecting equipment so it would not get out into the work area.

21 Q Then after the product was sawed it was handled by
22 workers who placed it into cardboard cartons, is that correct?

23 A Cardboard cartons.

24 Q Did that handling process generate any dust?

25 MR. HIGGINS: I again reiterate my earlier objection

1 to this whole line of questioning.

2 A Not particularly, it was by that time where it had
3 been handled it had gone through all this mechanical equipment
4 and there's very little free dust.

5 BY MR. METCALF:

6 Q You say very little, was there occasionally dust gen-
7 erated by that handling process that was ^{visible} ~~physical~~?

8 A This would be very local, where somebody might rub it,
9 but it was not what you would call a cloud of dust or dusty area
10 per se.

11 Q Then after the product was put into -- after the Kaylo
12 was put into cardboard cartons you say it was loaded, was it
13 generally loaded on boxcars?

14 A It depended where it was going. Much of the orders
15 were shipped by truck, but if it went for longer distances then
16 it might go by car.

17 Q Where there workers at the Berlin, New Jersey plant
18 whose job it was to load the boxed Kaylo onto boxcars?

19 A Yes, this would be the shipping room.

20 Q Was the finishing room process and the shipping room
21 process of Sayreville plant to your knowledge substantially the
22 same as that in the Berlin, New Jersey plant?

23 A Well, no, because the roof tile which was 18 by 36
24 inches was used as manufactured so there was none of this sawing
25 into other sizes. And so those materials might be put on pallets,

1 stacked and strapped and then the whole pallet would then be
2 handled for shipment.

3 Q So there was no sawing going on in the finishing room
4 at Sayreville?

5 A No. The only thing that would be done would be sanding
6 of the top surface because from the autoclave that would usually
7 have a rough surface.

8 Q I take it there was local exhaust ventilation where
9 the sanding was occurring?

10 A There was dust collectors all around.

11 Q Then at Sayreville was the roof tile -- by the way,
12 the roofing tile, was that also called Kaylo?

13 A Kaylo roof tile.

14 Q Was the Kaylo roof tile then put into cardboard boxes
15 and loaded on trucks or boxcars?

16 A Usually it went on the pallets because they were large
17 pieces and out on the field it was much easier to take them with
18 a pallet up on the roof of the building and then workmen would
19 merely carry it into the installation area.

20 Q So the pallets with the loose product were then loaded
21 into boxcars or trucks?

22 A Or trucks.

23 Q Do you remember what year the Sayreville, New Jersey
24 plant went on line, was actually producing Kaylo roof tile?

25 A I don't know exactly but it would be about 1948, in

1 that area.

2 Q Was there a plant manager at Sayreville, New Jersey?

3 A Yes.

4 Q Who was that?

5 A David Innes.

6 Q Do you remember for what period of time he was the
7 plant manager at Sayreville?

8 A I don't remember the time.

9 Q Was it up through at least 1952?

10 A I think in that neighborhood but again I don't know
11 precisely.

12 Q Did let's say between 1944 and 1949, Mr. Shuman, did
13 Mr. Hazard ever come to the Berlin, New Jersey plant and take
14 samples of the air to test the dust concentration in the air?

15 A Yes.

16 Q Do you remember with approximately what frequency he
17 did this between 1944 and 1949?

18 A As a rule it would be when we were making changes.
19 That is if he had established a certain area was acceptable of
20 course he wouldn't come back until there was some reason to
21 suspect that something else needed checking although he might
22 come in just as an unannounced routine check to see how things
23 were going.

24 MR. HIGGINS: Can I interrupt you, it's 11:46 now
25 according to my watch. It might be a good time to quit.

1 MR. METCALF: Would this be a good time for you to
2 quit?

3 A If you want to go another five or ten minutes that's
4 all right.

5 MR. METCALF: Why don't we stop now and take a break.

6 MR. HICKERNELL: This ends reel one.

7 (Recess.)

8 MR. HICKERNELL: This is reel number two in the depo-
9 sition of Everett C. Shuman and time is 1:30 p.m.

10 MR. METCALF: Could we have the last question and
11 answer read back.

12 (Last question and answer read back by stenographer.)

13 BY MR. METCALF:

14 Q Let's discuss a different area for a while, Mr. Shuman.
15 Have you had your deposition taken before?

16 A Yes.

17 Q Have you had your deposition taken before in connection
18 with a case involving a person who claimed he or she received
19 some sort of asbestos related disease?

20 A I can't remember in those terms but they were deposi-
21 tions that I had made for a case in Virginia last year and then
22 one other one this year.

23 MR. HIGGINS: Before it continues let me make a state-
24 ment. I suppose this line of questioning would be relevant if
25 this were a discovery deposition and I think you are treating

1 your cross examination as for purposes of discovery as well as
2 simply for cross examination of this witness.

3 I would like to not have this aspect of the testimony
4 included in the cross examination of this witness should this
5 video taped deposition be used for purposes of trial. Therefore
6 I would object to any questions dealing with prior depositions
7 as being outside of the course in scope of the direct examination
8 and not relevant to the issues in the Gilmore case. I will
9 register that objection and of course allow him to continue with
10 his discussion if all you're inquiring about is depositions for
11 the purposes of discovery.

12 BY MR. METCALF:

13 Q Do I understand then, Mr. Shuman, that you've given
14 two prior depositions?

15 A Really three.

16 Q Those are all within the last year?

17 A Two in 1979 and one in 1980.

18 Q Were any of those video taped depositions?

19 A None.

20 Q Have you ever testified in court?

21 A No.

22 Q Have you ever given anyone a written statement of your
23 recollection of your involvement with the Kaylo product?

24 A Well, in one of these situations I was given a list
25 of questions that I answered, written questions that I answered

1 written.

2 Q Other than that you've never given anyone a written
3 statement?

4 A Not that I recall.

5 Q Have you ever met with Mr. Higgins prior to today?

6 A No.

7 Q Have you ever met with Mr. Stancati prior to today?

8 A Yes.

9 Q How many times have you met with Mr. Stancati before
10 today?

11 A Twice I think, I'm not sure.

12 Q Do you remember where you met with him?

13 A At one of these depositions.

14 Q Did you ever talk on the telephone with Mr. Higgins
15 at any time before today?

16 A Well, when he phoned me to make arrangements for this
17 deposition which is just recently.

18 Q Did you review any documents, written materials in
19 preparation for your deposition today?

20 A Only to read the prior deposition which I just received
21 last week.

22 Q Mr. Shuman, between 1944 and about 1949 do I understand
23 that you were reporting directly to Mr. U. E. Bowes?

24 A Yes.

25 Q In an average month during that period between 1944 and

1 1949 approximately how many times would you talk with Mr. Bowes?

2 A That was highly variable but it might be frequent and
3 it might be with a lull in between. In addition of course since
4 I was reporting to him I would mail in a monthly activity report
5 as was done for all departments.

6 Q What sort of matters would you discuss in the monthly
7 activity report that you would send to Mr. Bowes?

8 A All the things that were physically underway.

9 Q These things are research projects that you had?

10 A Research and development or if something had happened
11 out in the field that was unusual I would report back.

12 Q Would you report to Mr. Bowes about any visits that
13 William Hazard had made to the Berlin, New Jersey plant?

14 A Not specifically because I presumed that Mr. Bowes was
15 aware of what Mr. Hazard was doing.

16 Q Did you in turn, Mr. Shuman, receive written reports
17 or letters periodically from Mr. Bowes?

18 A A few but not very often.

19 Q What sort of written correspondence would you receive
20 from Mr. Bowes?

21 A This was more in the line of inquiry or suggestions as
22 to something that might be investigated.

23 Q Did you ever discuss with Mr. Bowes any health hazards
24 that might be associated with inhalation of asbestos dust fibers?

25 A This would come up as a routine thing because he was

1 aware that the plant was improving its operating facilities
2 and that we had been working with Mr. Hazard so if he had some
3 specific question he might ask it. But he presumed that work
4 was underway as had been planned.

5 Q This would be with regard to potential asbestos related
6 health hazards including other things?

7 A It would be whatever hazard Bill Hazard had pointed
8 out we should be concerned about.

9 Q Did those hazards include potential hazards related to
10 inhalation of asbestos dust fibers?

11 A We didn't know anything about the significance of the
12 inhalation of asbestos.

13 Q When you say we to whom are you referring?

14 A I'm talking about the Berlin operation.

15 Q At what point in your career did you if at all become
16 aware of potential health hazards associated with inhalation
17 of asbestos dust fibers?

18 A The so-called cancerous phase I didn't become aware of
19 that until I read it in the newspapers somewhere along the
20 1960's when it got all the publicity. Prior to that and this
21 again I'm not too sure of the date Bill Hazard had pointed out
22 that the Saranac Lake Laboratory had found a reaction that they
23 had described as asbestosis which was different than silicosis
24 but nothing was said as to about the significance of one or the
25 other. Of course I was aware that silicosis was something we had

1 always been concerned about, so this was just another form of
2 silicosis.

3 Q Would you have had this discussion with Mr. Hazard
4 where you became aware of the asbestosis reaction discovered in
5 the Saranac Lake research before 1958?

6 A I would say it was in the early 50's. See, I was no
7 longer plant manager then but of course I was still in charge
8 of engineering which of course had to do with plant operations.
9 So he had mentioned it in that period and I can't pick the year
10 but I would say '52-'53 or somewhere along in there.

11 Q Do you think it would have been before 1952?

12 A Well, it could but I sort of doubt it. Because see,
13 I hadn't left the plant until 1950 and at that time I hadn't
14 heard anything about it.

15 Q After 1958 when Owens-Corning Fiberglass Company pur-
16 chased the Berlin, New Jersey from Owens-Illinois did you have
17 knowledge about the basic composition of Kaylo as manufactured
18 by Owens-Corning?

19 A Not specifically but it was presumed that they just con-
20 tinued to manufacture the same calcium silicate that had been
21 made.

22 Q So would it be fair to say that there was no substantial
23 difference between the composition of Kaylo before 1958 and after
24 1958?

25 MR. HIGGINS: Objection, that wasn't his testimony at

1 all. He said he wasn't aware of any changes.

2 MR. METCALF: I am just asking a different question now.

3 MR. HIGGINS: That's not a fair characterization of
4 his earlier testimony.

5 A The thing I'm going back to is what happened in the
6 field, there were no changes that we saw in the product in the
7 field and what we had seen before.

8 BY MR. METCALF:

9 Q While you were with Owens-Corning from what, 1958
10 until 1961?

11 A That's right.

12 Q Did you have a job title?

13 A Well, probably but I can't remember what it was. It
14 was the equivalent of a sales consultant to the sales department.

15 Q Were you a full-time employee of Owens-Corning Fiber-
16 glass?

17 A Yes.

18 Q You were a full-time employee of Owens-Corning Fiber-
19 glass from 1958 until 1961?

20 A That's right.

21 Q As a consultant to the sales department did you draft
22 or lend assistance or advice in drafting or putting together
23 product catalogs?

24 A Oh, only to the extent that if they had something that
25 they had prepared they came and asked me to look over to see that

1 there was nothing technically wrong in what they had done.

2 Q While employed by Owens-Corning Fiberglass to whom did
3 you report?

4 A H. T. Williams.

5 Q What position did H. T. Williams have in the company?

6 A He was sales manager for industrial insulations.

7 Q Were there monthly or other periodic meetings that you
8 attended while employed by Owens-Corning Fiberglass in performance
9 of your duties and responsibilities?

10 A There was usually a monthly sales meeting that I would
11 attend.

12 Q Who would conduct these monthly sales meetings?

13 A H. T. Williams.

14 Q Who else would attend the monthly sales meetings?

15 A Well, I can't recall specifically people but those who
16 were interested in the insulation field would attend from time
17 to time. There was a vice president, I can't recall his name
18 that would attend occasionally.

19 Q After the early 1950's information you learned about
20 some of the results of the Saranac studies with Kaylo. and
21 asbestos reaction did you learn any further additional information
22 about potential health hazards associated with inhalation of
23 asbestos or Kaylo?

24 A No.

25 Q You received no further information from Mr. Hazard in

1 that regard?

2 A No.

3 Q Did you know a Dr. Shook while you were employed?

4 A He was the medical doctor for Owens-Illinois.

5 Q For what period of time was Dr. Shook the medical
6 director for Owens-Illinois?

7 A He was medical director I think when I started in 1944
8 and later on he became ill and I can't remember what year it was
9 that he dropped out of active service.

10 Q Would it have been around the mid-1950's that Dr.
11 Shook dropped out of active service?

12 A It seems to me it was earlier but again I'm somewhat
13 hazy because the activities then were really carried on by Mr.
14 Hazard rather than Dr. Shook although I presume Mr. Hazard was
15 working with Dr. Shook in some way but I don't know specifically.

16 Q Did you ever meet Dr. Shook?

17 A Yes.

18 Q Did you meet Dr. Shook while you were plant manager
19 of the Berlin, New Jersey plant?

20 A I think I met him even before then.

21 Q Did you meet Dr. Shook periodically then while he was
22 active with Owens-Illinois?

23 A No, it was only when something unusually came up that
24 I'd see Dr. Shook because he had the whole company to look after.

25 Q What sort of unusual thing would come up that would

1 cause you to see Dr. Shook?

2 A Well, the plant had a routine x-ray program for all
3 employees which of course would have been under his jurisdiction.

4 Q Anything other than his administering an x-ray program?

5 A No.

6 Q Did you ever have any discussions with Dr. Shook re-
7 garding potential health hazards associated with inhalation of
8 asbestos fiber?

9 A No.

10 Q While you were working for Owens-Corning Fiberglass
11 did you ever meet or become acquainted with a person by the name
12 of C. G. Staelin?

13 A I don't recall that name.

14 Q I take it from your earlier testimony in response to
15 Mr. Higgins' questions that it was important to you to see how
16 the Kaylo product was being used in the field, is that a fair
17 statement?

18 A Yes.

19 Q It was important to you to know this so that you could
20 make any changes or alterations in the manufacturing process to
21 make a better product?

22 A Yes, that was our overall aim to keep improving the
23 product as best we could.

24 Q I guess to improve the product and to know whether or
25 not it was doing what it was supposed to do it was important to

1 know where it would be used and under what conditions it would be
2 used?

3 A Yes.

4 Q Would it be fair to say that it's important to know
5 whether or not a product for example Kaylo from your point of
6 view can be used by applicators of the product safely and without
7 any hazards to themselves?

8 A Well, that would be implied that we were concerned
9 of how the applicators would use it.

10 Q Your concern with that for among other reasons the
11 safety of the applicators, is that correct?

12 A Well, yes, but the product that we were making was
13 so similar to what had already been used and as I pointed out we
14 used the usual tools of the trade that there was no reason to
15 look at it from any other standpoint than the handability. That
16 is if someone was holding onto a piece and it would break unex-
17 pectedly this of course would be undesirable.

18 Q While you were director of research and plant manager
19 at the Berlin, New Jersey plant, Mr. Shuman, would it have made a
20 difference to you in your ongoing process to improve the 'Kaylo
21 product to know whether or not that product had the capability
22 of causing asbestosis in experiments at Saranac Laboratory?

23 MR. HIGGINS: Objection, that calls for pure speculation
24 on the part of the witness.

25 A We didn't know about any such thing so we never even

1 considered it.

2 BY MR. METCALF:

3 Q My question to you is if you had known about it.
4 I want you to assume as a fact that in 1948 Saranac Laboratory
5 wrote a letter to Owens-Illinois telling Owens-Illinois that
6 Kaylo inhalation in guinea pigs caused asbestosis and should be
7 handled as an industrially hazard product.

8 Assuming that that letter was in existence and written
9 to Owens-Illinois in 1948 would it have made a difference to
10 you in your development of the Kaylo product to have that
11 information?

12 MR. HIGGINS: Same objection because of pure specula-
13 tion, I'm not sure that's a fair characterization to a '48
14 letter and there's been no foundation made as to whether or not
15 this witness ever saw that letter or was aware of it. So again
16 it's pure speculation.

17 BY MR. METCALF:

18 Q Do you remember the question, Mr. Shuman?

19 A Yes.

20 Q Can you answer that?

21 A The only way I would make a change is if the orders
22 came down from top management.

23 Q Top management would be whom, would Mr. Bowes be top
24 management?

25 A He would be my direct top management.

1 Q So for you to make a change in the product you would
2 have in the ordinary chain of command in communication Owens-
3 Illinois would have received an order as it were from Mr. Bowes
4 to do so?

5 A Well, I would of course follow whatever I was asked to
6 do.

7 Q When you were asked to do things the person who asked
8 you to do them was the person to whom you reported, Mr. Bowes?

9 A Yes.

10 Q As I understand it in your professional career, Mr.
11 Shuman, you've occasionally published articles describing research
12 you've done, is that fair?

13 A Yes.

14 Q Approximately how many articles have you published?

15 A Oh, I don't think I counted them, probably a dozen.

16 Q Would all these articles relate to research that you've
17 conducted or supervised yourself?

18 A Yes.

19 Q I take it that before you had published one of these
20 articles it was important to you as an engineer and scientist to
21 know that you're on pretty solid ground with regard to statements
22 you made in the articles?

23 A Yes.

24 Q Would it be I guess unlikely that you'd make a state-
25 ment without some foundation for making a statement in an article
written by you?

1 A Yes.

2 Q I guess it would be fair to say then writing up research
3 and technical information it's important not to make unfounded
4 statements?

5 A That's right.

6 Q I take it it would be fair to say that you learn pretty
7 early on in your professional career that it's important to be
8 able to back up statements you make in articles that you write
9 and publish?

10 A Yes.

11 Q In 1952 you published an article about hydrous calcium
12 silicate insulation, did you not?

13 A Yes.

14 Q Mr. Shuman, let me hand you what's been marked as
15 Plaintiff's Exhibit OI-11.

16 Let me hand you what's been marked as Plaintiff's
17 Exhibit OI-11 and ask you if that's a copy of an article published
18 by you?

19 A Yes.

20 Q Does that article appear in April 1952 edition of
21 Petroleum Engineer magazine?

22 A Yes.

23 Q If you would just take a moment to look at the article
24 and make sure it's the one you published?

25 A It is.

1 Q There's just a couple of questions I want to ask about
2 that. On page C-62 of the article, Mr. Shuman, the first full
3 paragraph in the middle column of the page. Are you with me
4 there?

5 A Okay.

6 Q It's the paragraph that consists of one sentence and
7 reads, "applicators appreciate the fact that hydrous calcium
8 silicate is non-toxic and quote,easy on the hands,unquote."

9 A Yes.

10 Q What foundation or research did you have available to
11 you to indicate that hydrous calcium silicate is non-toxic and
12 easy on the hands?

13 A The word toxic as I was brought up in chemistry was
14 poison and there were no known poisons in calcium silicate and
15 the lime and silica had reacted so that they were a calcium
16 silicate, not either lime or silica. So there was no known
17 poison substances in the material.

18 Q Was it your understanding in April of 1952 that asbestos
19 was non-toxic?

20 A That's right, asbestos was non-toxic, meaning poison.

21 Q Just so I understand what's your definition of poison?

22 A Something that reacts chemically.

23 Q In 1952 it was your understanding that asbestos did not
24 react chemically in any way with animals or people in handling it?

25 A That was my understanding. The effect was more

1 mechanical than chemical.

2 Q At least that was your understanding?

3 A That was my understanding.

4 Q In 1952?

5 A Yes.

6 Q Mr. Shuman, let me hand you what's been marked as
7 Plaintiff's Exhibit OI-2 and ask if you can identify it. I will
8 let Mr. Higgins look at it first.

9 Do you have the documents marked Plaintiff's Exhibit
10 OI-2, Mr. Shuman?

11 A Yes.

12 Q Is that a two-page document?

13 A Yes.

14 Q Is it dated February 12th, 1943?

15 A Yes.

16 Q Does it purport to be signed by U. E. Bowes, director
17 of research?

18 MR. HIGGINS: The document speaks for itself.

19 BY MR. METCALF:

20 Q Does that appear to you to be an accurate facsimile of
21 Mr. Bowes' signature?

22 MR. HIGGINS: Objection, there's been no foundation
23 laid for Mr. Shuman's knowledge about Mr. Bowes' signature.

24 MR. METCALF: I beg to differ with that but the objec-
25 tion is noted.

1 BY MR. METCALF:

2 Q Does that appear to be Mr. Bowes' signature to you?

3 A I think so.

4 Q Does the first page of OI-2 have an inscription at the
5 top of the page?

6 MR. HIGGINS: The document speaks for itself.

7 MR. METCALF: I need to ask him some questions but I
8 agree it does speak for itself.

9 BY MR. METCALF:

10 Q Is that a reproduction of an Owens-Illinois letterhead?

11 A It looks like it.

12 Q Is that the type of letterhead that you're familiar
13 with while working with Owens-Illinois during that time?

14 A Yes.

15 Q By the way, did you ever meet Dr. L. U. Gardner?

16 A No.

17 MR. METCALF: I have no further questions about that
18 document.

19 BY MR. METCALF:

20 Q Did you ever have the occasion to meet Dr. H. J.
21 Vordwald?

22 A No.

23 Q Did you ever have any correspondence with Dr. Vordwald?

24 A Yes.

25 Q What was the occasion of your correspondence with Dr.

1 Vordwald?

2 A This had to do with sending them a sample of Kaylo dust
3 with which to conduct their research.

4 Q Did you ever become aware, Mr. Shuman, in a report dated
5 January 30, 1954 to Owens-Illinois Dr. Vordwald described Kaylo
6 as having because of its asbestos contents toxic properties?

7 A No, I never saw it.

8 Q If you had seen that would that have changed your
9 belief about Kaylo being non-toxic?

10 MR. HIGGINS: Objection, counselor, speculation to a
11 hypothetical question. It's not supportive of the facts of the
12 case.

13 BY MR. METCALF:

14 Q You can answer.

15 A Yes, I presume I certainly would have weighed the com-
16 ments.

17 Q By 1960, Mr. Shuman, had you come to the understanding
18 or belief that asbestos was a potentially toxic substance?

19 MR. HIGGINS: What year?

20 MR. METCALF: By 1960.

21 A Not particularly because all I had heard was of course
22 this in reference to asbestosis but I had never heard any state-
23 ments on the significance of what they meant. To me it meant it
24 was like silicosis but somewhat different.

25

1 BY MR. METCALF:

2 Q Mr. Shuman, let me hand you what's been marked as
3 Plaintiff's Exhibit OCF-8 after I've shown it to Mr. Higgins.

4 Would you be able to identify for us what Plaintiff's
5 Exhibit OCF-8 is?

6 MR. HIGGINS: Again the document speaks for itself.

7 A This seems to be an exposition of Kaylo and with
8 illustrations of its use and some of the properties.

9 BY MR. METCALF:

10 Q Is that an Owens-Corning document?

11 A It has Owens-Corning logo on it.

12 Q Is there a date on the first page?

13 A October 1960.

14 Q This is at a time when you were a full-time employee
15 of Owens-Corning Fiberglass, is that correct, October of '60?

16 A Yes.

17 Q At the page of Exhibit OCF-8 marked 24 at the lower left-
18 hand column, do you see that page?

19 A Yes.

20 Q The third full paragraph of the text of that page,
21 do you see that, it begins Kaylo pipe insulation?

22 A Yes.

23 Q Does the last sentence of that paragraph read that,
24 "it is non-irritating to the skin and non-toxic?"

25 A Yes.

1 MR. HIGGINS: Before he answers that let me interpose
2 an objection. First of all the documents speaks for itself.
3 Second of all there's been no foundation laid about whether or
4 not this witness knows anything at all about this document.
5 You're just asking him to read from a document.

6 MR. METCALF: I'm just asking him to agree with it.

7 MR. HIGGINS: I don't see the relevance of any of his
8 testimony.

9 BY MR. METCALF:

10 Q Mr. Shuman, does Exhibit OCF-8 contain certain techni-
11 cal information regarding Kaylo pipe covering?

12 A Yes.

13 Q Is this a type of technical information about which
14 you would have been consulted by the sales department in Owens-
15 Corning?

16 A Usually.

17 Q Does Exhibit OCF-8 contain technical information that
18 you would have been able to supply to the sales department?

19 A Well, these are data that had been accumulated by Owens-
20 Illinois before Owens-Corning took it over so I presume these are
21 the same data that Owens-Illinois had used.

22 Q When you left Owens-Illinois in 1958 and began working
23 with Owens-Corning did you discuss the knowledge you had about
24 Kaylo with the Owens-Corning Fiberglass people?

25 A Well, the ones that were active in it already knew

1 because Mr. Williams had been an employee of the Kaylo division
2 of Owens-Illinois before he took over this sales manager job
3 of Owens-Corning.

4 Q What was Mr. Williams' title again?

5 A I think he was sales manager of industrial insulation.

6 Q What was his title while he was working for Owens-
7 Illinois?

8 A I don't recall, I don't recall any specific title per
9 se because he was more or less like a supervisor in the sales
10 department because of his long years of experience.

11 Q Did Mr. Williams work for Owens-Illinois up until the
12 time the Berlin plant was sold to Owens-Corning?

13 A He had gone over to Owens-Corning a year or two prior
14 to that.

15 Q Did you ever know a Mr. Burch while you were working
16 at Owens --

17 A Yes, Oscar Burch. That was the name of the director
18 of research I was trying to think of earlier in the day when I
19 pointed out that he had taken over after Mr. Bowes had become
20 ill.

21 Q So Mr. Burch became director of research for Owens-
22 Illinois?

23 A Right.

24 Q Did Mr. Burch subsequently work for Owens-Corning?

25 A No.

1 Q What did you say Mr. Burch's first name was?

2 A Oscar.

3 Q Did you know a Mr. M. D. Burch who worked at Owens-
4 Corning?

5 A No.

6 Q Do you know whether or not Owens-Corning Fiberglass
7 Corporation had a position entitled director of personnel and
8 industrial relations?

9 A I don't know of any.

10 Q Would you have been as a consultant to the sales depart-
11 ment in a position to be aware of whether or not there was such a
12 title within Owens-Corning Fiberglass?

13 A No.

14 Q Were you ever acquainted with Mr. Harold Boechenstein?

15 A He's the president of Owens-Corning Fiberglass Corpo-
16 ration.

17 Q When did you first become acquainted with him?

18 A I don't recall specifically but I had known about him
19 of course but actually didn't meet him because at my level there's
20 no reason to be hob-knobbing with the president. But he was
21 democratic so if we were in a meeting or something of that sort
22 he was never aloof. But there was no reason for me to be in
23 close contact with him.

24 Q How about Mr. W. P. Zimmerman?

25 A He was one of the officials of Owens-Corning Fiberglass.

1 I met him but again occasionally.

2 Q I take it you never had conversations about asbestos
3 related health hazards with Mr. Boecheinstein or Mr. Zimmerman?

4 A None.

5 Q Did you ever meet or become acquainted with a Mr.
6 Edward C. Ames?

7 A The name sounds familiar but again I may have met him
8 just occasionally, I don't remember any lengthy contact with him?

9 Q Does the name have any connection to public relations
10 manager position in Owens-Corning Fiberglass?

11 A I don't recall that now.

12 Q Mr. Shuman, does the name Ira Brought ring any bells
13 for you?

14 A Not at all.

15 Q Does the name W. J. Stewart ring any bells for you?

16 A W. J. Stewart was with Owens-Illinois.

17 Q Was Mr. Stewart with Owens-Illinois in June of 1956?

18 A I'm not sure.

19 Q What was Mr. Stewart's position at Owens-Illinois?

20 A At one time he was general manager of the Kaylo division
21 and then I lost contact with whatever he was doing. But he was
22 there for -- I can't remember, two or three years or some number
23 like that.

24 Q Did you and he both work for Owens-Illinois at the
25 same time?

1 A Yes.

2 Q After I show it to Mr. Higgins I will hand you
3 Plaintiff's Exhibit OI-9.

4 Do you have Plaintiff's Exhibit OI-9 in your hands?

5 A Yes.

6 Q Does that exhibit bear the date of June 12, 1956?

7 A Yes.

8 Q Does the name E. C. Shuman appear in that?

9 A Yes.

10 MR. HIGGINS: Let me interpose another objection.
11 Again the document speaks for itself, there's been no foundation
12 as to whether or not this witness can identify this exhibit.
13 Apparently all counsel is seeking to do is to have him restate
14 information that is obviously on the document. I think this
15 procedure is improper.

16 MR. METCALF: I think we have to get to the point where
17 we can identify it.

18 MR. HIGGINS: Why don't you ask him the questions
19 can he identify this exhibit. And if he can't then perhaps
20 you ought to go into something else.

21 BY MR. METCALF:

22 Q Mr. Shuman, is that a memorandum that you recollect
23 receiving during your employment with Owens-Illinois?

24 A I don't remember this.

25 Q Do you remember anything about the contents stated in

1 that memorandum?

2 A No.

3 Q Is that the first time you've ever seen that?

4 A Excepting that if I got a copy, I must have gotten a
5 copy way back. But then at that time that I read it and stuck
6 it in the file.

7 Q Perhaps you can help me with the initials that appear
8 at the bottom of that document OI-9, if you can read them for me.

9 A I can't make them out. It's apparently W.G.. something
10 but I can't make out what the -- can't determine what the last
11 one is, what the last letter is.

12 Q Does the last letter appear to be an H?

13 A It could be --

14 MR. HIGGINS: Objection. I mean you're asking --
15 unless you're going to qualify him as an expert in document
16 reading and interpretation I don't see what possible relevance
17 any of this testimony has.

18 BY MR. METCALF:

19 Q Do you have any familiarity with Mr. William G.
20 Hazard's signature?

21 A Very little. I don't remember that I've seen that
22 excepting in passing somewhere.

23 Q June 1956 would it be your recollection that Mr. Hazard
24 was working for Owens-Illinois?

25 A I think he still was at that time.

1 Q Did you ever meet or become acquainted with a person
2 by the name of J. M. Robinson?

3 A Doesn't ring a bell.

4 Q I think that you testified in response to Mr. Higgins'
5 questions that when you joined Owens-Illinois sales of Kaylo were
6 very minor, is that fair?

7 A Yes.

8 Q In fact when you joined Owens-Illinois the Berlin, New
9 Jersey plant was really only in the pilot stage?

10 A I had characterized it as that. In fact at one time
11 called it the Berlin pilot plant. By pilot the implication was
12 it made usable standard material excepting on such a slow pro-
13 duction rate that large orders couldn't be accepted because we
14 couldn't fulfill them.

15 Q I think you also said that the asbestos fiber used in
16 Kaylo was primarily chrysotile?

17 A Yes.

18 Q You used the word primarily, it implies to me some
19 other fiber was also used?

20 A Not regularly, there were other asbestos that were on
21 the market that we might try and add in small portions but not
22 in any major change. It was primarily all chrysotile.

23 Q Did Kaylo insulation periodically contain amosite
24 asbestos?

25 A No, that would be of the heavy density material only,

1 as a roof tile you remember they were making at Sayreville.

2 Q Is it your testimony then that the Kaylo thermal insu-
3 lation never contained any amosite asbestos?

4 A It was not a fiber that was easy enough to handle to
5 go into the light density material.

6 Q What was it about the amosite that made it difficult
7 to handle?

8 A It's more of a discrete fiber, that is it was stiff and
9 would not fiberize as well as chrysotile.

10 Q So more likely than not when you take samples of dust
11 from the Kaylo plant in Berlin, New Jersey and sent them to Dr.
12 Vordwald of Saranac those dust samples would not have contained
13 any amosite?

14 A Would not contain amosite.

15 Q Have you ever met Dr. Garrett Schepers?

16 A No, not that I recall.

17 Q Did I understand you to say that Kaylo thermal insu-
18 lation contained approximately 18 percent asbestos by weight?

19 A Approximately, that's right.

20 Q It's your understanding, is it not, that Kaylo is still
21 manufactured and marketed today by Owens-Corning Fiberglass?

22 A I understand they're still making it, yes.

23 MR. HIGGINS: Are you implying that it contains
24 asbestos?

25 MR. METCALF: I'm not implying anything, Mr. Higgins,

1 I'm just asking questions.

2 BY MR. METCALF:

3 Q It would be fair to say, would it not, Mr. Shuman, that
4 after 1972 Kaylo did not contain asbestos?

5 A I have no idea.

6 Q The times that you observed asbestos containing insula-
7 tion such as pipe covering and insulating cement being applied
8 was that only while you were with the Portland Cement Association
9 in Chicago or did you observe it being applied on occasions sub-
10 sequent to that?

11 A Well, over the years whenever I was associated with
12 pieces of equipment and insulation was involved of course that's
13 when I was involved in its being used.

14 Q Did that occur periodically while you were plant
15 manager of the Berlin, New Jersey plant?

16 A At the Berlin, New Jersey plant we made our own insu-
17 lation.

18 Q You also used some of it?

19 A Oh, yes, that's what I'm implying is we made it and
20 applied it as needed.

21 Q Who applied it where you needed it?

22 A Workmen.

23 Q Were these members of the asbestos workers union or
24 were they --

25 A At the beginning they were not, later on they were.

1 Q Did these workers who applied it, were they supplied
2 respirators by Owens-Illinois?

3 A If there was a need to.

4 Q Was there ever a need to while they were applied?

5 A Again it depended on where this was being done. If it
6 was in an enclosed area they would be supplied, as I said respira-
7 tors were always available. But in most applications you sawed
8 a piece and then you do something and there isn't any continual
9 operation that produces dust in applications.

10 Q I'm not sure of the answer to my question is yes or
11 no. Did you have occasion to supply respirators to the people?

12 A I think I said yes, we did when the occasion arose
13 meaning closed areas where it might be dusty.

14 Q What sort of closed areas would those be?

15 A This would be pieces of equipment that were -- it was
16 along side of walls or places where it wasn't readily ventilated
17 naturally.

18 Q Would that be most indoor --

19 A I'm talking about indoors, yes.

20 Q Most indoor uses then for applications of Kaylo at the
21 Berlin, New Jersey plant for example would involve a situation
22 where the person applying it would be provided with a respirator?

23 A Yes.

24 MR. METCALF: I think I'm almost done here, Mr. Shuman.
25 Can we go off the tape.

1 (Discussion held off the record.)

2 BY MR. METCALF:

3 Q Mr. Shuman, was the address of Owens-Illinois Glass
4 Company in mid to late '40's Toledo one, Ohio?

5 A Yes.

6 Q What did the one refer to?

7 A It's the postal designation.

8 Q Sort of like a zip code?

9 A That's right, that was the forerunner of the zip code.

10 Q I think you've already told us about a Mr. David
11 Innes?

12 A Yes.

13 Q Who was he again?

14 A He was plant manager at the Sayreville plant. In fact
15 he was plant manager at the Berlin plant before I took over. And
16 then when they built the Sayreville plant he became plant manager
17 of the Sayreville plant.

18 Q Did you know a Mr. H. H. Renn?

19 A No, that's doesn't ring a bell.

20 Q A Mr. M. M. Olander?

21 A Olander was the director of personnel I think is what
22 his title was for Owens-Illinois.

23 Q Mr. A. C. Hirth?

24 A That doesn't ring a bell.

25 Q In early to mid '40's did you ever know the name of

1 Mr. Bowes' secretary?

2 A Miss Grice.

3 Q Do you remember her first name?

4 A She was a secretary now I'm presuming it was Mr. Bowes'
5 but at least the so-called general manager of the Kaylo division.
6 I can't right at the minute think of her first name. Josephine
7 it might have been.

8 Q Mr. Shuman, during the time you were working for Owens-
9 Illinois and Owens-Corning did you ever have occasion to discuss
10 asbestos containing insulation products with anybody employed by
11 Johns-Manville Corporation?

12 A Well, only in AST committee C16 where all materials
13 were being discussed.

14 Q Do you remember the names of anybody?

15 A Well, the representative of Johns-Manville at that time
16 was Charles Bradley.

17 Q Were you ever consulted in or about 1950 or 1951, Mr.
18 Shuman, with regard to putting together a brochure about the
19 health aspects of Kaylo insulation?

20 A No, I never heard of that.

21 Q Was there a santocel product made by Owens-Illinois?

22 A No, I don't think made by Owens-Illinois. That is a
23 trade name that I heard but I don't think this was -- my guess
24 would be and purely a guess would be Johns-Manville.

25 Q I believe you testified that Mr. Shook occasionally

1 took samples of atmospheric dust in the Berlin, New Jersey plant?

2 A I think that was Mr. Hazard.

3 Q Mr. Hazard, I'm sorry.

4 A Mr. Hazard did, yes.

5 Q Do you know whether or not Mr. Hazard would analyze
6 those samples of dust for their contents?

7 A I presume he did because he would then report back to
8 me whether the value was too high and we needed a better pick-up
9 equipment.

10 Q Do you know whether or not Saranac Laboratories read
11 x-rays for Owens-Illinois employees?

12 A That was my understanding that we would send our
13 employees down to the other OI plant about 15 miles away, I can't
14 remember the name of the little town where the x-rays were taken
15 and then they would be sent to Saranac Lake to be read.

16 Q Did you have annual chest x-rays while you were
17 employed by Owens-Illinois?

18 A Yes. That is you're implying while I was at the Berlin
19 plant?

20 Q Yes.

21 A Yes.

22 Q Did you have annual chest x-rays while you were officed
23 at Toledo?

24 A No, those were then -- it would be done on my own annual
25 checkup.

1 Q Do you remember a survey, dust survey being conducted
2 at the Berlin, New Jersey plant in about the middle of 1958?

3 A No, I don't remember any.

4 Q Do you remember whether you sent dust from the Berlin,
5 New Jersey plant to Saranac on more than one occasion?

6 A That was just once, the initial shipment was a mistake,
7 we had sent block and then Dr. Vordwald or his secretary pointed
8 out they wanted dust and then we actually sent the dust. But
9 that was the only shipment that we made.

10 Q Do you remember the name of the secretary that pointed
11 that out to you?

12 A I don't remember now.

13 Q Do you remember if her name was Lillian Bland?

14 A That name Bland sounds familiar, yes.

15 MR. METCALF: I have no further questions at this time.

16 I want to make a statement. I earlier stated I had no
17 objection to the deposition being taken to preserve testimony.
18 I am going to withdraw that and just let the record stand on its
19 own as to whether or not there's adequate foundation for this
20 being a deposition to preserve testimony.

21 MR. HIGGINS: Let me address that first with a couple
22 more questions to Mr. Shuman.

23 REDIRECT EXAMINATION

24 BY MR. HIGGINS:

25 Q Mr. Shuman, would you again describe what the present

1 state of your health is?

2 A Well, for my age reasonably good. Of course occasionally
3 I get as people do in my age arthritis in my knees which makes
4 walking rather difficult, but it comes and goes. But other than
5 that why I would say for my age fairly good health.

6 Q How old are you at the present time?

7 A I'm 77. If I vote in November I will be 78 plus one
8 day.

9 Q Mr. Shuman, would you again tell us what your job
10 title and responsibilities were at Owens-Corning from the period
11 of 1958 to 1961?

12 A As I said I can't remember the official title, the
13 word manager of engineering services sounds like it might be it.
14 But basically I was consultant to the sales department and as it
15 come out in the testimony it was to help sales people in answering
16 technical questions that might arise in the field that they
17 themselves couldn't answer.

18 Q What was the function of the sales department?

19 A Of course the sales department was to get orders for
20 the material. And this of course they would do by contacting
21 contractors and those organizations of large engineering organi-
22 zations that were buying thermal insulation. The first thing of
23 course would be to get into their specifications so that it was
24 an acceptable product on the list of the thermal insulation that
25 the customer was buying.

1 Q Did the sales department have anything to do with
2 research and development, particularly with regard to Kaylo?

3 A No. The sales department would only report what they
4 got from the field, comments about what was liked or disliked.
5 But so far as the conduct of the research or development they had
6 nothing to do with that.

7 Q In your capacity as a consultant for the sales depart-
8 ment of Owens-Corning did you have anything to do with research
9 and development generally and specifically with regard to Kaylo?

10 A No, I mean after the change was made then their own
11 research people did all of that.

12 Q So you were out of research and development?

13 A I was out of research and development.

14 Q Completely?

15 A Yes.

16 Q Mr. Shuman, you testified about the Sayreville plant on
17 a couple of occasions during your testimony here today. Was there
18 a point in time when the Sayreville plant ceased production of
19 Kaylo?

20 A Yes. As I pointed out this was heavy density material
21 which was primarily roof tile. And while it accomplished quite a
22 bit in the way of providing thermal insulation as well as support
23 in those days thermal insulation wasn't given the weight that
24 it is today and so it was considered to be too high priced. So
25 the outlook was unfavorable saleswise and so I think it was

1 somewhere around 1953 they decided to get out of the business.
2 That's when Sayreville was shut down.

3 Q Was the Sayreville plant in existence at the time
4 Owens-Corning purchased the Berlin plant in 1958?

5 A No, the equipment had been sold and somebody else had
6 it.

7 Q You testified earlier about some of the features of
8 hydrous calcium silicate insulation products in general and
9 specifically about Kaylo. You discussed its handability in the
10 field I think was something you talked about?

11 A Yes.

12 Q The fact that it produced relatively low amount of
13 dust compared to other kinds of thermal insulations?

14 A Yes.

15 MR. METCALF: Object to the form.

16 BY MR. HIGGINS:

17 Q That solubility was a factor to take into consideration
18 and the solubility of hydrous calcium silicate was better than
19 something like 85 percent mag?

20 MR. METCALF: Object to the form.

21 A Yes.

22 BY MR. HIGGINS:

23 Q That it could be used in higher temperatures -- that
24 an asbestos containing thermal insulation could be used in
25 higher temperatures than other types of insulations, is that

1 correct?

2 MR. METCALF: Object to the form.

3 A Well, if I understand you're saying the calcium silicate
4 materials would perform at higher temperatures than the 85 percent
5 mag, that's right.

6 BY MR. HIGGINS:

7 Q You also testified that one of the components of
8 hydrous calcium silicate thermal insulation specifically Kaylo
9 was asbestos, is that correct?

10 A At that time, yes.

11 MR. METCALF: Object to the form.

12 BY MR. HIGGINS:

13 Q During the period of time that you worked for Owens-
14 Illinois in your view was there any substitute for asbestos that
15 had better performance characteristics than asbestos itself?

16 MR. METCALF: Object to the form.

17 A We didn't know of any.

18 BY MR. HIGGINS:

19 Q You testified that the asbestos fiber that was incorpo-
20 rated into the Kaylo product would not change its characteristics
21 after the autoclaving process, is that correct?

22 A Yes.

23 MR. METCALF: Object to the form.

24 BY MR. HIGGINS:

25 Q Is that a fair characterization of what your testimony is?

1 A In other words, the asbestos in the finished product
2 was essentially the same as what had been put in originally.

3 Q If you know, was there any chemical alteration of the
4 asbestos fibers as a result of the autoclaving process?

5 A There was no known reaction between asbestos and the
6 other ingredients.

7 MR. HIGGINS: I have no further questions.

8 (Whereupon, the deposition was concluded.)
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11

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