

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

-----x
IN RE: ASBESTOS PRODUCTS LIABILITY Civil
LITIGATION (NO. VI) MDL 875
-----x

This Document Relates to:
UNITED STATES DISTRICT COURT
FIFTH DIVISION
DISTRICT OF MINNESOTA

-----x
CONWED CORPORATION,
Plaintiff, 5-92-88

-against-

UNION CARBIDE CHEMICALS AND
PLASTICS COMPANY, INC., (f/k/a
Union Carbide Corporation),

Defendant,

-and-

UNION CARBIDE CHEMICALS AND
PLASTICS COMPANY, INC. (f/k/a
Union Carbide Corporation),

-against-

OWENS-CORNING FIBERGLAS CORPORATION,
et al., WALKER JAMAR COMPANY, A.W.
KUETTEL & SONS, INC., API, INC.,
and MacARTHUR COMPANY,

Third-Party Defendants.

-----x
October 18, 1994
HILTON C. LEWINSOHN (Cont'd)



WALTER SHAPIRO. CSR
CHARLES SHAPIRO. CSR

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October 18, 1994
9:30 a.m.

Continued deposition of HILTON C. LEWINSOHN,
taken by Plaintiff, pursuant to adjournment,
at the offices of Kelley, Drye & Warren, Esqs.,
101 Park Avenue, New York, New York, before
Paul Kirschen, a Certified Shorthand Reporter
and Notary Public within and for the State of
New York.

* * *

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* * *

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2 H I L T O N C. L E W I N S O H N,

3 resumed, having been duly re-sworn by

4 Paul Kirschen, Notary Public, was

5 examined and testified as follows:

6 MR. BROWNSON: This is a

7 continuation of a prior deposition.

8 EXAMINATION (Continued)

9 BY MR. BROWNSON:

10 Q. Good morning, Dr. Lewinsohn. We are
11 continuing the deposition that we left off some
12 time ago in this case of Conwed versus Union
13 Carbide.

14 I would like to try to get this
15 finished up this morning. I think we can move
16 fairly rapidly here. We can finish this up.

17 First of all, you recall the case,
18 Conwed versus Union Carbide? Do you have that in
19 mind?

20 A. Could you just briefly restate it?

21 Q. O.K. This is the case involving the
22 Conwed ceiling tile plant in Minnesota at which
23 various workers have had various asbestos related
24 diseases which they allege were as a result of
25 their exposure in their plant. Conwed is suing

1
2 Union Carbide as a result of that exposure. That
3 is the case.

4 Does that bring it back to mind?

5 A. Yes.

6 Q. Since the first session of your
7 deposition in this case, have you had a chance to
8 go back and read your testimony or review it in
9 any way?

10 A. Just briefly before this deposition.

11 Q. O.K. Before we started here today?

12 A. Right.

13 Q. Yesterday or something?

14 A. This morning.

15 Q. O.K. And have you reviewed any other
16 materials in connection with the deposition here
17 today?

18 A. No.

19 Q. Since we broke from the first session
20 of this deposition until today, have you gone back
21 to review any materials, that came up in the first
22 session of the deposition to refresh your
23 recollection or update yourself in any way?

24 MR. WILL: You mean go back and
25 reread the exhibits?

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Lewinsohn

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2

MR. BROWNSON: Not necessarily

3

exhibits to the deposition, but any

4

materials.

5

A. Well, I have had another deposition

6

in another case since this.

7

I guess a lot of the similar material

8

to that which we discussed last time was referred

9

to.

10

Q. This other case, was this a case

11

involving asbestos related disease?

12

A. A case involving Turner & Newall, my

13

former employer.

14

Q. And was this a personal injury case?

15

A. No. This was a property damage

16

situation.

17

Chase Manhattan Bank.

18

Q. O.K. And some lawyer for Chase

19

Manhattan Bank took your deposition?

20

A. Yes.

21

Q. Was that here in New York?

22

A. Yes.

23

Q. Do you remember who that lawyer was?

24

A. I remember the first lawyer's name.

25

The deposition was in two phases. The first one

1

Lewinsohn

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2 was Mr. Connor.

3

I do not remember the second lawyer's
4 name. I think it was Mr. Leonard, but I am not
5 sure.

6

Q. And when did that deposition take
7 place?

8

A. Probably two or three months ago.

9

Q. And in connection with the
10 preparation for that deposition, did you go back
11 and review some materials concerning the workers
12 at the Turner & Newall plant at Rochdale, or what
13 were you looking at?

14

A. I was shown various documents from
15 Turner & Newall's files.

16

Q. Let me shift gears to Union Carbide.

17

Since the last session of your
18 deposition in this case, have you had occasion to
19 review any of the materials or any materials which
20 would pertain to the issue of Union Carbide
21 Calidria asbestos?

22

A. No, I haven't.

23

Q. Have you had occasion, since the
24 first session of your deposition in this case, to
25 review any materials on the issue of chrysotile

1

Lewinsohn

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2 asbestos, an asbestos related disease?

3 A. Well, once again, in the course of
4 preparation and being deposed in the other cases,
5 that issue has come up, yes.

6 Q. How would the issue of chrysotile
7 asbestos and disease come up with the issues in
8 that case.

9 Didn't that case involve Olympus?

10 A. Yes, but one discusses all forms of
11 asbestos, other phases.

12 Q. O.K. So in that deposition, did you
13 testify or discuss all forms of asbestos fiber and
14 health effects?

15 A. To the best of my recollection.

16 Without going back to look at the
17 deposition, I can't be any more specific.

18 Q. Let me direct your attention to this
19 particular case, the case of Conwed versus Union
20 Carbide.

21 It is my understanding that Union
22 Carbide intends to elicit from you some opinion
23 testimony in this case.

24 Can you tell us as you sit here today
25 what you understand the opinions are that you

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Lewinsohn

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2

would render in this particular case?

3

MR. GERSON: I need to object to the

4

form of the question.

5

We have designated Dr. Lewinsohn as

6

a potential witness without committing

7

ourselves at this stage. We reserve the

8

right to elicit his testimony or not to.

9

MR. BROWNSON: O.K. I understand

10

that he may or may not be called.

11

What I am wondering is -- let me

12

rephrase.

13

MR. WILL: Without the preamble.

14

Q. O.K. What I am wondering, Dr.

15

Lewinsohn, is do you know as you sit here today

16

what opinions you would have to offer in this

17

lawsuit?

18

A. I have no opinions specifically,

19

briefed or informed by Union Carbide as to how

20

they would use my testimony.

21

Q. O.K. Have you had a chance to read

22

the disclosure that counsel for Union Carbide made

23

in this case about areas that you might testify

24

about?

25

A. No.

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Q. Let me just show it to you. I would like to run through these things and ask you some questions about them.

And what I am showing the witness, I am not going to make this an exhibit because I just brought my copy. It's the experts' disclosure of Union Carbide in this case, and served on February 1994.

(Discussion off the record)

MR. BROWNSON: The copy.

(Discussion off the record)

MR. BROWNSON: Let's make this page Exhibit 8. Back on the record. I will make an exhibit of this page. We will mark this Exhibit 8. Disclosure by counsel to Union Carbide in this case.

(Disclosure by counsel to Union Carbide marked as Exhibit 8 for identification, as of this date.)

BY MR. BROWNSON:

Q. Have you had a chance to read Exhibit 8?

A. Very quickly, yes.

Q. Why don't you just take a moment to

1

Lewinsohn

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2 read through it and I will ask you some questions
3 about it.

4 A. All right.

5 Q. First of all, have you had a chance
6 to review any materials relating to the Conwed
7 plant at the present time?

8 A. No.

9 Q. Have you been advised that you will
10 be shown any materials with respect to the Conwed
11 plant.

12 A. No.

13 Q. It also indicates in the disclosure,
14 you may review materials or review materials
15 relating to Calidria asbestos.

16 Can you describe for me what
17 materials you reviewed relating to Calidria
18 asbestos?

19 MR. GERSON: During what time?

20 MR. WILL: Since he left Union
21 Carbide.

22 Q. Well, asking the question generally.
23 Let me break the question down.

24 Have you reviewed any mineralogical
25 reports, articles, literature, analyses of

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Lewinsohn

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2

Calidria asbestos at any time?

3

A. Yes.

4

Q. And can you tell us what it is that

5

you reviewed?

6

A. Not specifically, but I have

7

reviewed, particularly while I was at Union

8

Carbide, various reports that came my way from

9

time to time on those particular subjects.

10

Q. And do you recall any of them being

11

from Dr. Mumpton, reports from Dr. Mumpton?

12

A. I had seen a report from Dr. Mumpton.

13

I can't say I reviewed it. I know of

14

its existence.

15

Q. As far as any opinions you would be

16

prepared to offer, as you sit here today,

17

concerning Calidria asbestos, would it be fair to

18

say then that those opinions would not be based

19

upon the writings of Dr. Mumpton, or would they

20

be?

21

A. Well, if I was going to be questioned

22

as a witness about my opinions on Calidria

23

asbestos, I would prepare myself for that.

24

And at this moment in time, I can't

25

tell you what particular writings I would refer to

1

Lewinsohn

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2 in order to do that.

3 If there were writings by Dr. Mumpton
4 that were relevant, yes, I would look at them and
5 review them.

6 Q. But in order for you to render
7 opinions about Calidria asbestos, would it be fair
8 to say you would have to go back and review
9 writings by Dr. Mumpton?

10 In other words, you don't have those
11 in mind as you sit here today, do you?

12 A. I don't have any particular reference
13 in mind as I sit here today.

14 Q. Are you familiar with Robert Woolery?

15 A. I don't know.

16 Q. Do you recall having ever reviewed a
17 paper authored by Dr. Woolery called, "Asbestos in
18 the Paper Making Process"?

19 A. Not offhand.

20 Q. Let's go back to the subject of
21 Calidria asbestos.

22 In your mind, is there any
23 distinction -- strike that. Let me back up.

24 Are you familiar with the fact that
25 the Calidria brand asbestos sold by Union Carbide

1

2 comes from this deposit in New Idria, California?

3

A. Yes.

4

Q. I-d-r-i-a?

5

A. Yes.

6

Q. Have you ever been there at the mine?

7

A. I have been to the King City mine.

8

Q. You have been to the mine in King

9

City or the mill?

10

A. The mill.

11

Q. Have you ever been up to the mine up

4

12

on the mountain?

13

A. No.

14

Q. Now are you familiar with the fact

15

that there is at least two other, or have been

16

historically at least two other operating mines in

17

that deposit, one by Atlas Asbestos and one by

18

Johns-Manville?

19

A. I think I may have heard that there

20

were.

21

Q. And in your mind, do you know of any

22

distinction between the asbestos mined in those

23

three mines?

24

A. No.

25

Q. As far as you know, do you consider

1

Lewinsohn

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2 that to be the same asbestos?

3 A. From my perspective and from my
4 knowledge, yes.

5 Q. Going back to the Calidria asbestos,
6 have you seen any medical record or medical data,
7 or medical information concerning miners at the
8 Calidria mine?

9 MR. WILL: Are you talking about the
10 Union Carbide mine?

11 MR. BROWNSON: Right.

12 A. Well, I am not quite sure how best to
13 answer that question, because mining really
14 utilized very few people as I understand it.

15 And in my review that I undertook at
16 one time, they, King City Mill, I don't know
17 whether, without looking to see what people's
18 occupations were, whether I also reviewed miners.

19 But there were very few miners, to my
20 understanding, because of the nature of the mining
21 process.

22 Q. O.K. And would it be fair to say
23 that, over the years, there has really only been a
24 relatively handful of people who actually worked
25 up at the mine?

1

Lewinsohn

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2

A. That is what I understood. Yes.

3

Q. And when you have reviewed such

4

medical information as you have seen about Union

5

Carbide employees in King City, you didn't

6

specifically break out and review the miners as a

7

separate group, did you?

8

A. I don't believe I did.

9

Q. Now, let me broaden the question and

10 ask you, have you ever reviewed the medical

11 record, reports, or medical information concerning

12 employees at any of the King City facilities, the

13 mine, the mill, the truckers, any of the employees

14 associated with that asbestos production facility?

15

A. Shortly, I think I told you this last

16 time, shortly before --

17

MR. WILL: Are you asking

18

differently than what you covered before?

19

Go ahead.

20

A. I think I told you this last time.

21 That is that shortly before the buyout by the

22 management of the King City Mine & Mill, I went to

23 King City and reviewed, I think, without seeing my

24 report, I don't know the exact numbers now, but I

25 think about 100 individuals' x-rays to determine

1

Lewinsohn

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2

whether there were any obvious asbestos related

3

changes noticed in those films.

4

That was the only review I made.

5

Q. O.K. And just so I am clear on this,

6

what you reviewed then was the actual x-ray films?

7

A. I reviewed, I went down there, and I

8

went to the local hospital, where the x-rays had

9

been taken. And they made available to me from a

10

list that was provided by the mine, by the mill,

11

rather, the x-rays of workers.

12

And I am not quite sure what the

13

relation was of the workers that I reviewed. And

14

I looked, if I remember correctly, I looked at the

15

first available x-ray, I looked at the last and

16

most recent x-ray, and I probably looked routinely

17

at the one before that.

18

And if I had any suspicions, I would

19

look back further.

20

Q. Other than looking at the x-ray

21

films, did you see any other medical record or

22

medical information concerning workers?

23

A. Not at this moment in time that I can

24

remember.

25

Q. Have you ever seen any medical

1

Lewinsohn

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2 record, medical reports, medical information, or
3 x-rays, concerning any workers at either the
4 Johns-Manville or the atlas facilities at New
5 Idria, California?

6 A. No.

7 Q. Have you ever heard or been told what
8 the health experience of those workers has been?

9 A. No. I am not aware of the health
10 experience of those workers.

11 Q. Going back to your review of the
12 x-rays of the workers at the King City asbestos
13 facility, do you know whether these x-rays that
14 you reviewed included the x-rays of all workers
15 who worked at the mine and mill at King City since
16 the production started in 1963?

17 A. I honestly don't remember what the
18 selection criteria were.

19 I would have to look at my report,
20 which I assume, which I hope will be able to
21 enlighten me on that.

22 But at this moment in time, I just
23 don't remember the selection criteria. I am
24 sorry.

25 Q. Do you have a copy of the report?

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Lewinsohn

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A. I do, but not with me.

Q. I would like to get a copy of the report, Dr. Lewinsohn's report of his x-ray review.

MR. WILL: We will take it under advisement.

Q. First of all, would the report tell us, if we looked at it, if it included all workers who had worked at the mine and mill since production began?

A. It should tell you which workers were looked at.

Q. Do you remember if there was any breakdown by occupation among those workers?

A. To the best of my recollection, there was no breakdown by occupation.

Q. Was this a reading which was a blind type of reading --

A. Yes.

Q. -- where you just had a bunch of films and you didn't know, before you read them, where these people had worked in particular?

A. Correct.

Q. Did you become aware of that

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Lewinsohn

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2

information after you read the films?

3

A. I don't believe so.

4

Q. Now I take it, you have toured the

5

mill at King City?

6

A. On that occasion, when I went down

7

there, yes.

8

Q. And when was that again? About '85?

9

A. Just before the buyout took place,

10

the divestiture.

11

Q. Do you recall, when you toured the

12

mill on that occasion in about '84, '85, '86, in

13

that time period, were you shown the area where

14

the baggers worked in that mill?

15

A. I saw all the operations at that

16

mill.

17

Q. And do you know if your report of the

18

x-rays you reviewed of those workers would tell us

19

which of the workers worked in the bagging area?

20

A. I don't think so.

21

Q. Do you recall that information ever

22

coming to your attention?

23

Do you recall learning, in connection

24

with your review of x-rays, which of those workers

25

had worked in the bagging area?

1

Lewinsohn

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2

A. No.

3

Q. So as far as you know, that is

4

something that was never specifically looked at

5

separately or broken out?

6

A. I didn't do it. I don't know whether

7

anyone else did.

8

Q. In addition to the x-rays that you

9

looked at personally, did you review any other

10

data concerning the King City workers, that is,

11

reviewed by any other doctors, any other record

12

concerning the health of the King City workers?

13

A. I don't think so.

14

Q. Do you know whether any of the

15

workers at King City Hospital, x-rays you looked

16

at, had been exposed to levels of asbestos in

17

their employment that exceeded the OSHA level, or

18

whether they were all below the OSHA level?

19

A. I can't answer because I don't think

20

that any correlation was done between dust levels

21

and occupation.

22

Q. In connection with your review of the

23

x-rays, did you see any dust level or exposure

24

data?

25

A. I don't believe.

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Q. Do you know if you have ever seen any dust level data in the King City mine or mill?

A. At this moment in time, I don't remember.

Q. Do you know if you have ever seen any dust level or exposure data from either the Atlas one, or the Johns-Manville mines in that same asbestos deposit?

A. I don't believe I would have had any reason to.

Q. Have you seen any dust level or exposure data from any workers in plants similar to the Conwed plant, customer plants, where the Calidria asbestos was used in manufacturing processes?

A. Again, I must answer, I don't remember.

Q. Are you familiar with a program that Union Carbide undertook, beginning in about '72, '73, where they would send industrial hygienists out to Calidria customers' plants and take air samples?

A. I didn't join Carbide until '82. So I don't know about that.

1

Lewinsohn

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2

Q. I understand that.

3

But in connection with your work at
4 Union Carbide, did you become familiar with that
5 program?

6

A. Not specifically, no.

7

Q. And do you recall ever reviewing data
8 generated by that program, that is, dust counts
9 done at plants of customers using Calidria
10 asbestos?

11

A. No. I don't.

12

Q. In connection with your work at any
13 time, whether at Union Carbide or since that time,
14 have you ever seen the medical records, medical
15 reports, x-rays, or medical information concerning
16 workers at customers plants who used Calidria
17 asbestos in manufacturing processes?

18

A. I really don't know.

19

From time to time, people like Alan
20 Gerson would contact me for my thoughts or my
21 opinions on a particular case.

22

But that is as far as it went.

23

Q. Have you ever done a review of a
24 group of workers similar to what you did at the
25 King City x-rays from a customer plant where you

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2 looked at a large number of x-rays?

3 A. No.

4 Q. So what you have done is done some
5 consulting with Union Carbide lawyers on a
6 particular lawsuit involving a particular worker?

7 A. From time to time, yes.

8 Q. And did you do that work while you
9 were at Union Carbide, or is that the work you
10 have done since you left Union Carbide?

11 A. No. I have done that at Union
12 Carbide.

13 Q. And since you have left Union
14 Carbide, have you done any of that consulting in
15 connection with cases of workers who claim to have
16 been exposed to Calidria asbestos at some
17 customers' plants?

18 A. I don't know.

19 Q. In terms of the consulting or the
20 review that you have done in connection with
21 particular cases of workers here and there, do you
22 know if any of those have involved a Conwed worker
23 from the Conwed plant in Cloquet, Minnesota?

24 A. That I don't remember.

25 Q. Would you happen to remember actual

1

Lewinsohn

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2 names of any of those people?

3 A. No.

4 Q. If I threw a couple of names at you
5 of Conwed workers --

6 A. You could try.

7 Q. O.K. I will give you the name of
8 James Manisco.

9 A. That doesn't ring a bell.

10 Q. Is that a case you looked at in any
11 way?

12 A. It doesn't ring a bell.

13 Q. Have you ever seen any published
14 data, whether it was in your review of literature
15 or anywhere else, about any surveys or reviews or
16 studies of any group of workers in any plant
17 setting that used Calidria asbestos?

18 A. Not that I am aware of.

19 Q. Are you aware if any such published
20 data exists?

21 A. No.

22 Q. At the time you were at Union
23 Carbide, did you ever make any recommendations of
24 any type that any such survey be done of workers
25 in plants where Calidria asbestos was used?

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Lewinsohn

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2

A. I, personally? No.

3

Q. Are you aware of anyone at Union

4

Carbide, at any time, I guess up to the present

5

time, as far as you know, suggesting or initiating

6

any review or survey of workers in customer plants

7

where Calidria asbestos was used?

8

A. No.

9

Q. Did it ever come to your attention

10

that anyone else outside of Union Carbide was

11

proposing or actually engaging in any such surveys

12

of workers in customer plants where Calidria

13

asbestos was used?

14

A. No.

15

Q. Are you familiar with the

16

International Paper Workers Union? Have you ever

17

heard of them?

18

A. Not really, no.

19

Q. You have never done any work for them

20

in any connection, I take it?

21

A. No.

22

Q. Have you ever seen any of the --

23

strike that.

24

Have you ever heard that the

25

International Paper Workers Union did a screening,

1

Lewinsohn

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2

a medical screening, with x-rays, and other

3

reviews, of workers at the Conwed plant who used

4

Calidria asbestos?

5

A. I don't know.

6

The reason I am hesitating is because

7

I can remember, some time back, seeing a brief

8

report in the Bureau of National Affairs of the

9

Occupational Health Reporter, that publication,

10

which related to Conwed workers. But I don't

11

remember the context of it.

12

Whether that referred to it or not, I

13

do not remember.

14

Q. Do you recall if that came to your

15

attention while you were working for Union

16

Carbide, or is that something you saw since that

17

time?

18

A. I don't know.

19

Q. At the time that report in the

20

Reporter came to your attention, did you know that

21

the Conwed workers had been exposed to the

22

Calidria asbestos?

23

A. I don't know when that report came to

24

my attention.

25

I can't answer that.

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Lewinsohn

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Q. As you sit and think about it now, do you recall if the report said anything about the type of asbestos to which those workers were exposed?

A. No. I am sorry I raised it. It was just from my memory. I remembered seeing it.

Q. Do you recall ever seeing or reviewing a report by the Minnesota Department of Health concerning the Conwed workers at the Cloquet, Minnesota plant?

A. No, I had not.

Q. And while you were at Union Carbide, do you know if you were ever contacted, or did you ever discuss with any other researchers whether from the Minnesota Department of Health or Paper Workers Union or anywhere else, concerning any surveys or reviews of workers at the Conwed plant?

A. No.

Q. Looking back now at Exhibit 8, the disclosure.

First of all, have you ever seen this particular disclosure before the deposition here today?

A. No.

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Q. If you look in the first paragraph, it says, "Dr. Lewinsohn may be asked to give opinions about the ability of Calidria asbestos to cause diseases in workers under the conditions," I am sorry, "under the conditions during which it was used at the Conwed plant."

Do you see that reference?

A. I do.

Q. And is that an opinion that you would be prepared to give in this case, as far as you know?

MR. GERSON: At this time?

MR. BROWNSON: Well, yes.

A. Not at this moment in time, no.

Q. In order for you to give that opinion, what further information would you need to review?

A. I would need to review all the information pertaining to the use of Calidria asbestos in the Conwed plant, the circumstances under which it was used, any relevant industrial hygiene surveys that were conducted, any health record of employees that were available. And, in general, review the literature available on

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Lewinsohn

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2 Calidria asbestos.

3 It would require preparation.

4 (Telephone interruption)

5 (Recess)

6 BY MR. BROWNSON:

7 Q. Dr. Lewinsohn, you just told us, in
8 order to render an opinion about the ability of
9 Calidria asbestos to cause disease in workers
10 under the conditions used in the Conwed plant, you
11 would need to review a number of different things.

12 I understood you would not be able to
13 render an opinion without reviewing those
14 materials. Is that correct?

15 A. Not necessarily correct. If I were
16 to render an opinion specifically related to those
17 circumstances involving that particular group of
18 employees, I would need a lot more information.

19 Q. O.K. Are you prepared to render any
20 opinions, in general, concerning Calidria asbestos
21 and its ability to cause disease in workers in
22 manufacturing plants?

23 A. I think so. Yes.

24 Q. Can you tell us what your opinions
25 are in that regard about the ability of Calidria

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Lewinsohn

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2 asbestos to cause disease among workers in
3 manufacturing plants?

4 A. Yes. In my opinion, Calidria
5 asbestos is unlikely to cause the asbestos-related
6 diseases which have been described in connection
7 with the use of other asbestiform minerals.

8 Q. Are you saying -- strike that.

9 Let's take the disease of asbestosis.
10 I am talking now about clinical asbestosis which
11 would show up on an x-ray as interstitial
12 fibrosis. Okay?

13 A. Yes.

14 Q. Is it your opinion that Calidria
15 asbestosis unlikely to cause that disease among
16 workers in a manufacturing plant?

17 A. In general, yes, that is my opinion.

18 Q. Now is your opinion is based, in
19 part, upon the dose of Calidria which would be
20 required to cause such a disease?

21 A. It's based in part on that, but it's
22 based largely, I think, on the fact that this
23 fiber is so different from the other fibers which
24 have been associated with the disease.

25 Q. Well, let me ask you some questions

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Lewinsohn

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2 about that.

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First of all, you are not saying, are you, that Calidria is absolutely unable, under any circumstances, to cause asbestosis among workers?

6

A. No. I said unlikely.

7

I don't believe that I could make that statement that, under any circumstances, would not cause disease.

10

Q. O.K. So as I understand your opinion, what you are saying is Calidria is less likely to cause the disease asbestosis than other asbestos type fibers in the setting of a manufacturing plant where workers are using it?

15

A. Depending upon the working conditions, and the exposure of those workers, yes.

18

Q. And let me ask you this question.

19

All other things being equal, in terms of working conditions and exposure, are you saying that Calidria is less likely to cause asbestosis than other types of asbestos?

23

A. I think so, yes.

24

Q. And would you agree that the converse of that also is true, that if Calidria is used

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Lewinsohn

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2 where there are higher levels of exposure and more
3 dusty working conditions that it could be more
4 likely to cause diseases than some other types of
5 asbestos at lower exposure?

6 A. I don't follow that argument.

7 Q. Well, let me ask you this question.

8 Would you agree with me that if
9 people using Calidria asbestos were exposed to
10 enough of it for long enough in a manufacturing
11 plant, they could get asbestosis?

12 A. I would say that if the exposure were
13 overwhelming, and were of such magnitude as to
14 overwhelm the primary defense mechanism that the
15 human body has to prevent that type of fiber from
16 causing health effects, then under such
17 circumstances, it would be possible to develop
18 pulmonary fibrosis.

19 Q. In laymen's terms, asbestosis?

20 A. Asbestosis.

21 Q. Now, as I understand your opinion,
22 what you are saying is that the Calidria asbestos
23 is different than other types of asbestos, which
24 makes it less likely to cause asbestosis, is that
25 correct?

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Lewinsohn

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A. I think so.

3

Q. Now what are the specific differences

4

which, in your view, make it less likely to cause

5

asbestos-related disease?

6

A. It's basically the physical property,

7

you know, the fiber is a fibril. It is not a

8

bundle of fibril. But fiber itself is fibril.

9

It's very short, by which I mean it's

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usually around about 5 microns in length, and it's

11

of small diameter.

12

Such fibers, are readily engulfed by

13

the macrophages, which are the scavenger cells in

14

the lungs, and can be eliminated from the lungs,

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either in sputum or through the lymphatic chain.

16

Or even if swallowed would be eliminated through

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the gastroenterosinal tract.

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So the possibility for these fibers

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to dwell for long enough in the lungs to produce

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their fibrotic effect, I think is vastly

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diminished by the physical properties of the

22

fiber.

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Q. So what you are saying is because of

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the physical characteristics of these fibers being

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short, small diameter, they are more easily

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Lewinsohn

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2 cleared out of the lungs?

3 A. I think so. Yes.

4 Q. And would you agree that if, in a
5 given case, they were not cleared out of the
6 lungs, and they remained in the lungs in
7 sufficient quantities, then they could cause
8 disease?

9 A. For long enough?

10 Q. Right.

11 A. That is your guess is as good as mine
12 under those circumstances.

13 Q. Well --

14 A. I can't give you a definitive answer.

15 Q. Have you ever seen lung tissue fiber
16 burdened studies or analyses of workers exposed to
17 Calidria asbestos?

18 A. No.

19 Q. So as you sit here today, do you have
20 any actual data or information as to what the lung
21 tissue Calidria fiber burden is in workers exposed
22 in manufacturing plants?

23 A. No. I don't know that anybody has.

24 Q. And you have anticipated my next
25 question.

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Are you aware of any of any such information in the possession of anyone at Union Carbide?

A. No.

Q. And are you aware of any studies Union Carbide or people on behalf of Union Carbide have ever undertaken to try to find that out, do lung tissue fiber burden studies of people exposed to Calidria in manufacturing plants?

A. I am not aware of that.

Q. Have you seen any published data on that point?

A. No.

Q. I am going back through this disclosure here of your opinions, Exhibit 8.

One of the things it says you will make comment on is the scientific literature regarding the ability of chrysotile and short fibered chrysotile to cause disease.

I take it, that is generally what we were just talking about?

A. Generally, yes.

Q. Are you aware of any particular scientific literature that discusses the ability

1 of Calidria asbestos fiber to cause disease?

2 A. No. At this moment in time, I am not
3 aware of that.

4 Q. And are you aware of any literature
5 that discusses the ability of the New Idria
6 asbestos fiber in general, whether it came from
7 one of these other two mines of Atlas or
8 Johns-Manville, to cause disease?

9 A. Again, I must say that as I sit here
10 now, I can't give you any specific instance.

11 Q. Now, it also says on this disclosure
12 statement 8, that you may be asked about the
13 appropriateness of steps taken by Conwed
14 management, from an occupational health
15 standpoint, in light of the knowledge available to
16 them.

17 I take it, as you sit here today, you
18 have no specific information as to what knowledge
19 was available to Conwed and what steps they took?

20 A. No. I have had no preparation
21 whatever for my -- by Union Carbide counsel for
22 any testimony I would offer.

23 Therefore, I haven't been provided
24 with all the facts in this case.

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Q. Let me back up a little bit.

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When you told us earlier about your general opinions that Union Carbide asbestos is less dangerous than some other types, because you gave us a number of factors, you said the fact that it's fibril, short, small diameter, in your view does the pelletized form of the asbestos bear any relationship to its abilities to cause disease?

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A. I would say it does, in that the pelletized form of asbestosis is likely to be far less dust producing than loose fibers being pelletized.

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Q. Do you know if that is why Union Carbide pelletized the Calidria in the first place, to make it less dusty?

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A. I don't know why they selected that method of producing their final product, whether it was health represented or whether that was the most appropriate way in which to package it.

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Q. Have you seen any experiments that anyone at Union Carbide did where Calidria asbestos was placed inside a closed chamber to create an aerosol or a dust to determine how dusty

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2 it might be?

3

A. I don't recollect seeing that.

4

Q. Do you have any specific data in terms of the dustiness of Calidria asbestos in an experiment of that type, or where someone actually tests to see what sort of dust it will produce?

8

A. I don't. No.

9

Q. Have you seen any experiments showing the relative dustiness of pelletized versus non-pelletized Calidria asbestos?

12

A. No.

13

Q. Would you agree with me that whatever advantage there is to the pelletized form of the Calidria asbestos in terms of being less dusty, that that advantage is lost once the pellets are opened and fiberized?

18

A. Once they are opened and fiberized, could you tell me what you mean by that?

20

Q. Well, if the pellets are crushed and broken apart so they are no longer pellets, but now they are just loose fiber?

23

A. Obviously, if you take pellets and crush them and fiberize them, you are reducing them back down to a state of being fibril, which

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2 if they were allowed to escape into the air, would
3 be dustier than lying there compacted in pellets.

4 Q. O.K. Do you recall ever seeing any
5 information or data about the shipping of Calidria
6 asbestos in terms of broken bags, if whether the
7 bags break, if so, how many, that sort of thing?

8 A. No. I have no information on that.

9 Q. Do you recall ever seeing any
10 information of complaints by customers that when
11 they received Calidria asbestos, that bags were
12 broken and it was dusty, that sort of thing?

13 A. No.

14 Q. Looking at Exhibit 8, the disclosure
15 as to things you might testify, it also says you
16 might be asked to give an opinion as to the extent
17 to which alleged health problems in former Conwed
18 workers are attributable to factors other than
19 asbestos.

20 Again, I take it, you have no
21 specific information in that regard at the present
22 time?

23 A. That's correct.

24 Q. And as far as you know, have you been
25 asked at this point to educate yourself on that?

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Lewinsohn

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A. I have not.

3

Q. And if you were asked to educate

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yourself on that point so that you could render an

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opinion in this case, what information would you

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need to see?

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A. I would need to know all the

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information about the use of the Calidria fiber by

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Conwed in addition to what other fibrogenetic or

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carcinogenetic materials may have been present in

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the workplace at the same time.

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And whether any admixture of those

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materials took place in the formulation which went

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into the final product, which I would like to know

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what the conditions were under which these other

16

materials were used and the industrial hygiene

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data relating to them.

18

Q. At the present time, you don't have

19

any information in that regard?

20

A. I don't.

21

Q. Do you know if there is any

22

synergistic effect of any sort between Calidria

23

asbestos and cigarette smoking?

24

A. Calidria asbestos has really not been

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segregated epidemiologically to any extent that I

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am aware. I have no knowledge that there is any deleterious effect.

Q. So would that mean, in order to render an opinion, like we are just talking about, that you would not be interested in cigarette smoking data among these workers, or would that be something that would interest you?

A. It would interest me because cigarette smoking per se causes lung cancer.

Q. And would it also interest you because it could be possible that there is a synergistic effect between Calidria asbestos and cigarette smoking?

A. I would have to study that.

Q. You don't know one way or another?

A. I don't think anybody does.

Q. Would you agree that that is a possibility, however, that I guess that would bear study?

A. I guess if Calidria asbestos possesses the ability to damage the lungs, in the same way as other forms of chrysotile asbestos have been shown to do, then it would probably have the same synergistic effect with tobacco smoke as other

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Lewinsohn

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forms of chrysotile have.

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But I have no information, no scientific information specifically on that fact relating to Calidria.

6

Q. And when you said that in order to render an opinion as to whether health approximate in former Conwed workers are attributable to factors other than asbestos, you would want the information about what other materials these workers were exposed to.

12

13

Can you give me examples of what sort of materials would concern you in that regard?

14

A. Well, yes.

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Was Calidria the only asbestiform material that was used in the manufacture of tiles? Were other forms of asbestos used? Were other fibrogenetic dusts present? Silica containing dust, for example.

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Q. These other fibrogenetic -- you have mentioned, first of all, other types of asbestos could be fibrogenetic?

23

A. Yes.

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Q. Silica dust could be fibrogenetic?

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A. Yes.

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Q. I understand, as you sit here today, you have no specific information about the other types of asbestos used at Conwed?

A. That is not strictly true because in conversation, I have gathered that amosite was also used.

Q. So you are aware that some amosite was used at Conwed?

A. I am aware that some was used. I am not sure how or in what quantity.

Q. How about silica? Do you know if any silica was used at Conwed?

A. I don't know.

Q. Other than other types of asbestos and silica, are there other types of fibrogenetic types of dust that you would look for that could be a factor in spreading disease among these workers?

A. There aren't too many other significant fibrogenetic dusts besides those I have mentioned.

Q. Those are really the only two, asbestos and silica?

A. I guess so. Unless some of the

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2 employees happen to be coal miners or coal
3 workers.

4 Q. Coal is a fibrogenetic dust?

5 A. Yes.

6 Q. Black lung disease?

7 A. Right.

8 Q. Are you familiar with the studies by
9 Dr. Demenc and others of textile workers in
10 Charleston, South Carolina?

11 A. Yes.

12 Q. Is it your view, do you have an
13 opinion as to whether the results of those studies
14 have any bearing on or illustrate anything about
15 disease that may occur among Conwed workers as a
16 result of exposure to Calidria asbestos?

17 A. The study in Charleston?

18 Q. Right.

19 A. I don't see what bearing those
20 specifically have.

21 Q. Why do you think they would have no
22 bearing on the experience of workers at Conwed?

23 A. I didn't say they had no bearing.

24 I just don't see what bearing they
25 would have, because the workers in Charleston were

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Lewinsohn

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textile workers, using chrysotile fiber, which was

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totally different from the Calidria fiber in the

4

physical properties.

11

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Q. Are you aware of Dr. Demenc's study

6

of chrysotile?

7

A. I was the corporate medical director

8

for Raybestos Manhattan at the time those studies

9

took place that was at that plant, and provided

10

Dr. Demenc with the opportunity of going there.

11

Q. You are familiar with the fact there

12

were elevated rates of lung cancer found?

13

A. Certainly. Yes.

14

Q. And it's your view, however, as I

15

understand it, that that cannot be translated to

16

the experience of the Conwed workers because this

17

is a different type of manufacturing process and a

18

different type of chrysotile?

19

A. That is my belief, yes.

20

Q. What is it that is different about

21

the chrysotile in the textile plant in Charleston,

22

South Carolina from what was used at the plant at

23

Conwed?

24

A. The fiber in the textile plant at

25

Charleston is a spinning grade of chrysotile

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2 asbestos, which is mined under very different
3 circumstances and produced under very different
4 circumstances from Calidria asbestos.

5 The fiber itself, in order to be a
6 spinning grade fiber, has to be long and flexible.
7 It has to be very similar to cotton in other
8 respects, so it can pass through the process, the
9 textile process, of opening, carting, spinning,
10 winding.

11 We have gone through all the things
12 that were done with that fiber. Calidria can't do
13 that. Calidria is a little fiber, short thing.

14 Q. Would you say then, if we could try
15 to sum this up in laymen's terms as a general
16 proposition, the longer fibers are more dangerous
17 than the shorter fibers?

18 A. In very general terms, yes.

19 Q. And if we were to try to summarize
20 the difference in general terms between the
21 chrysotile that caused disease in the Charleston,
22 S.C. textile plant, and the Calidria at Conwed,
23 it's your view the chrysotile in Charleston was
24 quite a bit longer and was a spinning grade?

25 MR. WILL: I want to object to the

question.

I don't think the doctor ever concluded that the disease that was caused in Charleston was, in fact, due to the asbestos and not some other compounding factor.

But in any event --

MR. BROWNSON: Okay.

MR. WILL: -- he indicated there was an excess rate of lung cancer found in the study in the plant that was using the long chrysotile.

BY MR. BROWNSON:

Q. I understood you concurred with the conclusion, I guess, generally reached about those workers, that that chrysotile had something to do with the increased rate of lung cancer?

A. I think the way it is said, there was an excess incidence of lung cancer associated with exposure to chrysotile asbestos in the textile plant in Charleston, South Carolina.

Q. O.K.

And what I am trying to do is fill this out in general terms. Maybe it can't be

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2 done.

3 But as I thought I understood it, it
4 is your view that the reason that chrysotile may
5 be associated with more disease than what you, Dr.
6 Lewinsohn, would expect to see with Calidria was
7 because, as a general proposition, of this longer
8 spinning grade of chrysotile, and Calidria is
9 short?

10 A. That is one of the reasons, yes.

11 Q. Is that the main reason?

12 A. It is a very significant reason.

13 Q. Have you seen published fiber size
14 distribution data concerning the chrysotile
15 asbestos at Charleston, South Carolina?

16 A. I want to say probably, but I don't
17 recollect precisely.

18 Q. Have you seen publicized distribution
19 data with respect to Calidria chrysotile?

20 A. Yes.

21 Q. Have you seen such data which has
22 been generated by transmission electromicroscopy?

23 A. I don't remember the details of the
24 fiber size distribution data that I've seen, but I
25 know I have seen it.

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Q. Going back to Exhibit 8, the final area of opinions you might be asked that I would like to ask you about, is what is described here as the role of amosite.

You see that about the middle of the paragraph? It says, "The Role of Amosite"?

A. Yes.

Q. Do you have any opinions as you sit here today as to what role, if any, any amosite asbestos played in the disease of workers at Cloquet?

A. As I sit here today, I don't have any specific opinion but other than to state that amosite is known to result, following adequate exposure, in the development of asbestosis, lung cancer and mesothelioma.

Again, without knowing the specific circumstances surrounding its use at Conwed, I can't venture any further opinion.

Q. Would it be fair to say that one of the things you would need to know is the levels of exposure to amosite dust?

A. Yes. I need to know the levels of exposure to amosite dust.

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Q. Would you agree with me that the relationship between amosite asbestos and disease is dose dependent?

A. The relationship between amosite asbestos, and the production of asbestosis and probably lung cancer, I would say is dose dependent.

I think that the relationship between amosite and development of mesothelioma is also dose dependent, but I think that dose is one which has not yet been determined.

Q. If we can put that opinion in laymen's terms, the greater the dose of amosite asbestos, the greater the relationship between asbestos-related disease and, on the other hand, the less the dose, the less the relationship.

Would that be fair to say?

A. If you define dose as concentration and time, because dose depends upon the concentration and the time, the amount, that of exposure, and the time frame over which that exposure occurs.

Q. So again, to try to put this in laymen's terms, the more amosite asbestos you are

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exposed to for a longer time, the more likelihood
3 there is of asbestos-related disease?

4

A. Well, I hate to be too pedantic.

5

MR. GERSON: You are the expert. Be
6 as pedantic as you want to be.

7

A. The concept is, exposure is the
8 concentration and time. So the dose might be a
9 lower concentration over a longer time, or a
10 higher concentration over a shorter time.

11

Q. O.K. So the two things that are
12 important in determining the dose is the amount of
13 dust a worker is exposed to and how long?

14

A. And how long.

15

Q. O.K.

16

And there is one other factor, and
17 that is, that the development of the disease is
18 often delayed.

19

And so, therefore, there is a lapse
20 interval between the first exposure and the
21 recognition of any health affects.

22

That is what is known as the latency?

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A. Yes. That is not synonymous with the
24 length of exposure because exposure may have
25 ceased.

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Q. And do you have any opinion as to whether the latency of exposure from amosite asbestos is related to the dose?

In other words, if you get a higher dose, is the latency in any way shortened?

A. I would like to think that would be a simple explanation for it, but I have no scientific evidence or epidemiological evidence to confirm that theory.

Q. The final disease you mentioned of mesothelioma, it's your opinion that mesothelioma is also related to the dose of amosite asbestos, but you don't have information exactly what the dose is that causes mesothelioma?

A. I think the mesothelioma, the jury is still out as to what the level of exposure is required with any of the forms of asbestos to produce that particular form of malignancy.

Q. Is that also true of Calidria asbestos, the jury is still out in your view as to what dose would be necessary to cause mesothelioma?

A. I think jury is still out with Calidria asbestos as to whether it can cause any

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2 form of asbestos-related diseases.

3 Q. In your view?

4 A. In my view.

5 Q. And again, from the time you began at
6 Union Carbide to the present time, did you ever
7 initiate any research or studies to try to answer
8 that question?

9 A. No.

10 (Recess)

11 MR. BROWNSON: We have no other
12 questions.

13 MR. WILL: I have a couple of
14 questions I want to ask.

15 EXAMINATION BY

16 MR. WILL:

17 Q. Mr. Brownson asked you if you were to
18 give an opinion about amosite, the role of amosite
19 in causing a disease in workers, what you would
20 want to know.

21 And you said, one of the things you
22 would want to know was the level of exposure.

23 If there are no dust counts done in
24 the plant when the amosite was in use, would that
25 prevent you from giving opinions about any role

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that amosite may have played?

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MR. BROWNSON: I am going to object

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to the form of the question.

5

Go ahead.

6

A. If there are no dust counts?

7

I think it might still be possible to

8

render an opinion, providing there was comparative

9

data available in terms of other measurements that

10

might have been made or in terms of descriptive,

11

descriptions of the dustiness of the operation.

12

Q. Would it be helpful to know how much

13

amosite had been used in a plant, kind of

14

consumption?

15

A. It would be helpful to know, if one

16

also knew how much amosite went into the process.

17

Q. Last time, last time being February,

18

1994, you were questioned by Mr. Brownson about --

19

I want to make sure I characterize this accurately

20

so I don't get an objection.

21

In the February session of your

22

deposition, you were asked a question by Mr.

23

Brownson, the gist of which was that, will people

24

be at risk from getting an asbestos-related

25

disease, even if they were are not working

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Lewinsohn

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2 directly with the asbestos in any product?

3 Do you recall that generally?

4 A. Give it to me again.

5 Q. Well the question, I will refer to it
6 specifically, referring to page 171, and 172 of
7 the deposition, and your answer to the question,
8 which had to do with Dr. Selicoff's statement that
9 asbestos fibers didn't respect job
10 classifications, Mr. Brownson said:

11 "In other words, they could float
12 adrift around in the work area?"

13 And in responding to that, you
14 referenced the work of Dr. Wagner, the work of
15 Molly Newhouse, and a paper by McCaughey, Wade &
16 Elms, and you talked about something that you
17 said, there had been instances of asbestos disease
18 occurring in people that had pure environmental
19 exposure.

20 And my question was, what did you
21 mean when you referred to asbestos-related disease
22 occurring in people with pure environmental
23 exposure? To what were you referring?

24 MR. BROWNSON: I will object to the
25 form.

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2

Go ahead and answer.

3

A. Yes. There was an awareness that developed that people who had been exposed, living in the vicinity of an asbestos manufacturing facility, or a mine, could also develop the asbestos-related diseases.

8

And the instances that, the two instances that are best known are the domestic exposure that Molly Newhouse described, and then what I would call the environmental exposures that Dr. Wagner has described in the Northwest Province in South Africa, in this little town of Kuruman, and where the mine tailings were used for road building.

16

People paved their driveways with it. School playgrounds were made from this material, tennis courts. It was used for all sorts of purposes.

20

And mesothelioma developed in the community in that little town, who had never ever had any occupational exposure.

23

That is what I would call environmental exposure.

25

Q. What type of asbestos fiber was

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2 involved in Kuruman?

3 A. Kuruman was crocidolite fiber.

4 Q. In your first deposition, Mr.

5 Brownson asked you about the first case of
6 mesothelioma that that you recall seeing.

7 You mentioned that was a person at
8 the Ferrado plant?

9 A. Yes.

10 Q. Do you know the name of that
11 individual?

12 A. Yes. Archibald Vernon.

13 Q. And to what type of fibers had Mr.
14 Vernon been occupationally exposed?

15 A. Mr. Vernon worked at that plant, had
16 been exposed to chrysotile fibers, but he was one
17 of a number of workers who had worked in one area
18 of the plant, where -- and they all worked in
19 close proximity -- where they had manufactured a
20 special, I think it was a railroad brake block,
21 which was for some mid-European country's
22 railroads, that was specifically made out of
23 crocidolite asbestos. He was exposed to
24 crocidolite.

25 Q. You also made reference to the fact

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2 there was some type of ownership relationship
3 between Bell Mines and Turner & Newall.

4 Do you know the specifics of that
5 relationship?

6 A. You mean the business relationship?

7 No. I don't know the specifics.

8 Q. Or the particular legalities of the
9 way it was organized?

10 A. No. I wasn't particularly interested
11 in it.

12 Q. You mentioned something in the first
13 deposition, something called a scheduled area
14 under the asbestos regulations that applied in
15 England after 1931.

16 And briefly, what was the scheduled
17 area?

18 A. I am relying now on my memory of sort
19 of a complex regulatory issues.

20 But as I remember it, the asbestos
21 industry regulations in the United Kingdom were
22 promulgated in 1931 and took effect in 1933.

23 Also, they did not stipulate any
24 exposure levels or regulate any particular
25 processes, as far as I can recollect. They also

1
2 didn't stipulate any medical surveillance that
3 should be conducted.

4 But at the same time those
5 regulations took effect, the silicosis and
6 asbestosis medical arrangement team of 1931 was
7 introduced. And the silicosis medical boards,
8 which subsequently became like pneumoconiosis,
9 like pneumonia, pneumoconiosis panel, had the
10 responsibilities for conducting medical
11 surveillance examinations on asbestos workers and
12 the way in which the asbestos workers were, who
13 they were to examine were categorized according to
14 the type of work they did and the areas in which
15 they worked.

16 And so those areas, which came under
17 the surveillance of the pneumoconiosis medical
18 panel were the scheduled areas.

19 Q. For example, in the Turner & Newall
20 Rochdale plant, was the entire plant where
21 asbestos was used considered a scheduled area?

22 MR. BROWNSON: I object to the form
23 of the question.

24 A. No.

25 Q. And were all of the workers in the

1

Lewinsohn

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2 entire plant required to be monitored?

3 MR. BROWNSON: I object to the form.

4 A. Not by the pneumoconiosis medical
5 panel, no.

6 Q. For asbestos?

7 A. For asbestos. Right.

8 Q. Finally, whose responsibility was it
9 to see that the regulations were followed in
10 England in the Rochdale plant.

11 A. Whose responsibility?

12 Q. Under the British regulations, what
13 entity had the responsibility for seeing that the
14 asbestos regulations were complied with?

15 A. That was a factory inspection.

16 Q. Was it the job of, I mean which
17 private entity was the company charged with that?

18 MR. BROWNSON: I will object to the
19 form.

20 I think he has already answered.

21 Q. Is the factory inspector an arm of
22 the government?

23 A. Yes.

24 Q. They were in charge of enforcing the
25 regulations?

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A. Correct.

3

Q. What private entity had

4

responsibility for complying with the regulations?

5

A. The employer.

6

MR. WILL: Thank you.

7

MR. GERSON: Wait a minute.

8

(Discussion off record)

9

BY MR. WILL:

10

Q. Mr. Brownson asked you questions

11

about the fact that there were three mines in the

12

New Idria area, J-M, Atlas and Union Carbide.

13

And you indicated that, as far as you

14

were concerned, there was no difference between

15

the mines, is that correct?

16

A. Yes.

17

Q. Now my question is, do you know, for

18

example, what processes were used at the other

19

mines?

20

A. No.

21

Q. Have you ever done any studies to see

22

whether there were any differences between the

23

fibers from the other mines and the Union Carbide

24

fiber?

25

A. No.

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Q. Do you know, in terms of the health history, at Johns-Manville and Atlas, do you know what process was used in the milling that was done at Johns-Manville or Atlas?

A. No.

Q. Did you understand that Union Carbide used a wet mill process?

MR. BROWNSON: I object to the form of the question.

MR. WILL: I will withdraw the question.

Q. Is it possible that the method of milling used at Atlas or Johns-Manville would have some impact on the health history of its employees?

A. I would have to know what the method of milling was.

I can't answer.

Q. Let me ask the question a little differently.

Would the industrial hygiene practices followed have some impact on the health history of the workers?

A. (No verbal response).

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Q. You don't know anything about it?

A. No.

Q. All right. I will withdraw that question.

To your knowledge, was any tremolite ever found in Calidria asbestos?

A. Not to my knowledge.

Q. Would that have any impact on its ability to cause disease vis-a-vis other types of chrysotile?

A. It is my understanding that the recent medical literature reports have appeared which indicate that asbestos which is contaminated with tremolite is more likely to be the cause of lung cancer and mesothelioma and possibly other asbestos-related effects.

Q. Are you talking about chrysotile asbestos?

MR. BROWNSON: Objection to the form.

A. I am talking about chrysotile asbestos which is not pure and which may have been contaminated by tremolite.

MR. WILL: That is all.

BY MR. BROWNSON:

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Lewinsohn

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2

Q. Dr. Lewinsohn, you said there have

3

been recent reports in the medical literature

4

saying asbestos contaminated with tremolite might

5

be more dangerous than asbestos without tremolite.

6

Are you aware of any reports which

7

have actually compared the two, asbestos with

8

tremolite, and asbestos without tremolite?

9

A. No. I think I misspoke. I shouldn't

10

have said it in that manner.

11

The reports indicate -- let me just

12

think a moment.

13

MR. GERSON: Take your time.

14

A. What I am trying to say is that the

15

reports in the recent literature indicate that

16

chrysotile asbestos contaminated with tremolite

17

has been found to be the most probable cause of

18

malignancies that have arisen in workers exposed

19

to that type of fiber.

20

Q. And are you aware that reports have

21

also appeared in the medical literature that have

22

said that tremolite is not a factor and that it's

23

the chrysotile itself that causes the disease?

24

MR. GERSON: I object to form.

25

A. I haven't seen that.

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Q. Are you aware of a paper by Dr.

3

William J. Nicolson and Philip L. Andrigan, of

4

Mount Sinai, which takes that position, published

5

in 1994?

6

A. I haven't seen that.

7

Q. Let me just ask you a couple of other

8

things.

9

You mentioned earlier, Mr. Will asked

10

you about the first worker you ever saw when you

11

were back at England that had mesothelioma.

12

What was the name of that worker?

13

A. Mr. Archibald Vernon.

14

Q. Archibald Vernon?

15

A. V-e-r-n-o-n.

16

Q. And you said that Mr. Vernon was

17

exposed to crocidolite asbestos during his work?

18

A. Yes.

19

Q. Is it also true he was exposed to

20

chrysotile asbestos?

21

A. Yes, I said that.

22

Q. Do you know if the chrysotile

23

asbestos which Mr. Vernon was exposed to contained

24

tremolite or not?

25

A. No. I don't.

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Q. You mentioned a minute ago about
3 these British asbestos regulations.

4

I believe you told us that these went
5 into effect in 1931?

6

A. They were promulgated in 1931. They
7 took effect in '33.

8

Q. And at that time, was the government
9 agency in England, called the factory inspector,
10 charged with going around the different factories
11 and enforcing the asbestos regulations in England?

12

A. Yes.

13

Q. And when you came to Union Carbide, I
14 think in '82 --

15

A. '82.

16

Q. -- were you aware that Union Carbide
17 at that time had British subsidiaries?

18

A. At that time? No.

19

I probably learned about them
20 subsequently.

21

Q. Did you learn that Union Carbide had
22 had British subsidiaries going back historically
23 before that time?

24

A. I don't understand what you mean.

25

Q. Well, did it come to your attention

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2 that Union Carbide had a subsidiary called Union
3 Carbide U.K. that it had owned for some years
4 before 1982?

5 A. I assumed that they had owned it for
6 some time.

7 Q. Do you know how long they had owned
8 it?

9 A. No.

10 Q. Do you know that it was at least back
11 into the 1960's, if not before?

12 A. I don't know.

13 Q. Did you ever see, while you were at
14 Union Carbide, did you ever see any letters or
15 reports from the Union Carbide subsidiary in
16 England called Union Carbide U.K. that came back
17 to the medical director's office at Union Carbide
18 in New York City about asbestos and health?

19 A. I know I saw some. There was some
20 correspondence that took place when I was at Union
21 Carbide with that entity, but I don't remember
22 what it was in relationship to.

23 Q. Do you know if it had anything to do
24 with asbestos and health?

25 A. I don't remember.

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Q. Do you have any information at the
3 present time as to the type of amosite used at
4 Conwed?

5

A. Type?

6

Q. Type. Where it came from?

7

A. I am aware amosite only comes from
8 one place.

9

Q. That is South Africa?

10

A. From the Northeastern Transvaal in
11 South Africa.

12

Amosite stands for Asbestos Mines of
13 South Africa. It is an acronym.

14

Q. So your understanding is amosite
15 would have come from South Africa?

16

A. Yes.

17

Q. Do you know what grade it was?

18

A. No.

19

Q. And do you know, do you have any
20 information at the present time as to the time
21 period that this amosite was purchased by Conwed
22 for its use out there and the amount?

23

A. No.

24

Q. You mentioned a minute ago, in
25 response to a question by Mr. Will, about these

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Lewinsohn

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environmental exposures to asbestos down in South
3 Africa.

4

5

6

7

Have you ever seen any published
studies in this country about environmental
exposures in the U.S. to spouses of workers in
asbestos plants, manufacturing plants?

8

A. Yes.

9

10

Q. One of those Tunarco plants in
Patterson, New Jersey?

11

A. That wasn't one that I have seen.

12

Q. Which ones can you recall?

13

14

A. I can recall a publication I was
involved in, in Raybestos, Manhattan.

15

16

17

18

Q. And in that particular study, was
there any disease at all shown among the spouses
of the workers in the Raybestos Manhattan plant
related to asbestos?

19

20

21

22

A. We thought that we had, my co-worker
and I thought that we found some cases of
relatives who had lived with a worker who had
worked in that Raybestos plant.

23

24

He developed asbestos-related health
factors.

25

Q. Which particular Raybestos plant was

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Lewinsohn

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2 this?

3 A. Stratford, Connecticut.

4 Q. And this is published? This is work
5 you did at the time you were working for Raybestos
6 Manhattan Company?

7 A. Correct.

8 Q. Are you aware that the Minnesota
9 Department of Health screened the spouses of
10 Conwed workers at Cloquet, Minnesota to see if
11 they had asbestos-related disease?

12 A. No. I am not.

13 Q. Are you aware of what the current
14 OSHA standard is in the U.S. for exposure to
15 chrysotile asbestos in workplaces?

16 A. It has gone down to 0.1, I believe.

17 Q. Are you aware that it has been
18 reduced to .05 fibers per CC of air?

19 A. Well, then it has just gone down. It
20 has been reduced within the last month.

21 Q. Are you aware of the new OSHA
22 asbestos standards that came into effect in August
23 1994?

24 A. August '94?

25 Q. Right.

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A. That is what we are just referring to.

Yes. I haven't read it.

Q. O.K. And are you aware that that applies equally to chrysotile asbestos as to amosite or crocidolite?

A. Yes. OSHA has never recognized the difference, in spite of the rest of the world having done so.

Q. You are aware that OSHA is the U.S. Government agency that regulates hazards in the workplace like factories?

A. Yes.

Q. And this particular OSHA standard deals with exposure to asbestos in the workplace such as factories that use asbestos in manufacturing processes?

A. Correct.

Q. And I take it that you disagree with OSHA's position as to how they regulate chrysotile asbestos in relation to other fiber types in the workplace?

MR. GERSON: Objection to form.

A. I didn't say that.

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MR. BROWNSON: That is all I have.

EXAMINATION BY

MR. WILL:

Q. Doctor, one follow-up.

To your knowledge, did Union Carbide
U.K. British subsidiary have any involvement with
asbestos?

A. My knowledge?

Q. To your knowledge.

A. At this moment in time, I really
don't know.

MR. WILL: O.K. That is all I have.

MR. BROWNSON: I will say, for the
record, as we have done in the past, I will
take charge of the original transcript and
file it with the court, and then I also
want a copy.

(Continued on next page.)

1 Lewinsohn 308

2 MR. WILL: Dr. Lewinsohn will want
3 to read it and sign the deposition, as he
4 did with his first one.

5 (Time noted: 11:40 a.m.)

6

7 Subscribed and sworn to before me
8 this ___ day of _____, 1994.

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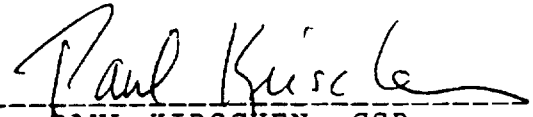
C E R T I F I C A T E

STATE OF NEW YORK)
) ss.:
COUNTY OF NEW YORK)

I, PAUL KIRSCHEN, a Certified
Shorthand Reporter and Notary Public
within and for the State of New York, do
hereby certify that I reported the
proceedings in the within-entitled matter,
and that the within transcript is a true
record of such proceedings.

I further certify that I am not
related, by blood or marriage, to any of
the parties in this matter and that I am
in no way interested in the outcome of
this matter.

IN WITNESS WHEREOF, I have hereunto
set my hand this 27th day of October
1994.



PAUL KIRSCHEN, CSR

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November 18, 1994

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I N D E X

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WITNESS

PAGE

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Hilton C. Lewinsohn (Resumed)

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E X H I B I T S

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EXHIBIT

FOR IDENT.

9

8 Disclosure by counsel
to Union Carbide

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DOCUMENT REQUEST

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(1) IN THE UNITED STATES DISTRICT COURT
 (2) FOR THE EASTERN DISTRICT OF PENNSYLVANIA
 (3) IN RE: ASBESTOS PRODUCTS LIABILITY Civil
 (4) LITIGATION (NO. VI) MDL 875
 (5) This Document Relates to:
 (6) UNITED STATES DISTRICT COURT
 (7) FIFTH DIVISION
 (8) DISTRICT OF MINNESOTA
 (9) CONWED CORPORATION, Plaintiff, 5-92-00
 (10) -against-
 (11) UNION CARBIDE CHEMICALS AND
 (12) PLASTICS COMPANY, INC., (f/k/a
 (13) Union Carbide Corporation),
 (14) -and- Defendant,
 (15) -against-
 (16) UNION CARBIDE CHEMICALS AND
 (17) PLASTICS COMPANY, INC. (f/k/a
 (18) Union Carbide Corporation),
 (19) -against-
 (20) OWENS-CORNING FIBERGLAS CORPORATION,
 (21) et al., WALKER JAMAR COMPANY, A.W.
 (22) KUETTEL & SONS, INC., API, INC.,
 (23) and MacARTHUR COMPANY,
 (24) Third-Party Defendants.
 (25) October 18, 1994
 (26) HILTON C. LEWINSOHN (Cont'd)
 (27)
 (28)
 (29)
 (30)

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(1) Appearances:
 (2)
 (3) KELLY, DRYE & WARREN, ESQS.
 (4) Attorneys for Union Carbide
 (5) 101 Park Avenue
 (6) New York, New York
 (7) BY: ALAN J. GERSON, ESQ.,
 (8) of Counsel
 (9) -and-
 (10) FOLEY & LARONER, ESQS.
 (11) 777 E. Wisconsin Avenue
 (12) Milwaukee, Wisconsin 53202
 (13) BY: TREVOR J. WILL, ESQ.,
 (14) of Counsel
 (15) STICH, ANGELL, KREIDLER & MUTH, P.A.
 (16) Attorneys for Conwed Corp.
 (17) 250 2nd Avenue South
 (18) Minneapolis, Minnesota 55401
 (19) BY: ROBERT D. BROWNSON, ESQ.,
 (20) of Counsel
 (21) -and-
 (22) RUDWICK & HOLFE, ESQS.
 (23) 203 N. LaSalle
 (24) Chicago, Illinois 60601
 (25) BY: MICHAEL R. GOLDMAN, ESQ.,
 (26) of Counsel
 (27) . . .
 (28)
 (29)

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(1) October 18, 1994
 (2) 9:30 a.m.
 (3)
 (4) Continued deposition of HILTON C. LEWINSOHN,
 (5) taken by Plaintiff, pursuant to adjournment,
 (6) at the offices of Kelley, Drye & Warren, Esqs.,
 (7) 101 Park Avenue, New York, New York, before
 (8) Paul Kirschen, a Certified Shorthand Reporter
 (9) and Notary Public within and for the State of
 (10) New York.
 (11) . . .
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(1) HILTON C. LEWINSOHN,
 (2) resumed, having been duly re-sworn by
 (3) Paul Kirschen, Notary Public, was
 (4) examined and testified as follows:
 (5) MR. BROWNSON: This is a
 (6) continuation of a prior deposition.
 (7) EXAMINATION (Continued)
 (8) BY MR. BROWNSON:
 (9) Q. Good morning, Dr. Lewinsohn. We are
 (10) continuing the deposition that we left off some
 (11) time ago in this case of Conwed versus Union
 (12) Carbide.
 (13) I would like to try to get this
 (14) finished up this morning. I think we can move
 (15) fairly rapidly here. We can finish this up.
 (16) First of all, you recall the case,
 (17) Conwed versus Union Carbide? Do you have that in
 (18) mind?
 (19) A. Could you just briefly restate it?
 (20) Q. O.K. This is the case involving the
 (21) Conwed ceiling tile plant in Minnesota at which
 (22) various workers have had various asbestos related
 (23) diseases which they allege were as a result of
 (24) their exposure in their plant. Conwed is suing
 (25)

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- (1)
(2) Union Carbide as a result of that exposure. That
(3) is the case.
(4) Does that bring it back to mind?
(5) A. Yes.
(6) Q. Since the first session of your
(7) deposition in this case, have you had a chance to
(8) go back and read your testimony or review it in
(9) any way?
(10) A. Just briefly before this deposition.
(11) Q. O.K. Before we started here today?
(12) A. Right.
(13) Q. Yesterday or something?
(14) A. This morning.
(15) Q. O.K. And have you reviewed any other
(16) materials in connection with the deposition here
(17) today?
(18) A. No.
(19) Q. Since we broke from the first session
(20) of this deposition until today, have you gone back
(21) to review any materials, that came up in the first
(22) session of the deposition to refresh your
(23) recollection or update yourself in any way?
(24) MR. WILL: You mean go back and
(25) reread the exhibits?

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- (1)
(2) MR. BROWNSON: Not necessarily
(3) exhibits to the deposition, but any
(4) materials.
(5) A. Well, I have had another deposition
(6) in another case since this.
(7) I guess a lot of the similar material
(8) to that which we discussed last time was referred
(9) to.
(10) Q. This other case, was this a case
(11) involving asbestos related disease?
(12) A. A case involving Turner & Newall, my
(13) former employer.
(14) Q. And was this a personal injury case?
(15) A. No. This was a property damage
(16) situation.
(17) Chase Manhattan Bank.
(18) Q. O.K. And some lawyer for Chase
(19) Manhattan Bank took your deposition?
(20) A. Yes.
(21) Q. Was that here in New York?
(22) A. Yes.
(23) Q. Do you remember who that lawyer was?
(24) A. I remember the first lawyer's name.
(25) The deposition was in two phases. The first one

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- (1)
(2) was Mr. Connor.
(3) I do not remember the second lawyer's
(4) name. I think it was Mr. Leonard, but I am not
(5) sure.
(6) Q. And when did that deposition take
(7) place?
(8) A. Probably two or three months ago.
(9) Q. And in connection with the
(10) preparation for that deposition, did you go back
(11) and review some materials concerning the workers
(12) at the Turner & Newall plant at Rochdale, or what
(13) were you looking at?
(14) A. I was shown various documents from
(15) Turner & Newall's files.
(16) Q. Let me shift gears to Union Carbide.
(17) Since the last session of your
(18) deposition in this case, have you had occasion to
(19) review any of the materials or any materials which
(20) would pertain to the issue of Union Carbide
(21) Calidria asbestos?
(22) A. No, I haven't.
(23) Q. Have you had occasion, since the
(24) first session of your deposition in this case, to
(25) review any materials on the issue of chrysotile

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- (1)
(2) asbestos, an asbestos related disease?
(3) A. Well, once again, in the course of
(4) preparation and being deposed in the other cases,
(5) that issue has come up, yes.
(6) Q. How would the issue of chrysotile
(7) asbestos and disease come up with the issues in
(8) that case.
(9) Didn't that case involve Olympus?
(10) A. Yes, but one discusses all forms of
(11) asbestos, other phases.
(12) Q. O.K. So in that deposition, did you
(13) testify or discuss all forms of asbestos fiber and
(14) health effects?
(15) A. To the best of my recollection.
(16) Without going back to look at the
(17) deposition, I can't be any more specific
(18) Q. Let me direct your attention to this
(19) particular case, the case of Conwed versus Union
(20) Carbide.
(21) It is my understanding that Union
(22) Carbide intends to elicit from you some opinion
(23) testimony in this case.
(24) Can you tell us as you sit here today
(25) what you understand the opinions are that you

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- (1) would render in this particular case?
 (2) MR. GERSON: I need to object to the
 (3) form of the question.
 (4) We have designated Dr. Lewinsohn as
 (5) a potential witness without committing
 (6) ourselves at this stage. We reserve the
 (7) right to elicit his testimony or not to.
 (8) MR. BROWNSON: O.K. I understand
 (9) that he may or may not be called.
 (10) What I am wondering is - let me
 (11) rephrase.
 (12) MR. WILL: Without the preamble.
 (13) Q. O.K. What I am wondering, Dr.
 (14) Lewinsohn, is do you know as you sit here today
 (15) what opinions you would have to offer in this
 (16) lawsuit?
 (17) A. I have no opinions specifically,
 (18) briefed or informed by Union Carbide as to how
 (19) they would use my testimony.
 (20) Q. O.K. Have you had a chance to read
 (21) the disclosure that counsel for Union Carbide made
 (22) in this case about areas that you might testify
 (23) about?
 (24) A. No.
 (25)

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- (1) read through it and I will ask you some questions
 (2) about it.
 (3) A. All right.
 (4) Q. First of all, have you had a chance
 (5) to review any materials relating to the Conwed
 (6) plant at the present time?
 (7) A. No.
 (8) Q. Have you been advised that you will
 (9) be shown any materials with respect to the Conwed
 (10) plant.
 (11) A. No.
 (12) Q. It also indicates in the disclosure,
 (13) you may review materials or review materials
 (14) relating to Calidria asbestos.
 (15) Can you describe for me what
 (16) materials you reviewed relating to Calidria
 (17) asbestos?
 (18) MR. GERSON: During what time?
 (19) MR. WILL: Since he left Union
 (20) Carbide.
 (21) Q. Well, asking the question generally.
 (22) Let me break the question down.
 (23) Have you reviewed any mineralogical
 (24) reports, articles, literature, analyses of
 (25)

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- (1) Q. Let me just show it to you. I would
 (2) like to run through these things and ask you some
 (3) questions about them.
 (4) And what I am showing the witness, I
 (5) am not going to make this an exhibit because I
 (6) just brought my copy. It's the experts'
 (7) disclosure of Union Carbide in this case, and
 (8) served on February 1994.
 (9) (Discussion off the record)
 (10) MR. BROWNSON: The copy.
 (11) (Discussion off the record)
 (12) MR. BROWNSON: Let's make this page
 (13) Exhibit 8. Back on the record. I will
 (14) make an exhibit of this page. We will mark
 (15) this Exhibit 8. Disclosure by counsel to
 (16) Union Carbide in this case.
 (17) (Disclosure by counsel to Union
 (18) Carbide marked as Exhibit 8 for
 (19) identification, as of this date.)
 (20) BY MR. BROWNSON:
 (21) Q. Have you had a chance to read Exhibit
 (22) 8?
 (23) A. Very quickly, yes.
 (24) Q. Why don't you just take a moment to
 (25)

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- (1) Calidria asbestos at any time?
 (2) A. Yes.
 (3) Q. And can you tell us what it is that
 (4) you reviewed?
 (5) A. Not specifically, but I have
 (6) reviewed, particularly while I was at Union
 (7) Carbide, various reports that came my way from
 (8) time to time on those particular subjects.
 (9) Q. And do you recall any of them being
 (10) from Dr. Mumpton, reports from Dr. Mumpton?
 (11) A. I had seen a report from Dr. Mumpton.
 (12) I can't say I reviewed it. I know of
 (13) its existence.
 (14) Q. As far as any opinions you would be
 (15) prepared to offer, as you sit here today,
 (16) concerning Calidria asbestos, would it be fair to
 (17) say then that those opinions would not be based
 (18) upon the writings of Dr. Mumpton, or would they
 (19) be?
 (20) A. Well, if I was going to be questioned
 (21) as a witness about my opinions on Calidria
 (22) asbestos, I would prepare myself for that.
 (23) And at this moment in time, I can't
 (24) tell you what particular writings I would refer to
 (25)

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- (1) in order to do that.
 (2) If there were writings by Dr. Mumpton
 (3) that were relevant, yes, I would look at them and
 (4) review them.
 (5) Q. But in order for you to render
 (6) opinions about Calidria asbestos, would it be fair
 (7) to say you would have to go back and review
 (8) writings by Dr. Mumpton?
 (9) In other words, you don't have those
 (10) in mind as you sit here today, do you?
 (11) A. I don't have any particular reference
 (12) in mind as I sit here today.
 (13) Q. Are you familiar with Robert Woolery?
 (14) A. I don't know.
 (15) Q. Do you recall having ever reviewed a
 (16) paper authored by Dr. Woolery called, "Asbestos in
 (17) the Paper Making Process"?
 (18) A. Not offhand.
 (19) Q. Let's go back to the subject of
 (20) Calidria asbestos.
 (21) In your mind, is there any
 (22) distinction - strike that. Let me back up.
 (23) Are you familiar with the fact that
 (24) the Calidria brand asbestos sold by Union Carbide
 (25)

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- (1) that to be the same asbestos?
 (2) A. From my perspective and from my
 (3) knowledge, yes.
 (4) Q. Going back to the Calidria asbestos,
 (5) have you seen any medical record or medical data
 (6) or medical information concerning miners at the
 (7) Calidria mine?
 (8) MR. WILL: Are you talking about the
 (9) Union Carbide mine?
 (10) MR. BROWNSON: Right.
 (11) A. Well, I am not quite sure how best to
 (12) answer that question, because mining really
 (13) utilized very few people as I understand it.
 (14) And in my review that I undertook at
 (15) one time, they, King City Mill, I don't know
 (16) whether, without looking to see what people's
 (17) occupations were, whether I also reviewed miners.
 (18) But there were very few miners, to my
 (19) understanding, because of the nature of the mining
 (20) process.
 (21) Q. O.K. And would it be fair to say
 (22) that, over the years, there has really only been a
 (23) relatively handful of people who actually worked
 (24) up at the mine?
 (25)

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- (1) comes from this deposit in New Idria, California?
 (2) A. Yes.
 (3) Q. I-d-r-i-a?
 (4) A. Yes.
 (5) Q. Have you ever been there at the mine?
 (6) A. I have been to the King City mine.
 (7) Q. You have been to the mine in King
 (8) City or the mill?
 (9) A. The mill.
 (10) Q. Have you ever been up to the mine up
 (11) on the mountain?
 (12) A. No.
 (13) Q. Now are you familiar with the fact
 (14) that there is at least two other, or have been
 (15) historically at least two other operating mines in
 (16) that deposit, one by Atlas Asbestos and one by
 (17) Johns-Manville?
 (18) A. I think I may have heard that there
 (19) were.
 (20) Q. And in your mind, do you know of any
 (21) distinction between the asbestos mined in those
 (22) three mines?
 (23) A. No.
 (24) Q. As far as you know, do you consider
 (25)

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- (1) A. That is what I understood. Yes.
 (2) Q. And when you have reviewed such
 (3) medical information as you have seen about Union
 (4) Carbide employees in King City, you didn't
 (5) specifically break out and review the miners as a
 (6) separate group, did you?
 (7) A. I don't believe I did.
 (8) Q. Now, let me broaden the question and
 (9) ask you, have you ever reviewed the medical
 (10) record, reports, or medical information concerning
 (11) employees at any of the King City facilities, the
 (12) mine, the mill, the truckers, any of the employees
 (13) associated with that asbestos production facility?
 (14) A. Shortly, I think I told you this last
 (15) time, shortly before -
 (16) MR. WILL: Are you asking
 (17) differently than what you covered before?
 (18) Go ahead.
 (19) A. I think I told you this last time.
 (20) That is that shortly before the buyout by the
 (21) management of the King City Mine & Mill, I went to
 (22) King City and reviewed, I think, without seeing my
 (23) report, I don't know the exact numbers now, but I
 (24) think about 100 individuals' x-rays to determine
 (25)

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- (1)
 (2) whether there were any obvious asbestos related
 (3) changes noticed in those films.
 (4) That was the only review I made.
 (5) Q. O.K. And just so I am clear on this,
 (6) what you reviewed then was the actual x-ray films?
 (7) A. I reviewed, I went down there, and I
 (8) went to the local hospital, where the x-rays had
 (9) been taken. And they made available to me from a
 (10) list that was provided by the mine, by the mill,
 (11) rather, the x-rays of workers.
 (12) And I am not quite sure what the
 (13) relation was of the workers that I reviewed. And
 (14) I looked, if I remember correctly, I looked at the
 (15) first available x-ray, I looked at the last and
 (16) most recent x-ray, and I probably looked routinely
 (17) at the one before that.
 (18) And if I had any suspicions, I would
 (19) look back further.
 (20) Q. Other than looking at the x-ray
 (21) films, did you see any other medical record or
 (22) medical information concerning workers?
 (23) A. Not at this moment in time that I can
 (24) remember.
 (25) Q. Have you ever seen any medical

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- (1)
 (2) record, medical reports, medical information, or
 (3) x-rays, concerning any workers at either the
 (4) Johns-Manville or the atlas facilities at New
 (5) Idria, California?
 (6) A. No.
 (7) Q. Have you ever heard or been told what
 (8) the health experience of those workers has been?
 (9) A. No. I am not aware of the health
 (10) experience of those workers.
 (11) Q. Going back to your review of the
 (12) x-rays of the workers at the King City asbestos
 (13) facility, do you know whether these x-rays that
 (14) you reviewed included the x-rays of all workers
 (15) who worked at the mine and mill at King City since
 (16) the production started in 1963?
 (17) A. I honestly don't remember what the
 (18) selection criteria were.
 (19) I would have to look at my report,
 (20) which I assume, which I hope will be able to
 (21) enlighten me on that.
 (22) But at this moment in time, I just
 (23) don't remember the selection criteria. I am
 (24) sorry.
 (25) Q. Do you have a copy of the report?

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- (1)
 (2) A. I do, but not with me.
 (3) Q. I would like to get a copy of the
 (4) report. Dr. Lewinsohn's report of his x-ray
 (5) review.
 (6) MR. WILL: We will take it under
 (7) advisement.
 (8) Q. First of all, would the report tell
 (9) us, if we looked at it, if it included all workers
 (10) who had worked at the mine and mill since
 (11) production began?
 (12) A. It should tell you which workers were
 (13) looked at.
 (14) Q. Do you remember if there was any
 (15) breakdown by occupation among those workers?
 (16) A. To the best of my recollection, there
 (17) was no breakdown by occupation.
 (18) Q. Was this a reading which was a blind
 (19) type of reading -
 (20) A. Yes.
 (21) Q. - where you just had a bunch of
 (22) films and you didn't know, before you read them,
 (23) where these people had worked in particular?
 (24) A. Correct.
 (25) Q. Did you become aware of that

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- (1)
 (2) information after you read the films?
 (3) A. I don't believe so.
 (4) Q. Now I take it, you have toured the
 (5) mill at King City?
 (6) A. On that occasion, when I went down
 (7) there, yes.
 (8) Q. And when was that again? About '85?
 (9) A. Just before the buyout took place,
 (10) the divestiture.
 (11) Q. Do you recall, when you toured the
 (12) mill on that occasion in about '84, '85, '86, in
 (13) that time period, were you shown the area where
 (14) the baggers worked in that mill?
 (15) A. I saw all the operations at that
 (16) mill.
 (17) Q. And do you know if your report of the
 (18) x-rays you reviewed of those workers would tell us
 (19) which of the workers worked in the bagging area?
 (20) A. I don't think so.
 (21) Q. Do you recall that information ever
 (22) coming to your attention?
 (23) Do you recall learning, in connection
 (24) with your review of x-rays, which of those workers
 (25) had worked in the bagging area?

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- (1)
 (2) A. No.
 (3) Q. So as far as you know, that is
 (4) something that was never specifically looked at
 (5) separately or broken out?
 (6) A. I didn't do it. I don't know whether
 (7) anyone else did.
 (8) Q. In addition to the x-rays that you
 (9) looked at personally, did you review any other
 (10) data concerning the King City workers, that is,
 (11) reviewed by any other doctors, any other record
 (12) concerning the health of the King City workers?
 (13) A. I don't think so.
 (14) Q. Do you know whether any of the
 (15) workers at King City Hospital, x-rays you looked
 (16) at, had been exposed to levels of asbestos in
 (17) their employment that exceeded the OSHA level, or
 (18) whether they were all below the OSHA level?
 (19) A. I can't answer because I don't think
 (20) that any correlation was done between dust levels
 (21) and occupation.
 (22) Q. In connection with your review of the
 (23) x-rays, did you see any dust level or exposure
 (24) data?
 (25) A. I don't believe.

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- (1)
 (2) Q. Do you know if you have ever seen any
 (3) dust level data in the King City mine or mill?
 (4) A. At this moment in time, I don't
 (5) remember.
 (6) Q. Do you know if you have ever seen any
 (7) dust level or exposure data from either the Atlas
 (8) one, or the Johns-Manville mines in that same
 (9) asbestos deposit?
 (10) A. I don't believe I would have had any
 (11) reason to.
 (12) Q. Have you seen any dust level or
 (13) exposure data from any workers in plants similar
 (14) to the Conwed plant, customer plants, where the
 (15) Calidria asbestos was used in manufacturing
 (16) processes?
 (17) A. Again, I must answer, I don't
 (18) remember.
 (19) Q. Are you familiar with a program that
 (20) Union Carbide undertook, beginning in about '72,
 (21) '73, where they would send industrial hygienists
 (22) out to Calidria customers' plants and take air
 (23) samples?
 (24) A. I didn't join Carbide until '82. So
 (25) I don't know about that.

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- (1)
 (2) Q. I understand that.
 (3) But in connection with your work at
 (4) Union Carbide, did you become familiar with that
 (5) program?
 (6) A. Not specifically, no.
 (7) Q. And do you recall ever reviewing data
 (8) generated by that program, that is, dust counts
 (9) done at plants of customers using Calidria
 (10) asbestos?
 (11) A. No. I don't.
 (12) Q. In connection with your work at any
 (13) time, whether at Union Carbide or since that time,
 (14) have you ever seen the medical records, medical
 (15) reports, x-rays, or medical information concerning
 (16) workers at customers plants who used Calidria
 (17) asbestos in manufacturing processes?
 (18) A. I really don't know.
 (19) From time to time, people like Alan
 (20) Gerson would contact me for my thoughts or my
 (21) opinions on a particular case
 (22) But that is as far as it went.
 (23) Q. Have you ever done a review of a
 (24) group of workers similar to what you did at the
 (25) King City x-rays from a customer plant where you

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- (1)
 (2) looked at a large number of x-rays?
 (3) A. No.
 (4) Q. So what you have done is done some
 (5) consulting with Union Carbide lawyers on a
 (6) particular lawsuit involving a particular worker?
 (7) A. From time to time, yes.
 (8) Q. And did you do that work while you
 (9) were at Union Carbide, or is that the work you
 (10) have done since you left Union Carbide?
 (11) A. No. I have done that at Union
 (12) Carbide.
 (13) Q. And since you have left Union
 (14) Carbide, have you done any of that consulting in
 (15) connection with cases of workers who claim to have
 (16) been exposed to Calidria asbestos at some
 (17) customers' plants?
 (18) A. I don't know.
 (19) Q. In terms of the consulting or the
 (20) review that you have done in connection with
 (21) particular cases of workers here and there, do you
 (22) know if any of those have involved a Conwed worker
 (23) from the Conwed plant in Cloquet, Minnesota?
 (24) A. That I don't remember.
 (25) Q. Would you happen to remember actual

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- (1)
 (2) names of any of those people?
 (3) A. No.
 (4) Q. If I threw a couple of names at you
 (5) of Conwed workers -
 (6) A. You could try.
 (7) Q. O.K. I will give you the name of
 (8) James Manisco.
 (9) A. That doesn't ring a bell
 (10) Q. Is that a case you looked at in any
 (11) way?
 (12) A. It doesn't ring a bell.
 (13) Q. Have you ever seen any published
 (14) data, whether it was in your review of literature
 (15) or anywhere else, about any surveys or reviews or
 (16) studies of any group of workers in any plant
 (17) setting that used Calidria asbestos?
 (18) A. Not that I am aware of.
 (19) Q. Are you aware if any such published
 (20) data exists?
 (21) A. No.
 (22) Q. At the time you were at Union
 (23) Carbide, did you ever make any recommendations of
 (24) any type that any such survey be done of workers
 (25) in plants where Calidria asbestos was used?

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- (1)
 (2) a medical screening, with x-rays, and other
 (3) reviews, of workers at the Conwed plant who used
 (4) Calidria asbestos?
 (5) A. I don't know.
 (6) The reason I am hesitating is because
 (7) I can remember, some time back, seeing a brief
 (8) report in the Bureau of National Affairs of the
 (9) Occupational Health Reporter, that publication,
 (10) which related to Conwed workers. But I don't
 (11) remember the context of it.
 (12) Whether that referred to it or not, I
 (13) do not remember.
 (14) Q. Do you recall if that came to your
 (15) attention while you were working for Union
 (16) Carbide, or is that something you saw since that
 (17) time?
 (18) A. I don't know.
 (19) Q. At the time that report in the
 (20) Reporter came to your attention, did you know that
 (21) the Conwed workers had been exposed to the
 (22) Calidria asbestos?
 (23) A. I don't know when that report came to
 (24) my attention.
 (25) I can't answer that

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- (1)
 (2) A. I, personally? No.
 (3) Q. Are you aware of anyone at Union
 (4) Carbide, at any time, I guess up to the present
 (5) time, as far as you know, suggesting or initiating
 (6) any review or survey of workers in customer plants
 (7) where Calidria asbestos was used?
 (8) A. No.
 (9) Q. Did it ever come to your attention
 (10) that anyone else outside of Union Carbide was
 (11) proposing or actually engaging in any such surveys
 (12) of workers in customer plants where Calidria
 (13) asbestos was used?
 (14) A. No.
 (15) Q. Are you familiar with the
 (16) International Paper Workers Union? Have you ever
 (17) heard of them?
 (18) A. Not really, no.
 (19) Q. You have never done any work for them
 (20) in any connection, I take it?
 (21) A. No.
 (22) Q. Have you ever seen any of the -
 (23) strike that
 (24) Have you ever heard that the
 (25) International Paper Workers Union did a screening,

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- (1)
 (2) Q. As you sit and think about it now, do
 (3) you recall if the report said anything about the
 (4) type of asbestos to which those workers were
 (5) exposed?
 (6) A. No. I am sorry I raised it. It was
 (7) just from my memory. I remembered seeing it.
 (8) Q. Do you recall ever seeing or
 (9) reviewing a report by the Minnesota Department of
 (10) Health concerning the Conwed workers at the
 (11) Cloquet, Minnesota plant?
 (12) A. No, I had not.
 (13) Q. And while you were at Union Carbide,
 (14) do you know if you were ever contacted, or did you
 (15) ever discuss with any other researchers whether
 (16) from the Minnesota Department of Health or Paper
 (17) Workers Union or anywhere else, concerning any
 (18) surveys or reviews of workers at the Conwed plant?
 (19) A. No.
 (20) Q. Looking back now at Exhibit 8, the
 (21) disclosure.
 (22) First of all, have you ever seen this
 (23) particular disclosure before the deposition here
 (24) today?
 (25) A. No.

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- (1) Q. If you look in the first paragraph,
 (2) it says, "Dr. Lewinsohn may be asked to give
 (3) opinions about the ability of Calidria asbestos to
 (4) cause diseases in workers under the conditions," I
 (5) am sorry, "under the conditions during which it
 (6) was used at the Conwed plant."
 (7) Do you see that reference?
 (8) A. I do.
 (9) Q. And is that an opinion that you would
 (10) be prepared to give in this case, as far as you
 (11) know?
 (12) MR. GERSON: At this time?
 (13) MR. BROWNSON: Well, yes.
 (14) A. Not at this moment in time, no.
 (15) Q. In order for you to give that
 (16) opinion, what further information would you need
 (17) to review?
 (18) A. I would need to review all the
 (19) information pertaining to the use of Calidria
 (20) asbestos in the Conwed plant, the circumstances
 (21) under which it was used, any relevant industrial
 (22) hygiene surveys that were conducted, any health
 (23) record of employees that were available. And, in
 (24) general, review the literature available on
 (25)

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- (1) Calidria asbestos.
 (2) It would require preparation.
 (3) (Telephone interruption)
 (4) (Recess)
 (5) BY MR. BROWNSON:
 (6) Q. Dr. Lewinsohn, you just told us, in
 (7) order to render an opinion about the ability of
 (8) Calidria asbestos to cause disease in workers
 (9) under the conditions used in the Conwed plant, you
 (10) would need to review a number of different things.
 (11) I understood you would not be able to
 (12) render an opinion without reviewing those
 (13) materials. Is that correct?
 (14) A. Not necessarily correct. If I were
 (15) to render an opinion specifically related to those
 (16) circumstances involving that particular group of
 (17) employees, I would need a lot more information.
 (18) Q. O.K. Are you prepared to render any
 (19) opinions, in general, concerning Calidria asbestos
 (20) and its ability to cause disease in workers in
 (21) manufacturing plants?
 (22) A. I think so. Yes.
 (23) Q. Can you tell us what your opinions
 (24) are in that regard about the ability of Calidria
 (25)

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- (1) asbestos to cause disease among workers in
 (2) manufacturing plants?
 (3) A. Yes. In my opinion, Calidria
 (4) asbestos is unlikely to cause the asbestos-related
 (5) diseases which have been described in connection
 (6) with the use of other asbestiform minerals.
 (7) Q. Are you saying - strike that.
 (8) Let's take the disease of asbestosis.
 (9) I am talking now about clinical asbestosis which
 (10) would show up on an x-ray as interstitial
 (11) fibrosis. Okay?
 (12) A. Yes.
 (13) Q. Is it your opinion that Calidria
 (14) asbestosis unlikely to cause that disease among
 (15) workers in a manufacturing plant?
 (16) A. In general, yes, that is my opinion.
 (17) Q. Now is your opinion is based, in
 (18) part, upon the dose of Calidria which would be
 (19) required to cause such a disease?
 (20) A. It's based in part on that, but it's
 (21) based largely, I think, on the fact that this
 (22) fiber is so different from the other fibers which
 (23) have been associated with the disease.
 (24) Q. Well, let me ask you some questions
 (25)

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- (1) about that.
 (2) First of all, you are not saying, are
 (3) you, that Calidria is absolutely unable, under any
 (4) circumstances, to cause asbestosis among workers?
 (5) A. No. I said unlikely.
 (6) I don't believe that I could make
 (7) that statement that, under any circumstances,
 (8) would not cause disease.
 (9) Q. O.K. So as I understand your
 (10) opinion, what you are saying is Calidria is less
 (11) likely to cause the disease asbestosis than other
 (12) asbestos type fibers in the setting of a
 (13) manufacturing plant where workers are using it?
 (14) A. Depending upon the working
 (15) conditions, and the exposure of those workers,
 (16) yes.
 (17) Q. And let me ask you this question.
 (18) All other things being equal, in
 (19) terms of working conditions and exposure, are you
 (20) saying that Calidria is less likely to cause
 (21) asbestosis than other types of asbestos?
 (22) A. I think so, yes.
 (23) Q. And would you agree that the converse
 (24) of that also is true, that if Calidria is used
 (25)

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- (1) where there are higher levels of exposure and more
 (2) dusty working conditions that it could be more
 (3) likely to cause diseases than some other types of
 (4) asbestos at lower exposure?
 (5) A. I don't follow that argument
 (6) Q. Well, let me ask you this question
 (7) Would you agree with me that if
 (8) people using Calidria asbestos were exposed to
 (9) enough of it for long enough in a manufacturing
 (10) plant, they could get asbestosis?
 (11) A. I would say that if the exposure were
 (12) overwhelming, and were of such magnitude as to
 (13) overwhelm the primary defense mechanism that the
 (14) human body has to prevent that type of fiber from
 (15) causing health effects, then under such
 (16) circumstances, it would be possible to develop
 (17) pulmonary fibrosis.
 (18) Q. In laymen's terms, asbestosis?
 (19) A. Asbestosis
 (20) Q. Now, as I understand your opinion,
 (21) what you are saying is that the Calidria asbestos
 (22) is different than other types of asbestos, which
 (23) makes it less likely to cause asbestosis, is that
 (24) correct?
 (25)

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- (1) cleared out of the lungs?
 (2) A. I think so. Yes.
 (3) Q. And would you agree that if, in a
 (4) given case, they were not cleared out of the
 (5) lungs, and they remained in the lungs in
 (6) sufficient quantities, then they could cause
 (7) disease?
 (8) A. For long enough?
 (9) Q. Right.
 (10) A. That is your guess is as good as mine
 (11) under those circumstances.
 (12) Q. Well -
 (13) A. I can't give you a definitive answer
 (14) Q. Have you ever seen lung tissue fiber
 (15) burdened studies or analyses of workers exposed to
 (16) Calidria asbestos?
 (17) A. No.
 (18) Q. So as you sit here today, do you have
 (19) any actual data or information as to what the lung
 (20) tissue Calidria fiber burden is in workers exposed
 (21) in manufacturing plants?
 (22) A. No. I don't know that anybody has.
 (23) Q. And you have anticipated my next
 (24) question.
 (25)

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- (1) A. I think so.
 (2) Q. Now what are the specific differences
 (3) which, in your view, make it less likely to cause
 (4) asbestos-related disease?
 (5) A. It's basically the physical property,
 (6) you know, the fiber is a fibril. It is not a
 (7) bundle of fibril. But fiber itself is fibril.
 (8) It's very short, by which I mean it's
 (9) usually around about 5 microns in length, and it's
 (10) of small diameter.
 (11) Such fibers, are readily engulfed by
 (12) the macrophages, which are the scavenger cells in
 (13) the lungs, and can be eliminated from the lungs,
 (14) either in sputum or through the lymphatic chain.
 (15) Or even if swallowed would be eliminated through
 (16) the gastroenterosinal tract.
 (17) So the possibility for these fibers
 (18) to dwell for long enough in the lungs to produce
 (19) their fibrotic effect, I think is vastly
 (20) diminished by the physical properties of the
 (21) fiber.
 (22) Q. So what you are saying is because of
 (23) the physical characteristics of these fibers being
 (24) short, small diameter, they are more easily
 (25)

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- (1) Are you aware of any of any such
 (2) information in the possession of anyone at Union
 (3) Carbide?
 (4) A. No.
 (5) Q. And are you aware of any studies
 (6) Union Carbide or people on behalf of Union Carbide
 (7) have ever undertaken to try to find that out, do
 (8) lung tissue fiber burden studies of people exposed
 (9) to Calidria in manufacturing plants?
 (10) A. I am not aware of that.
 (11) Q. Have you seen any published data on
 (12) that point?
 (13) A. No.
 (14) Q. I am going back through this
 (15) disclosure here of your opinions, Exhibit 8.
 (16) One of the things it says you will
 (17) make comment on is the scientific literature
 (18) regarding the ability of chrysotile and short
 (19) fibered chrysotile to cause disease.
 (20) I take it, that is generally what we
 (21) were just talking about?
 (22) A. Generally, yes.
 (23) Q. Are you aware of any particular
 (24) scientific literature that discusses the ability
 (25)

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- (1) of Calidria asbestos fiber to cause disease?
 (2) A. No. At this moment in time, I am not
 (3) aware of that.
 (4) Q. And are you aware of any literature
 (5) that discusses the ability of the New Idria
 (6) asbestos fiber in general, whether it came from
 (7) one of these other two mines of Atlas or
 (8) Johns-Manville, to cause disease?
 (9) A. Again, I must say that as I sit here
 (10) now, I can't give you any specific instance.
 (11) Q. Now, it also says on this disclosure
 (12) statement 8, that you may be asked about the
 (13) appropriateness of steps taken by Conwed
 (14) management, from an occupational health
 (15) standpoint, in light of the knowledge available to
 (16) them.
 (17) I take it, as you sit here today, you
 (18) have no specific information as to what knowledge
 (19) was available to Conwed and what steps they took?
 (20) A. No. I have had no preparation
 (21) whatever for my - by Union Carbide counsel for
 (22) any testimony I would offer.
 (23) Therefore, I haven't been provided
 (24) with all the facts in this case.
 (25)

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- (1) Q. Let me back up a little bit.
 (2) When you told us earlier about your
 (3) general opinions that Union Carbide asbestos is
 (4) less dangerous than some other types, because you
 (5) gave us a number of factors, you said the fact
 (6) that it's fibril, short, small diameter, in your
 (7) view does the pelletized form of the asbestos bear
 (8) any relationship to its abilities to cause
 (9) disease?
 (10) A. I would say it does, in that the
 (11) pelletized form of asbestos is likely to be far
 (12) less dust producing than loose fibers being
 (13) pelletized.
 (14) Q. Do you know if that is why Union
 (15) Carbide pelletized the Calidria in the first
 (16) place, to make it less dusty?
 (17) A. I don't know why they selected that
 (18) method of producing their final product, whether
 (19) it was health represented or whether that was the
 (20) most appropriate way in which to package it.
 (21) Q. Have you seen any experiments that
 (22) anyone at Union Carbide did where Calidria
 (23) asbestos was placed inside a closed chamber to
 (24) create an aerosol or a dust to determine how dusty
 (25)

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- (1) it might be?
 (2) A. I don't recollect seeing that
 (3) Q. Do you have any specific data in
 (4) terms of the dustiness of Calidria asbestos in an
 (5) experiment of that type, or where someone actually
 (6) tests to see what sort of dust it will produce?
 (7) A. I don't No.
 (8) Q. Have you seen any experiments showing
 (9) the relative dustiness of pelletized versus
 (10) non-pelletized Calidria asbestos?
 (11) A. No.
 (12) Q. Would you agree with me that whatever
 (13) advantage there is to the pelletized form of the
 (14) Calidria asbestos in terms of being less dusty,
 (15) that that advantage is lost once the pellets are
 (16) opened and fiberized?
 (17) A. Once they are opened and fiberized,
 (18) could you tell me what you mean by that?
 (19) Q. Well, if the pellets are crushed and
 (20) broken apart so they are no longer pellets, but
 (21) now they are just loose fiber?
 (22) A. Obviously, if you take pellets and
 (23) crush them and fiberize them, you are reducing
 (24) them back down to a state of being fibril, which
 (25)

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- (1) if they were allowed to escape into the air, would
 (2) be dustier than lying there compacted in pellets.
 (3) Q. O.K. Do you recall ever seeing any
 (4) information or data about the shipping of Calidria
 (5) asbestos in terms of broken bags, if whether the
 (6) bags break, if so, how many, that sort of thing?
 (7) A. No. I have no information on that.
 (8) Q. Do you recall ever seeing any
 (9) information of complaints by customers that when
 (10) they received Calidria asbestos, that bags were
 (11) broken and it was dusty, that sort of thing?
 (12) A. No.
 (13) Q. Looking at Exhibit 8, the disclosure
 (14) as to things you might testify, it also says you
 (15) might be asked to give an opinion as to the extent
 (16) to which alleged health problems in former Conwed
 (17) workers are attributable to factors other than
 (18) asbestos.
 (19) Again, I take it, you have no
 (20) specific information in that regard at the present
 (21) time?
 (22) A. That's correct.
 (23) Q. And as far as you know, have you been
 (24) asked at this point to educate yourself on that?
 (25)

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- (1) A. I have not.
 (2) Q. And if you were asked to educate
 (3) yourself on that point so that you could render an
 (4) opinion in this case, what information would you
 (5) need to see?
 (6) A. I would need to know all the
 (7) information about the use of the Calidria fiber by
 (8) Conwed in addition to what other fibrogenetic or
 (9) carcinogenetic materials may have been present in
 (10) the workplace at the same time.
 (11) And whether any admixture of those
 (12) materials took place in the formulation which went
 (13) into the final product, which I would like to know
 (14) what the conditions were under which these other
 (15) materials were used and the industrial hygiene
 (16) data relating to them.
 (17) Q. At the present time, you don't have
 (18) any information in that regard?
 (19) A. I don't.
 (20) Q. Do you know if there is any
 (21) synergistic effect of any sort between Calidria
 (22) asbestos and cigarette smoking?
 (23) A. Calidria asbestos has really not been
 (24) segregated epidemiologically to any extent that I
 (25)

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- (1) forms of chrysotile have.
 (2) But I have no information, no
 (3) scientific information specifically on that fact
 (4) relating to Calidria.
 (5) Q. And when you said that in order to
 (6) render an opinion as to whether health approximate
 (7) in former Conwed workers are attributable to
 (8) factors other than asbestos, you would want the
 (9) information about what other materials these
 (10) workers were exposed to.
 (11) Can you give me examples of what sort
 (12) of materials would concern you in that regard?
 (13) A. Well, yes.
 (14) Was Calidria the only asbestiform
 (15) material that was used in the manufacture of
 (16) tiles? Were other forms of asbestos used? Were
 (17) other fibrogenetic dusts present? Silica
 (18) containing dust, for example.
 (19) Q. These other fibrogenetic - you have
 (20) mentioned, first of all, other types of asbestos
 (21) could be fibrogenetic?
 (22) A. Yes.
 (23) Q. Silica dust could be fibrogenetic?
 (24) A. Yes.
 (25)

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- (1) am aware. I have no knowledge that there is any
 (2) deleterious effect.
 (3) Q. So would that mean, in order to
 (4) render an opinion, like we are just talking about,
 (5) that you would not be interested in cigarette
 (6) smoking data among these workers, or would that be
 (7) something that would interest you?
 (8) A. It would interest me because
 (9) cigarette smoking per se causes lung cancer.
 (10) Q. And would it also interest you
 (11) because it could be possible that there is a
 (12) synergistic effect between Calidria asbestos and
 (13) cigarette smoking?
 (14) A. I would have to study that.
 (15) Q. You don't know one way or another?
 (16) A. I don't think anybody does.
 (17) Q. Would you agree that that is a
 (18) possibility, however, that I guess that would bear
 (19) study?
 (20) A. I guess if Calidria asbestos possess
 (21) the ability to damage the lungs, in the same way
 (22) as other forms of chrysotile asbestos have been
 (23) shown to do, then it would probably have the same
 (24) synergistic effect with tobacco smoke as other
 (25)

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- (1) Q. I understand, as you sit here today,
 (2) you have no specific information about the other
 (3) types of asbestos used at Conwed?
 (4) A. That is not strictly true because in
 (5) conversation, I have gathered that amosite was
 (6) also used.
 (7) Q. So you are aware that some amosite
 (8) was used at Conwed?
 (9) A. I am aware that some was used. I am
 (10) not sure how or in what quantity.
 (11) Q. How about silica? Do you know if any
 (12) silica was used at Conwed?
 (13) A. I don't know.
 (14) Q. Other than other types of asbestos
 (15) and silica, are there other types of fibrogenetic
 (16) types of dust that you would look for that could
 (17) be a factor in spreading disease among these
 (18) workers?
 (19) A. There aren't too many other
 (20) significant fibrogenetic dusts besides those I
 (21) have mentioned.
 (22) Q. Those are really the only two,
 (23) asbestos and silica?
 (24) A. I guess so. Unless some of the
 (25)

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- (1) employees happen to be coal miners or coal
(2) workers.
(3) Q. Coal is a fibrogenetic dust?
(4) A. Yes.
(5) Q. Black lung disease?
(6) A. Right
(7) Q. Are you familiar with the studies by
(8) Dr. Demenc and others of textile workers in
(9) Charleston, South Carolina?
(10) A. Yes.
(11) Q. Is it your view, do you have an
(12) opinion as to whether the results of those studies
(13) have any bearing on or illustrate anything about
(14) disease that may occur among Conwed workers as a
(15) result of exposure to Calidria asbestos?
(16) A. The study in Charleston?
(17) Q. Right.
(18) A. I don't see what bearing those
(19) specifically have.
(20) Q. Why do you think they would have no
(21) bearing on the experience of workers at Conwed?
(22) A. I didn't say they had no bearing.
(23) I just don't see what bearing they
(24) would have, because the workers in Charleston were
(25)

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- (1) textile workers, using chrysotile fiber, which was
(2) totally different from the Calidria fiber in the
(3) physical properties.
(4) Q. Are you aware of Dr. Demenc's study
(5) of chrysotile?
(6) A. I was the corporate medical director
(7) for Raybestos Manhattan at the time those studies
(8) took place that was at that plant, and provided
(9) Dr. Demenc with the opportunity of going there.
(10) Q. You are familiar with the fact there
(11) were elevated rates of lung cancer found?
(12) A. Certainly. Yes.
(13) Q. And it's your view, however, as I
(14) understand it, that that cannot be translated to
(15) the experience of the Conwed workers because this
(16) is a different type of manufacturing process and a
(17) different type of chrysotile?
(18) A. That is my belief, yes.
(19) Q. What is it that is different about
(20) the chrysotile in the textile plant in Charleston,
(21) South Carolina from what was used at the plant at
(22) Conwed?
(23) A. The fiber in the textile plant at
(24) Charleston is a spinning grade of chrysotile
(25)

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- (1) asbestos, which is mined under very different
(2) circumstances and produced under very different
(3) circumstances from Calidria asbestos.
(4) The fiber itself, in order to be a
(5) spinning grade fiber, has to be long and flexible.
(6) It has to be very similar to cotton in other
(7) respects, so it can pass through the process, the
(8) textile process, of opening, carding, spinning,
(9) winding.
(10) We have gone through all the things
(11) that were done with that fiber. Calidria can't do
(12) that. Calidria is a little fiber, short thing.
(13) Q. Would you say then, if we could try
(14) to sum this up in laymen's terms as a general
(15) proposition, the longer fibers are more dangerous
(16) than the shorter fibers?
(17) A. In very general terms, yes.
(18) Q. And if we were to try to summarize
(19) the difference in general terms between the
(20) chrysotile that caused disease in the Charleston,
(21) S.C. textile plant, and the Calidria at Conwed,
(22) it's your view the chrysotile in Charleston was
(23) quite a bit longer and was a spinning grade?
(24) MR. WILL: I want to object to the
(25)

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- (1) question.
(2) I don't think the doctor ever
(3) concluded that the disease that was caused
(4) in Charleston was, in fact, due to the
(5) asbestos and not some other compounding
(6) factor.
(7) But in any event -
(8) MR. BROWNSON: Okay.
(9) MR. WILL: - he indicated there was
(10) an excess rate of lung cancer found in the
(11) study in the plant that was using the long
(12) chrysotile.
(13) BY MR. BROWNSON:
(14) Q. I understood you concurred with the
(15) conclusion, I guess, generally reached about those
(16) workers, that that chrysotile had something to do
(17) with the increased rate of lung cancer?
(18) A. I think the way it is said, there was
(19) an excess incidence of lung cancer associated with
(20) exposure to chrysotile asbestos in the textile
(21) plant in Charleston, South Carolina.
(22) Q. O.K.
(23) And what I am trying to do is fill
(24) this out in general terms. Maybe it can't be
(25)

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- (1) done.
 (2) But as I thought I understood it, it
 (3) is your view that the reason that chrysotile may
 (4) be associated with more disease than what you, Dr.
 (5) Lewinsohn, would expect to see with Calidria was
 (6) because, as a general proposition, of this longer
 (7) spinning grade of chrysotile, and Calidria is
 (8) short?
 (9) A. That is one of the reasons, yes.
 (10) Q. Is that the main reason?
 (11) A. It is a very significant reason.
 (12) Q. Have you seen published fiber size
 (13) distribution data concerning the chrysotile
 (14) asbestos at Charleston, South Carolina?
 (15) A. I want to say probably, but I don't
 (16) recollect precisely.
 (17) Q. Have you seen publicized distribution
 (18) data with respect to Calidria chrysotile?
 (19) A. Yes.
 (20) Q. Have you seen such data which has
 (21) been generated by transmission electromicroscopy?
 (22) A. I don't remember the details of the
 (23) fiber size distribution data that I've seen, but I
 (24) know I have seen it.
 (25)

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- (1) Q. Would you agree with me that the
 (2) relationship between amosite asbestos and disease
 (3) is dose dependent?
 (4) A. The relationship between amosite
 (5) asbestos, and the production of asbestosis and
 (6) probably lung cancer, I would say is dose
 (7) dependent.
 (8) I think that the relationship between
 (9) amosite and development of mesothelioma is also
 (10) dose dependent, but I think that dose is one which
 (11) has not yet been determined.
 (12) Q. If we can put that opinion in
 (13) laymen's terms, the greater the dose of amosite
 (14) asbestos, the greater the relationship between
 (15) asbestos-related disease and, on the other hand,
 (16) the less the dose, the less the relationship.
 (17) Would that be fair to say?
 (18) A. If you define dose as concentration
 (19) and time, because dose depends upon the
 (20) concentration and the time, the amount, that of
 (21) exposure, and the time frame over which that
 (22) exposure occurs.
 (23) Q. So again, to try to put this in
 (24) laymen's terms, the more amosite asbestos you are
 (25)

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- (1) Q. Going back to Exhibit 8, the final
 (2) area of opinions you might be asked that I would
 (3) like to ask you about, is what is described here
 (4) as the role of amosite.
 (5) You see that about the middle of the
 (6) paragraph? It says, "The Role of Amosite"?
 (7) A. Yes.
 (8) Q. Do you have any opinions as you sit
 (9) here today as to what role, if any, any amosite
 (10) asbestos played in the disease of workers at
 (11) Cloquet?
 (12) A. As I sit here today, I don't have any
 (13) specific opinion but other than to state that
 (14) amosite is known to result, following adequate
 (15) exposure, in the development of asbestosis, lung
 (16) cancer and mesothelioma.
 (17) Again, without knowing the specific
 (18) circumstances surrounding its use at Conwed, I
 (19) can't venture any further opinion.
 (20) Q. Would it be fair to say that one of
 (21) the things you would need to know is the levels of
 (22) exposure to amosite dust?
 (23) A. Yes. I need to know the levels of
 (24) exposure to amosite dust.
 (25)

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- (1) exposed to for a longer time, the more likelihood
 (2) there is of asbestos-related disease?
 (3) A. Well, I hate to be too pedantic.
 (4) MR. GERSON: You are the expert. Be
 (5) as pedantic as you want to be.
 (6) A. The concept is, exposure is the
 (7) concentration and time. So the dose might be a
 (8) lower concentration over a longer time, or a
 (9) higher concentration over a shorter time.
 (10) Q. O.K. So the two things that are
 (11) important in determining the dose is the amount of
 (12) dust a worker is exposed to and how long?
 (13) A. And how long.
 (14) Q. O.K.
 (15) A. And there is one other factor, and
 (16) that is, that the development of the disease is
 (17) often delayed.
 (18) And so, therefore, there is a lapse
 (19) interval between the first exposure and the
 (20) recognition of any health affects.
 (21) Q. That is what is known as the latency?
 (22) A. Yes. That is not synonymous with the
 (23) length of exposure because exposure may have
 (24) ceased.
 (25)

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- (1) Q. And do you have any opinion as to
 (2) whether the latency of exposure from amosite
 (3) asbestos is related to the dose?
 (4) In other words, if you get a higher
 (5) does, is the latency in any way shortened?
 (6) A. I would like to think that would be a
 (7) simple explanation for it, but I have no
 (8) scientific evidence or epidemiological evidence to
 (9) confirm that theory.
 (10) Q. The final disease you mentioned of
 (11) mesothelioma, it's your opinion that mesothelioma
 (12) is also related to the dose of amosite asbestos,
 (13) but you don't have information exactly what the
 (14) dose is that causes mesothelioma?
 (15) A. I think the mesothelioma, the jury is
 (16) still out as to what the level of exposure is
 (17) required with any of the forms of asbestos to
 (18) produce that particular form of malignancy.
 (19) Q. Is that also true of Calidria
 (20) asbestos, the jury is still out in your view as to
 (21) what dose would be necessary to cause
 (22) mesothelioma?
 (23) A. I think jury is still out with
 (24) Calidria asbestos as to whether it can cause any
 (25)

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- (1) form of asbestos-related diseases.
 (2) Q. In your view?
 (3) A. In my view.
 (4) Q. And again, from the time you began at
 (5) Union Carbide to the present time, did you ever
 (6) initiate any research or studies to try to answer
 (7) that question?
 (8) A. No.
 (9) (Recess)
 (10) MR. BROWNSON: We have no other
 (11) questions.
 (12) MR. WILL: I have a couple of
 (13) questions I want to ask.
 (14) EXAMINATION BY
 (15) MR. WILL:
 (16) Q. Mr. Brownson asked you if you were to
 (17) give an opinion about amosite, the role of amosite
 (18) in causing a disease in workers, what you would
 (19) want to know.
 (20) And you said, one of the things you
 (21) would want to know was the level of exposure.
 (22) If there are no dust counts done in
 (23) the plant when the amosite was in use, would that
 (24) prevent you from giving opinions about any role
 (25)

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- (1) that amosite may have played?
 (2) MR. BROWNSON: I am going to object
 (3) to the form of the question.
 (4) Go ahead.
 (5) A. If there are no dust counts?
 (6) I think it might still be possible to
 (7) render an opinion, providing there was comparative
 (8) data available in terms of other measurements that
 (9) might have been made or in terms of descriptive,
 (10) descriptions of the dustiness of the operation.
 (11) Q. Would it be helpful to know how much
 (12) amosite had been used in a plant, kind of
 (13) consumption?
 (14) A. It would be helpful to know, if one
 (15) also knew how much amosite went into the process.
 (16) Q. Last time, last time being February,
 (17) 1994, you were questioned by Mr. Brownson about -
 (18) I want to make sure I characterize this accurately
 (19) so I don't get an objection.
 (20) In the February session of your
 (21) deposition, you were asked a question by Mr.
 (22) Brownson, the gist of which was that, will people
 (23) be at risk from getting an asbestos-related
 (24) disease, even if they were are not working
 (25)

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- (1) directly with the asbestos in any product?
 (2) Do you recall that generally?
 (3) A. Give it to me again.
 (4) Q. Well the question, I will refer to it
 (5) specifically, referring to page 171, and 172 of
 (6) the deposition, and your answer to the question,
 (7) which had to do with Dr. Selicoff's statement that
 (8) asbestos fibers didn't respect job
 (9) classifications, Mr. Brownson said:
 (10) "In other words, they could float
 (11) adrift around in the work area?"
 (12) And in responding to that, you
 (13) referenced the work of Dr. Wagner, the work of
 (14) Molly Newhouse, and a paper by McCaughey, Wade &
 (15) Elms, and you talked about something that you
 (16) said, there had been instances of asbestos disease
 (17) occurring in people that had pure environmental
 (18) exposure.
 (19) And my question was, what did you
 (20) mean when you referred to asbestos-related disease
 (21) occurring in people with pure environmental
 (22) exposure? To what were you referring?
 (23) MR. BROWNSON: I will object to the
 (24) form.
 (25)

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- (1)
 (2) Go ahead and answer.
 (3) A. Yes. There was an awareness that
 (4) developed that people who had been exposed, living
 (5) in the vicinity of an asbestos manufacturing
 (6) facility, or a mine, could also develop the
 (7) asbestos-related diseases.
 (8) And the instances that, the two
 (9) instances that are best known are the domestic
 (10) exposure that Molly Newhouse described, and then
 (11) what I would call the environmental exposures that
 (12) Dr. Wagner has described in the Northwest Province
 (13) in South Africa, in this little town of Kuruman,
 (14) and where the mine tailings were used for road
 (15) building.
 (16) People paved their driveways with it.
 (17) School playgrounds were made from this material,
 (18) tennis courts. It was used for all sorts of
 (19) purposes.
 (20) And mesothelioma developed in the
 (21) community in that little town, who had never ever
 (22) had any occupational exposure.
 (23) That is what I would call
 (24) environmental exposure.
 (25) Q. What type of asbestos fiber was

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- (1)
 (2) involved in Kuruman?
 (3) A. Kuruman was crocidolite fiber.
 (4) Q. In your first deposition, Mr.
 (5) Brownson asked you about the first case of
 (6) mesothelioma that that you recall seeing.
 (7) You mentioned that was a person at
 (8) the Ferrado plant?
 (9) A. Yes.
 (10) Q. Do you know the name of that
 (11) individual?
 (12) A. Yes. Archibald Vernon.
 (13) Q. And to what type of fibers had Mr.
 (14) Vernon been occupationally exposed?
 (15) A. Mr. Vernon worked at that plant, had
 (16) been exposed to chrysotile fibers, but he was one
 (17) of a number of workers who had worked in one area
 (18) of the plant, where - and they all worked in
 (19) close proximity - where they had manufactured a
 (20) special, I think it was a railroad brake block,
 (21) which was for some mid-European country's
 (22) railroads, that was specifically made out of
 (23) crocidolite asbestos. He was exposed to
 (24) crocidolite.
 (25) Q. You also made reference to the fact

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- (1)
 (2) there was some type of ownership relationship
 (3) between Bell Mines and Turner & Newall.
 (4) Do you know the specifics of that
 (5) relationship?
 (6) A. You mean the business relationship?
 (7) No. I don't know the specifics.
 (8) Q. Or the particular legalities of the
 (9) way it was organized?
 (10) A. No. I wasn't particularly interested
 (11) in it.
 (12) Q. You mentioned something in the first
 (13) deposition, something called a scheduled area
 (14) under the asbestos regulations that applied in
 (15) England after 1931.
 (16) And briefly, what was the scheduled
 (17) area?
 (18) A. I am relying now on my memory of sort
 (19) of a complex regulatory issues.
 (20) But as I remember it, the asbestos
 (21) industry regulations in the United Kingdom were
 (22) promulgated in 1931 and took effect in 1933.
 (23) Also, they did not stipulate any
 (24) exposure levels or regulate any particular
 (25) processes, as far as I can recollect. They also

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- (1)
 (2) didn't stipulate any medical surveillance that
 (3) should be conducted.
 (4) But at the same time those
 (5) regulations took effect, the silicosis and
 (6) asbestosis medical arrangement team of 1931 was
 (7) introduced. And the silicosis medical boards,
 (8) which subsequently became like pneumoconiosis,
 (9) like pneumonia, pneumoconiosis panel, had the
 (10) responsibilities for conducting medical
 (11) surveillance examinations on asbestos workers and
 (12) the way in which the asbestos workers were, who
 (13) they were to examine were categorized according to
 (14) the type of work they did and the areas in which
 (15) they worked.
 (16) And so those areas, which came under
 (17) the surveillance of the pneumoconiosis medical
 (18) panel were the scheduled areas.
 (19) Q. For example, in the Turner & Newall
 (20) Rochdale plant, was the entire plant where
 (21) asbestos was used considered a scheduled area?
 (22) MR. BROWNSON: I object to the form
 (23) of the question.
 (24) A. No.
 (25) Q. And were all of the workers in the

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- (1) entire plant required to be monitored?
 (2) MR. BROWNSON: I object to the form
 (3) A. Not by the pneumoconiosis medical
 (4) panel, no.
 (5) Q For asbestos?
 (6) A. For asbestos. Right
 (7) Q. Finally, whose responsibility was it
 (8) to see that the regulations were followed in
 (9) England in the Rochdale plant.
 (10) A. Whose responsibility?
 (11) Q. Under the British regulations, what
 (12) entity had the responsibility for seeing that the
 (13) asbestos regulations were complied with?
 (14) A. That was a factory inspection.
 (15) Q. Was it the job of, I mean which
 (16) private entity was the company charged with that?
 (17) MR. BROWNSON: I will object to the
 (18) form.
 (19) I think he has already answered.
 (20) Q. Is the factory inspector an arm of
 (21) the government?
 (22) A. Yes.
 (23) Q. They were in charge of enforcing the
 (24) regulations?
 (25)

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- (1) Q. Do you know, in terms of the health
 (2) history, at Johns-Manville and Atlas, do you know
 (3) what process was used in the milling that was done
 (4) at Johns-Manville or Atlas?
 (5) A. No.
 (6) Q. Did you understand that Union Carbide
 (7) used a wet mill process?
 (8) MR. BROWNSON: I object to the form
 (9) of the question.
 (10) MR. WILL: I will withdraw the
 (11) question.
 (12) Q. Is it possible that the method of
 (13) milling used at Atlas or Johns-Manville would have
 (14) some impact on the health history of its
 (15) employees?
 (16) A. I would have to know what the method
 (17) of milling was.
 (18) I can't answer.
 (19) Q. Let me ask the question a little
 (20) differently.
 (21) Would the industrial hygiene
 (22) practices followed have some impact on the health
 (23) history of the workers?
 (24) A. (No verbal response).
 (25)

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- (1) A. Correct.
 (2) Q. What private entity had
 (3) responsibility for complying with the regulations?
 (4) A. The employer.
 (5) MR. WILL: Thank you.
 (6) MR. GERSON: Wait a minute.
 (7) (Discussion off record)
 (8) BY MR. WILL:
 (9) Q. Mr. Brownson asked you questions
 (10) about the fact that there were three mines in the
 (11) New Idria area, J-M, Atlas and Union Carbide.
 (12) And you indicated that, as far as you
 (13) were concerned, there was no difference between
 (14) the mines, is that correct?
 (15) A. Yes.
 (16) Q. Now my question is, do you know, for
 (17) example, what processes were used at the other
 (18) mines?
 (19) A. No.
 (20) Q. Have you ever done any studies to see
 (21) whether there were any differences between the
 (22) fibers from the other mines and the Union Carbide
 (23) fiber?
 (24) A. No.
 (25)

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- (1) Q. You don't know anything about it?
 (2) A. No.
 (3) Q. All right. I will withdraw that
 (4) question.
 (5) To your knowledge, was any tremolite
 (6) ever found in Calidria asbestos?
 (7) A. Not to my knowledge.
 (8) Q. Would that have any impact on its
 (9) ability to cause disease vis-a-vis other types of
 (10) chrysotile?
 (11) A. It is my understanding that the
 (12) recent medical literature reports have appeared
 (13) which indicate that asbestos which is contaminated
 (14) with tremolite is more likely to be the cause of
 (15) lung cancer and mesothelioma and possibly other
 (16) asbestos-related effects.
 (17) Q. Are you talking about chrysotile
 (18) asbestos?
 (19) MR. BROWNSON: Objection to the form.
 (20) A. I am talking about chrysotile
 (21) asbestos which is not pure and which may have been
 (22) contaminated by tremolite.
 (23) MR. WILL: That is all.
 (24) BY MR. BROWNSON:
 (25)

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- (1) Q. Dr. Lewinsohn, you said there have
 (2) been recent reports in the medical literature
 (3) saying asbestos contaminated with tremolite might
 (4) be more dangerous than asbestos without tremolite.
 (5) Are you aware of any reports which
 (6) have actually compared the two, asbestos with
 (7) tremolite, and asbestos without tremolite?
 (8) A. No. I think I misspoke. I shouldn't
 (9) have said it in that manner.
 (10) The reports indicate - let me just
 (11) think a moment.
 (12) MR. GERSON: Take your time.
 (13) A. What I am trying to say is that the
 (14) reports in the recent literature indicate that
 (15) chrysotile asbestos contaminated with tremolite
 (16) has been found to be the most probable cause of
 (17) malignancies that have arisen in workers exposed
 (18) to that type of fiber.
 (19) Q. And are you aware that reports have
 (20) also appeared in the medical literature that have
 (21) said that tremolite is not a factor and that it's
 (22) the chrysotile itself that causes the disease?
 (23) MR. GERSON: I object to form.
 (24) A. I haven't seen that.
 (25)

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- (1) Q. You mentioned a minute ago about
 (2) these British asbestos regulations.
 (3) I believe you told us that these went
 (4) into effect in 1931?
 (5) A. They were promulgated in 1931. They
 (6) took effect in '33.
 (7) Q. And at that time, was the government
 (8) agency in England, called the factory inspector,
 (9) charged with going around the different factories
 (10) and enforcing the asbestos regulations in England?
 (11) A. Yes.
 (12) Q. And when you came to Union Carbide, I
 (13) think in '82 -
 (14) A. '82.
 (15) Q. - were you aware that Union Carbide
 (16) at that time had British subsidiaries?
 (17) A. At that time? No.
 (18) I probably learned about them
 (19) subsequently.
 (20) Q. Did you learn that Union Carbide had
 (21) had British subsidiaries going back historically
 (22) before that time?
 (23) A. I don't understand what you mean.
 (24) Q. Well, did it come to your attention
 (25)

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- (1) Q. Are you aware of a paper by Dr.
 (2) William J. Nicolson and Philip L. Andriagan, of
 (3) Mount Sinai, which takes that position, published
 (4) in 1994?
 (5) A. I haven't seen that.
 (6) Q. Let me just ask you a couple of other
 (7) things.
 (8) You mentioned earlier, Mr. Will asked
 (9) you about the first worker you ever saw when you
 (10) were back at England that had mesothelioma.
 (11) What was the name of that worker?
 (12) A. Mr. Archibald Vernon.
 (13) Q. Archibald Vernon?
 (14) A. V-e-r-n-o-n.
 (15) Q. And you said that Mr. Vernon was
 (16) exposed to crocidolite asbestos during his work?
 (17) A. Yes.
 (18) Q. Is it also true he was exposed to
 (19) chrysotile asbestos?
 (20) A. Yes, I said that.
 (21) Q. Do you know if the chrysotile
 (22) asbestos which Mr. Vernon was exposed to contained
 (23) tremolite or not?
 (24) A. No. I don't.
 (25)

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- (1) that Union Carbide had a subsidiary called Union
 (2) Carbide U.K. that it had owned for some years
 (3) before 1982?
 (4) A. I assumed that they had owned it for
 (5) some time.
 (6) Q. Do you know how long they had owned
 (7) it?
 (8) A. No.
 (9) Q. Do you know that it was at least back
 (10) into the 1960's, if not before?
 (11) A. I don't know.
 (12) Q. Did you ever see, while you were at
 (13) Union Carbide, did you ever see any letters or
 (14) reports from the Union Carbide subsidiary in
 (15) England called Union Carbide U.K. that came back
 (16) to the medical director's office at Union Carbide
 (17) in New York City about asbestos and health?
 (18) A. I know I saw some. There was some
 (19) correspondence that took place when I was at Union
 (20) Carbide with that entity, but I don't remember
 (21) what it was in relationship to.
 (22) Q. Do you know if it had anything to do
 (23) with asbestos and health?
 (24) A. I don't remember.
 (25)

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- (1)
 (2) Q. Do you have any information at the
 (3) present time as to the type of amosite used at
 (4) Conwed?
 (5) A. Type?
 (6) Q. Type. Where it came from?
 (7) A. I am aware amosite only comes from
 (8) one place.
 (9) Q. That is South Africa?
 (10) A. From the Northeastern Transvaal in
 (11) South Africa.
 (12) Amosite stands for Asbestos Mines of
 (13) South Africa. It is an acronym.
 (14) Q. So your understanding is amosite
 (15) would have come from South Africa?
 (16) A. Yes.
 (17) Q. Do you know what grade it was?
 (18) A. No.
 (19) Q. And do you know, do you have any
 (20) information at the present time as to the time
 (21) period that this amosite was purchased by Conwed
 (22) for its use out there and the amount?
 (23) A. No.
 (24) Q. You mentioned a minute ago, in
 (25) response to a question by Mr. Will, about these

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- (1)
 (2) environmental exposures to asbestos down in South
 (3) Africa.
 (4) Have you ever seen any published
 (5) studies in this country about environmental
 (6) exposures in the U.S. to spouses of workers in
 (7) asbestos plants, manufacturing plants?
 (8) A. Yes.
 (9) Q. One of those Tunarco plants in
 (10) Patterson, New Jersey?
 (11) A. That wasn't one that I have seen.
 (12) Q. Which ones can you recall?
 (13) A. I can recall a publication I was
 (14) involved in, in Raybestos, Manhattan.
 (15) Q. And in that particular study, was
 (16) there any disease at all shown among the spouses
 (17) of the workers in the Raybestos Manhattan plant
 (18) related to asbestos?
 (19) A. We thought that we had, my co-worker
 (20) and I thought that we found some cases of
 (21) relatives who had lived with a worker who had
 (22) worked in that Raybestos plant.
 (23) He developed asbestos-related health
 (24) factors.
 (25) Q. Which particular Raybestos plant was

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- (1)
 (2) this?
 (3) A. Stratford, Connecticut.
 (4) Q. And this is published? This is work
 (5) you did at the time you were working for Raybestos
 (6) Manhattan Company?
 (7) A. Correct.
 (8) Q. Are you aware that the Minnesota
 (9) Department of Health screened the spouses of
 (10) Conwed workers at Cloquet, Minnesota to see if
 (11) they had asbestos-related disease?
 (12) A. No. I am not.
 (13) Q. Are you aware of what the current
 (14) OSHA standard is in the U.S. for exposure to
 (15) chrysotile asbestos in workplaces?
 (16) A. It has gone down to 0.1, I believe.
 (17) Q. Are you aware that it has been
 (18) reduced to .05 fibers per CC of air?
 (19) A. Well, then it has just gone down. It
 (20) has been reduced within the last month.
 (21) Q. Are you aware of the new OSHA
 (22) asbestos standards that came into effect in August
 (23) 1994?
 (24) A. August '94?
 (25) Q. Right.

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- (1)
 (2) A. That is what we are just referring
 (3) to.
 (4) Yes. I haven't read it.
 (5) Q. O.K. And are you aware that that
 (6) applies equally to chrysotile asbestos as to
 (7) amosite or crocidolite?
 (8) A. Yes. OSHA has never recognized the
 (9) difference, in spite of the rest of the world
 (10) having done so.
 (11) Q. You are aware that OSHA is the U.S.
 (12) Government agency that regulates hazards in the
 (13) workplace like factories?
 (14) A. Yes.
 (15) Q. And this particular OSHA standard
 (16) deals with exposure to asbestos in the workplace
 (17) such as factories that use asbestos in
 (18) manufacturing processes?
 (19) A. Correct.
 (20) Q. And I take it that you disagree with
 (21) OSHA's position as to how they regulate chrysotile
 (22) asbestos in relation to other fiber types in the
 (23) workplace?
 (24) MR. GERSON: Objection to form.
 (25) A. I didn't say that.

1 Lewinsohn
 2 MR. BROWNSON: That is all I have.
 3 EXAMINATION BY
 4 MR. WILL:
 5 Q. Doctor, one follow-up.
 6 To your knowledge, did Union Carbide
 7 U.K. British subsidiary have any involvement with
 8 asbestos?
 9 A. My knowledge?
 10 Q. To your knowledge.
 11 A. At this moment in time, I really
 12 don't know.
 13 MR. WILL: O.K. That is all I have.
 14 MR. BROWNSON: I will say, for the
 15 record, as we have done in the past, I will
 16 take charge of the original transcript and
 17 file it with the court, and then I also
 18 want a copy.
 19 (Continued on next page.)
 20
 21
 22
 23
 24
 25

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1 Lewinsohn
 2 MR. WILL: Dr. Lewinsohn will want
 3 to read it and sign the deposition, as he
 4 did with his first one.
 5 (Time noted: 11:40 a.m.)
 6 _____
 7 Subscribed and sworn to before me
 8 this ____ day of _____, 1994.
 9 _____
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 9 hereby certify that I reported the
 10 proceedings in the within-entitled matter,
 11 and that the within transcript is a true
 12 record of such proceedings.
 13 I further certify that I am not
 14 related, by blood or marriage, to any of
 15 the parties in this matter and that I am
 16 in no way interested in the outcome of
 17 this matter.
 18 IN WITNESS WHEREOF, I have hereunto
 19 set my hand this ____ day of _____,
 20 1994.
 21 _____
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DOYLE REPORTING, INC.

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IN THE CIRCUIT COURT OF COOK COUNTY, ILLINOIS
COUNTY DEPARTMENT, LAW DIVISION

----- -X
BOARD OF EDUCATION OF :
CITY OF CHICAGO, :
Plaintiff, :
vs. : No. 92 L 9934
A, C, and S, INC., et al., : Judge
Defendants. : Michael Gallagher
----- -X
EVANSTON COMMUNITY CONSOLIDATED :
SCHOOL DISTRICT NO. 65, et al., :
Plaintiffs, :
vs. : No. 92 L 9933
A, C, and S, INC., et al., :
Defendants. :
----- -X
BOARD OF EDUCATION OF :
SCHOOL DISTRICT NO. 211, et al., :
Plaintiffs, :
vs. : No. 92 L 9932
ABITIBI ASBESTOS MINING CO., :
et al., :
Defendants. :
----- -X
BOARD OF EDUCATION :
TOWNSHIP HIGH SCHOOLS, :
et al., :
Plaintiffs, :
vs. : No. 92 L 9927
A, C, and S, INC., et al., :
Defendants. :
----- -X

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