

1  
2 UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF PENNSYLVANIA  
3 - - - - - x  
In Re: Asbestos Products Liability :  
4 Litigation (No. VI) :  
- - - - - x  
5 This Document relates to: United States :  
District Court :  
6 Fifth Division, District of Minnesota :  
- - - - - x  
7 CONWED CORPORATION, :  
Plaintiff, :  
8 :  
-against- :  
9 :  
10 UNION CARBIDE CHEMICALS & PLASTICS :Case No.  
CO., INC., (f/k/a Union Carbide :Civ.  
Corp.), :5-91-88  
11 Defendant, :  
12 -and- :  
13 UNION CARBIDE CHEMICALS & PLASTICS :  
CO, INC., (f/k/a Union Carbide Corp.), :  
14 -against- :  
15 OWENS-CORNING FIBERGLAS CORPORATION, :  
16 WALKER JAMAR COMPANY, A.W. KUETTEL & :  
17 SONS, INC., API, INC. and MacARTHUR :  
COMPANY, :  
Third-Party Defendants. :  
18 - - - - - x  
19 June 22, 1995  
20 9:15 a.m.  
21 ED ILGREN, M.D.

22 **DUPLICATE**  
23 FILE COPY  
24  
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June 22, 1995

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9:15 a.m.

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Deposition of ED ILGREN, M.D., taken by

5

Plaintiff, pursuant to adjournment, held

6

at the offices of Kelley Drye &amp; Warren,

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Esqs., 101 Park Avenue, New York, New York,

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before Sara Deutsch, a Shorthand Reporter

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and Notary Public within and for the State

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of New York.

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-and-

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New York, New York

20

21

By:   ALAN GERSON, ESQ.,  
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1  
2 E D I L G R E N, M.D., having been  
3 previously sworn, resumed and testified  
4 further as follows:

5 EXAMINATION BY

6 MR. BROWNSON:

7 Q. Dr. Ilgren, let's continue the  
8 deposition which we started before, and what I  
9 want to do at the risk of being repetitive, I do  
10 not want to repeat anything we've done before, but  
11 I want to start out by going back to your opinions  
12 with respect to Calidria chrysotile asbestos. Can  
13 we use the term "Calidria" here, I think we have  
14 in the past, to refer to the particular  
15 chrysotile. I just want to get your terms  
16 straight before we start, so why don't we refer to  
17 it as Calidria, which is --

18 A. Yes.

19 MR. WILL: That's Union Carbide's  
20 brand name?

21 MR. BROWNSON: Right.

22 MR. WILL: Do we have to trademark  
23 the transcript or not?

24 Q. I want to start out with talking  
25 about Calidria and mesothelioma, which we've

1 Ilgren

2 talked about at some length. Let me put it this  
3 way. As I understand your opinion, it's your  
4 opinion that Calidria asbestos did not cause  
5 mesothelioma among coal workers, is that correct?

6 A. Yes.

7 Q. Now you are familiar with cases of  
8 certain Conwed workers who have been diagnosed as  
9 having mesothelioma, and I want to just go back to  
10 those cases and let's talk about Donald Broeffle,  
11 Stanley Fleisch, Clarence Maki, James Manisto and  
12 Lawrence Roseth, and when at the last session of  
13 your deposition you identified those as cases  
14 where some doctor had made some diagnosis of  
15 mesothelioma, is that correct?

16 A. I believe so, yes.

17 Q. Okay, and I want to talk a little bit  
18 about those, but before I do, since we were last  
19 at your deposition, have you become aware of any  
20 other cases of mesothelioma or cases that some  
21 doctors identified as mesothelioma among the  
22 Conwed workers?

23 A. Fred Bergstrom would be amongst them.

24 MR. WILL: Yes, but we talked about  
25 Fred last time.

1 Ilgren

2 THE WITNESS: No, I haven't.

3 Q. Other than Fred Bergstrom, you're not  
4 aware of any others?

5 A. Not that I recall.

6 Q. Now at an earlier session of your  
7 deposition we marked as an exhibit, the witness  
8 disclosure served by Mr. Will in this case, which  
9 I got this copy that I've highlighted, and you're  
10 familiar with that, of course, correct?

11 A. Right.

12 Q. Okay. Now in the disclosure it says  
13 that with respect to mesothelioma, I'm going to  
14 quote in the Conwed -- "The putative mesotheliomas  
15 noted at Conwed would have been due to amosite  
16 exposure or non-asbestos-related cause." That's  
17 the statement we see here, and that's number 8.

18 A. I thought we also put crocidolite on  
19 there.

20 Q. At your last deposition you testified  
21 that it was your general sense that crocidolite  
22 may have had something to do with these  
23 mesothelioma. And what I want to do now is I want  
24 to just develop your current thinking as to what  
25 actually was the cause of these Conwed

1 Ilgren

2 mesotheliomas, and why don't I just put the  
3 question to you. As you sit here today, what is  
4 your belief as to the cause of the Conwed  
5 mesotheliomas that I've just described to you?

6 MR. WILL: Bob, that's a little  
7 broad. Do you want -- he doesn't have  
8 anything in front of him. I think you  
9 marked his files previously.

10 MR. BROWNSON: Well, I did.

11 Q. Let me put it to you this way. What  
12 I'm trying to do is avoid a page by page going  
13 through all these medical files. Maybe we can't  
14 avoid it, but at the last deposition you said it  
15 was your general sense that crocidolite used in  
16 the research and development department was a  
17 cause or the cause of the mesotheliomas.

18 MR. WILL: Again, I don't mean to  
19 argue with you, I think he's referenced  
20 that with respect to Manisto and Bergstrom  
21 who worked in the R&D department with  
22 crocidolite. I'm not trying to be funny  
23 about this, but there are a couple of them  
24 where he noted that a doctor diagnosed meso  
25 but he was not certain whether that was in

1 Ilgren

2 fact the correct diagnosis.

3 Q. Let's back up then. Let's start with  
4 James Manisto and Fred Bergstrom, since Trevor  
5 just mentioned those, you're familiar with those  
6 two cases, I take it?

7 A. I haven't reviewed them very  
8 recently, but I am familiar.

9 Q. Is it your opinion in this case that  
10 those mesotheliomas were caused by those two men's  
11 exposure to crocidolite in the research and  
12 development department?

13 A. Certainly very possible.

14 Q. Do you believe that -- let's confine  
15 ourselves to those two cases. Do you believe that  
16 either of those cases is an or could be an  
17 etiopathic mesothelioma, that is one that's not  
18 related to any asbestos exposure?

19 A. It's unlikely.

20 Q. That's unlikely.

21 A. Yes.

22 Q. Okay. Do you believe that amosite  
23 exposure would have had anything to do with either  
24 of those two mesotheliomas?

25 A. Possibly.

1 Ilgren

2 Q. Is there any way that you use or that  
3 you have developed to apportion or quantify  
4 causation of mesotheliomas when you've got a man  
5 exposed to both amosite and crocidolite?

6 A. Apportion to amosite or crocidolite?

7 Q. Right. It's a question that tends to  
8 come up more in the mind of lawyers where they  
9 will ask the question was amosite a cause, was  
10 crocidolite a cause, and if so, how would those be  
11 apportioned, and I'm just curious if you have any  
12 technique or analysis that you would be able to  
13 use in that regard?

14 A. I think sort of traditional approach  
15 through long burden, obviously they're amphibole  
16 both retained, so examination of the lungs might  
17 reveal a very large number of crocidolite fibers  
18 and actually a very small number of amosite  
19 fibers, just as an example, one way to apportion  
20 to one fiber type as opposed to another fiber  
21 type.

22 Q. Let me ask you this. This is a  
23 hypothetical question. Let's take the  
24 hypothetical case of James Manisto, and let's  
25 assume hypothetically that he's got a pleural

1 Ilgren

2 malignant mesothelioma, and let's assume  
3 hypothetically that he's been exposed to both  
4 crocidolite and amosite, and let's further assume  
5 hypothetically that we've got sufficient latency  
6 from beginning of exposure of each of those  
7 fibers.

8 A. Okay.

9 Q. Now let's further assume  
10 hypothetically that we're involved in a lawsuit,  
11 and to make this easy, let's say Mr. Manisto is  
12 simply suing Union Carbide, for example, as he did  
13 at one time, and let's further assume  
14 hypothetically that the question is put to you,  
15 Dr. Ilgren, we want to determine to what extent  
16 the crocidolite exposure contributed to that  
17 mesothelioma, and to what extent amosite exposure  
18 did, and let's say now that you've given it some  
19 thought and you're going to explain to us what we  
20 could do to try to make that determination. Now  
21 you've told us that one thing we could do would be  
22 to do a lung tissue fiber burden and look at  
23 fibers and count fibers and try to quantify the  
24 two, is that correct?

25 A. Right.

1 Ilgren

2 Q. And let's just stop there a moment.  
3 You haven't seen any such test done on either  
4 Manisto or Bergstrom, I take it? I'm not aware of  
5 any either.

6 A. Not that I know of.

7 Q. If you were doing such a test or you  
8 were sending it to Dr. Pooley or Dr. Langer or  
9 somebody to do such a test, what fibers would you  
10 consider counting? Would you count only fibers  
11 greater than five microns or would you count all  
12 fibers or fibers greater than one or what would  
13 you use for your counting technique or what would  
14 you recommend?

15 A. I'd be interested in the fibers over  
16 five microns. I know Fred Pooley counts all  
17 fibers. But then they break them down according  
18 to size. Some labs only focus on the fibers that  
19 are over five microns.

20 Q. So I assume that you would recommend  
21 that TEM be used?

22 A. Definitely.

23 Q. And would it be fair to say that the  
24 fibers you would be interested in would be those  
25 greater than five?

Ilgren

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A. Yes.

3

Q. Now would you have any interest in  
4 fibers less than five or to you is that simply  
5 something that's of academic interest only but  
6 really irrelevant to the question?

7

A. I think the correlation with diseases  
8 expressed mostly in terms of fibers greater than  
9 five, though I'd certainly like to know what  
10 numbers and percentages fall in all fiber size  
11 classes.

12

Q. Let me put the question a little  
13 differently.

14

With respect to crocidolite, do you  
15 believe that fibers, crocidolite fibers less than  
16 five microns are biologically active in any sense  
17 with respect to mesothelioma?

18

MR. WILL: In humans?

19

MR. BROWNSON: In humans.

20

A. I would say probably not.

21

Q. Okay. I think I detected from your  
22 prior answer when you said that fibers over five  
23 microns are of interest, I think I detected a  
24 thought that historically the data we have, the  
25 epidemiological studies and as such, historically

1 Ilgren

2 people have focused on fibers over five, and I'm  
3 wondering if that is some sort of historical or  
4 analytical artifact or that because people have  
5 always believed that it's just particles over that  
6 five that cause disease.

7 MR. WILL: Object to the form of the  
8 question. I'll elaborate my objection if  
9 you want me to.

10 MR. BROWNSON: No, that's all right.

11 Q. Do you understand the question?

12 A. I believe so.

13 Q. What do you think about that? In  
14 other words, what's your view on that?

15 MR. WILL: On what?

16 Q. On this five micron question with  
17 respect to crocidolite. In other words, I was  
18 trying to get at that with my prior question. Do  
19 you believe that those over five are active and  
20 those under five are not or do you believe that  
21 those over five have historically been counted for  
22 analytical or other reasons?

23 A. I'm not a state-of-the-art hygienist  
24 per se. In other words, my sense is that the  
25 greater than five micron cutoff is a combination

Ilgren

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2 of utilitarian purpose plus biological perception,  
3 so there's certainly an element of both where the  
4 hygienist simply said yes, it's possibly easier to  
5 count reliably fibers over five microns for  
6 technical reasons. But in addition, there was a  
7 historical perception that biologically fibers  
8 over, quote, unquote, five, I don't want to use a  
9 precise cutoff, but it's so-called long fibers in  
10 the range, say, of ten or 20 or 30 microns were  
11 more biologically active than short fibers.

12 Q. Do you believe that with respect to  
13 being biologically active, five microns is to some  
14 extent an artificial cutoff, in other words, it's  
15 not an absolute bright line?

16 A. Certain workers such as Stanton  
17 focused more on eight microns, though there was  
18 also a certain level of tumor probability with  
19 five. Pott, as I recall, I think looked at four  
20 or five. I think a man called Maroudis looked at  
21 20. And I can't remember whether Davis felt in  
22 terms of cancer induction, one was looking at ten  
23 microns. So I mean I don't believe that there's  
24 an absolute clear cutoff, but the experimental  
25 evidence I think tends to focus in the region of

Ilgren

1

2 five.

3 Q. Would you agree with the statement  
4 that the longer the fiber, the more biologically  
5 active it is, as a general proposition?

6 A. Generally up to the point of  
7 respirability, yes.

8 Q. And that although there's no absolute  
9 cutoff at five microns, you are less concerned  
10 about fibers under five microns, would that be  
11 fair to say?

12 A. That's correct.

13 Q. Now does there come some length where  
14 you simply would not be concerned at all, and  
15 let's confine ourself to crocidolite fibers. We  
16 were talking about for instance if you saw a  
17 one-micron crocidolite fiber, would you just  
18 consider that too short to be of any concern or is  
19 there some other cutoff you use or is -- I'll  
20 leave it at that.

21 A. Again, I think my general thinking  
22 would focus on five.

23 Q. Now you mentioned that Dr. Pooley  
24 counts fibers under five. Does he -- as far as  
25 you're aware, does he have any cutoff length that

1 Ilgren

2 he uses when he counts fibers?

3 A. As I recall, he counts fibers of all  
4 sizes, but the data are expressed also in terms of  
5 fibers over five.

6 Q. So he reports them as fibers over  
7 five or fibers under five?

8 A. He reports them as total fiber number  
9 of all sizes, and those, as I recall, over five or  
10 over ten, it's a fairly detailed analysis.

11 Q. Now in connection with your work,  
12 your own work, have you ever done any lung fiber  
13 tissue burden analysis or do you farm that out to  
14 people to have that done?

15 A. It's farmed out.

16 Q. And who do you use in cases where  
17 you've seen the need for that work to do it?

18 A. Generally Allen Gibbs, Fred Pooley.

19 Q. And have you ever asked them to do  
20 such lung fiber or lung tissue fiber burden  
21 analysis on any cases involving Calidria-exposed  
22 people?

23 A. Have I ever sent them a case?

24 Q. Right.

25 A. No.

1 Ilgren

2 Q. As far as you're aware, have they  
3 done any, either of them done any lung tissue  
4 fiber burden analysis on any of the Conwed  
5 workers?

6 A. I'm not aware of any.

7 Q. Let's move on a minute. We had  
8 started with the question about what you would do  
9 to make this apportionment between amosite and  
10 crocidolite exposure in mesothelioma, and this  
11 hypothetical Conwed worker, and you told us that  
12 one thing you could do would be this lung tissue  
13 fiber burden analysis. Is there any other  
14 analysis or technique that you would use to try to  
15 make that determination?

16 A. Yes.

17 Q. Or that apportionment. And what  
18 would that be?

19 A. I'd be interested in the types of  
20 work they did. In addition to the types of work  
21 people did around them, the types of products they  
22 used, the kinds of fiber levels, if there was dust  
23 measurements made, the kinds of fiber levels that  
24 were found. The type of ventilation that might  
25 have been found in the plant, among other things.

Ilgren

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2 And what periods of time, say, amosite and/or  
3 crocidolite might have been used in the products  
4 in relation to their employment history within the  
5 constraints of the latency period, i.e., prior to  
6 a 20-year point.

7 Q. Now with respect to time, I take it  
8 what you're looking at there would be latency, in  
9 other words, the longer the time from first  
10 exposure to one of these fiber types, the more  
11 important it would be to you in making this  
12 causation determination. Would that be fair to  
13 say?

14 A. Could you just say that again.

15 Q. Let me rephrase the question. You  
16 said one of the things you'd be interested in was  
17 the time from which they were exposed to these  
18 fibers. Why would you be interested in that?  
19 What are you looking for there?

20 A. I see. Just simply that if the  
21 person was diagnosed, say, in 1990 with a  
22 mesothelioma, I'd be looking for the kinds of  
23 exposure he had prior to 1970. I wouldn't say  
24 that perhaps the exposures he might have incurred  
25 in 1940 were more important than those he incurred

Ilgren

1  
2 in 1950.

3 Q. But are you saying that any exposures  
4 within the last 20 years would not be important,  
5 in your view?

6 A. I don't believe they would be very  
7 important. Certainly the very critical ones would  
8 be the ones prior to the 20-year period.

9 Q. And with respect to the 20-year  
10 latency period that you apply here, again is that  
11 a bright line, for instance, if it's 21 or 19 or  
12 15 or 25, is there --

13 A. Well, the review by I think Linphaer  
14 that looked at, I think it was 1105 mesotheliomas  
15 entitled the paper being something like Latency  
16 Analysis in Mesotheliomas, and he found that 97.5  
17 percent of all the cases, and as I recall they  
18 were exposed, occupationally-asbestos-exposed  
19 cases, were over 20 years with a median of 32.5  
20 years, so I would generally say that a reasonable  
21 minimum is 20 years. Can one discount 15? I  
22 think it's very rare if it doesn't.

23 Q. So a 15-year latency is rare but it  
24 could occur, would that be a fair summary?

25 A. Possibly.

1 Ilgren

2 Q. Now do you believe that latency from  
3 onset of exposure to diagnosis is influenced by  
4 the dose? In other words, if a person had a  
5 higher dose could the latency be shorter or vice  
6 versa?

7 A. Generally I would say within the past  
8 30 years, perhaps not. At the turn of the century  
9 when Auribalt was looking at the mortality of  
10 French women working in textile plants where the  
11 women were exposed to phenomenal -- reportedly  
12 phenomenal doses, the latency for, say, asbestosis  
13 was I think seven or eight years, but by and large  
14 I don't think today that in recent times the dose  
15 would necessarily affect the latency period.

16 Q. Have you done any research yourself  
17 on the issue of dose and latency with respect to  
18 mesothelioma?

19 A. The dose latency data for all the  
20 animal studies are certainly in my book. I  
21 haven't gone back and analyzed them, nor have I  
22 ever done a meta-analysis or a critical synthesis  
23 of all the latency, so the short answer is no.

24 Q. So if we were to go to your book,  
25 which I didn't bring with me today, we had at a

1 Ilgren

2 prior session, called Mesothelioma in Animals  
3 where you compile all these different papers, if  
4 you wanted to, you could look at one or more of  
5 those papers and see what they say, but you didn't  
6 actually do any critical analysis yourself on that  
7 question?

8 A. No. I believe the latency times are  
9 there, again, I'd have to go back and check.

10 Q. But when you say you believe they're  
11 there, do you mean that you believe you reported  
12 them in your book as a category or do you believe  
13 they're back in the papers that are reported in  
14 the book?

15 A. Well, that's what I don't recall.  
16 I'm not sure if they're in the book. They're  
17 certainly in the papers. They may also be on the  
18 data base, but I just don't recall.

19 Q. Now with respect to these other  
20 factors you said you would look at in the  
21 hypothetical Conwed workers we were talking  
22 about --

23 A. Yes.

24 Q. -- where they worked, who was working  
25 around them, what types of products they were

1 Ilgren

2 working with, would it be fair to say that those  
3 factors all relate to the question of their dose  
4 and their exposure? In other words, what you're  
5 looking for there is what they were exposed to and  
6 how much?

7 A. What were the parameters again.

8 Q. They were type of work, fiber levels  
9 and ventilation were the three that you named.

10 MR. WILL: I think he also said what  
11 was going on around them.

12 A. I also said product type.

13 Q. Right. What I'm trying to do is see  
14 if there's some way we could summarize those. It  
15 looks to me what you're dealing with there is  
16 types of exposure and doses.

17 A. Types in terms of fiber type or types  
18 in terms of fiber level?

19 Q. I probably should ask you that.

20 A. Well, generically certain products  
21 contained crocidolite and other products didn't,  
22 though there wasn't any absolute line that perhaps  
23 some did and some didn't, but I'd say that  
24 ventilation activity and I think the one other you  
25 read.

1 Ilgren

2 Q. Types of work and fiber levels?

3 A. Would generally be related to fiber  
4 concentration as opposed to fiber type, i.e.  
5 amosite as opposed to crocidolite as opposed to  
6 chrysotile.

7 Q. And have you been asked in this  
8 particular case to make any apportionment with  
9 respect to amosite and crocidolite in the cases of  
10 Mr. Manisto and Mr. Bergstrom?

11 A. No.

12 Q. Based upon the data that you've seen  
13 that is available, do you think that it would be  
14 possible to do that?

15 A. I'd have to go back and get my files  
16 out and the records. I don't recall the details.  
17 It might be but I just don't recall.

18 Q. Well, let me ask you this question.  
19 If it turns out that there is absolutely no  
20 industrial hygiene asbestosis air level data for  
21 the amosite and any crocidolite that these two men  
22 were exposed to, which I'll represent to you is  
23 the case, there just simply are no such  
24 measurements, in that situation do you believe it  
25 would still be possible to make some apportionment

1 Ilgren

2 between those two things?

3 A. Perhaps.

4 Q. And that's why -- what would you use

5 as a surrogate or a replacement for actual

6 measurements if you were to do that?

7 A. Obviously it's not as good, but kinds  
8 of activities they might have done whether say one  
9 was sawing a pipe or sawing a board or drilling a  
10 hole. There's perhaps not the best data, but  
11 there are acknowledged ranges of levels generated  
12 for those different activities.

13 Q. Let me go back to the hypothetical  
14 Conwed worker I gave you. Would it be fair to say  
15 that the best test, in your view, would be the  
16 lung tissue fiber burden that you were describing  
17 a little while ago in order to try to determine  
18 the relative contribution of these different  
19 fibers?

20 A. Probably.

21 Q. And let's assume, let's add another  
22 hypothetical to your thing here. Let's assume  
23 that now a lung tissue fiber burden test has been  
24 done on our hypothetical Mr. Manisto, and let's  
25 assume that the following is found in his lungs,

Ilgren

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2 crosidolite, amosite and chrysotile, those three  
3 things.

4

A. Yes.

5

6 Q. Would it be your view that the  
7 chrysotile would have had no role to play in the  
8 causation of his mesothelioma?

8

A. Pure?

9

Q. Right.

10

A. Amphibole-free.

11

12 Q. Right. We're just talking about  
13 chrysotile fibers as seen under the microscope.

13

A. Yes.

14

15 Q. And as I understand your view, the  
16 amosite would have had some role to play but a  
17 lesser role than the crosidolite, would that be  
18 fair to say?

18

19 A. The question is an amphibole and  
20 amphibole and amphibole. I think the question or  
21 the answer slightly restated is there any  
22 difference between the biological potency of a  
23 long, thin amosite fiber and a long, thin  
24 crosidolite fiber. I don't know if we have that  
25 information.

25

Q. So would you then be looking in this

Ilgren

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2 hypothetical situation for the amount of the  
3 respective fibers seen in that tissue as a more  
4 important thing to look at than the type of the  
5 fiber?

6 A. I think you'd want to know the amount  
7 of each type.

8 Q. Let's start with crocidolite. Is  
9 there an amount of crocidolite that you believe  
10 needs to be found in lung tissue before you will  
11 assign it as being a cause of a mesothelioma? In  
12 other words, a million fibers per dry gram or some  
13 number, is there some number you use?

14 A. There are numerical correlates for  
15 mesotheliomas, for crocidolite, for amosite. A  
16 Nottingham gas mask worker with mesothelioma with  
17 I believe the briefest duration of exposure had 1  
18 to 2 million crocidolite fibers over five microns  
19 per gram lung, and I think that's somewhere near  
20 perhaps the lower end of -- again, I haven't  
21 looked at this for a little while, I think that's  
22 towards the lower end of the amount of crocidolite  
23 it might take.

24 Amosite -- I think the only data we  
25 have for amosite mesothelioma lung burden comes

1 Ilgren

2 from Gibbs, et al. 1992, an analysis of the  
3 Uxbridge plant workers, and again, as I recall,  
4 the amounts of amosite found in the five or six  
5 mesotheliomas they looked at were in the order of,  
6 I just don't recall, 80, a hundred million fibers.

7 Q. Let me ask you this with respect to  
8 this particular question of how much fiber per dry  
9 gram of lung would be a bottom value or a floor or  
10 a threshold or causation of mesothelioma, have you  
11 done any specific research on that question?

12 A. Well, in conjunction with a threshold  
13 analysis for mesothelioma, I've certainly tracked  
14 the lung burden literature. Right off the top of  
15 my head I couldn't cite the figures, but I think  
16 the numbers I gave you before, there aren't those  
17 many data out there.

18 Q. Let me ask you this. Would those  
19 figures be in these published papers by these  
20 authors you've just told us?

21 A. I believe so, sure.

22 Q. And at this point as you sit here  
23 today, in response to the question, is it your  
24 answer that a minimum lung tissue fiber burden for  
25 crocidolite is somewhere in the 1 to 2 million

1 Ilgren

2 fiber per dry gram of tissue range?

3 A. I'd like to go back to a couple of  
4 papers, but that's basically what I recall.

5 Q. And with respect to amosite, I'm not  
6 quite sure if you told us you had a minimum or  
7 not, what would your sense be as you sit here  
8 today what that minimum would be, as reported in  
9 these papers?

10 A. I don't know if one could actually  
11 determine that. I guess I would try to answer the  
12 question by looking at the worker with  
13 mesothelioma that had, say, apparently the  
14 briefest exposure duration, which isn't to say he  
15 didn't have perhaps an intense exposure, but I'd  
16 be looking for the mesothelioma case with the  
17 briefest exposure duration and asking the question  
18 how many amosite fibers would he have in his lung.

19 I mean one would naturally like to  
20 look at all the mesothelioma cases irrespective of  
21 exposure duration and intensity. And again, I  
22 can't remember the figures, there aren't many  
23 cases, and the only ostensibly pure  
24 amosite-exposed cases that I can think of are from  
25 this Uxbridge cohort.

1 Ilgren

2 MR. BROWNSON: Let's just take one  
3 moment here.

4 (Discussion off the record)

5 (Whereupon, document entitled "Fiber  
6 Levels and Disease in Workers From a  
7 Factory Predominantly Using Amosite" marked  
8 Ilgren Exhibit 25 for identification, as of  
9 this date.)

10 Q. Now we've marked an article here as  
11 Ilgren Deposition 25, and for the record it's  
12 called "Fiber Levels and Disease in Workers From a  
13 Factory Predominantly Using Amosite," and it's  
14 published in Environmental Health Perspectives  
15 beginning at page 261 by A.R. Gibbs, et al.

16 Now, is this the paper which reports  
17 these data you were just talking about about the  
18 amosite?

19 A. Yes.

20 Q. This is from this factory at Uxbridge  
21 in England?

22 A. North London, right.

23 Q. Let me ask you a question. They  
24 report here that this particular plant produced  
25 insulation board. Do you have any information as

1 Ilgren

2 to what this insulation board was specifically?

3 A. I think it was 40 percent amosite  
4 with a little chrysotile.

5 Q. Let me rephrase the question. What  
6 physically was the product?

7 A. Ceiling tile, I think. I believe.

8 Q. And as you understand it, would that  
9 be acoustical ceiling tile like we see in the room  
10 here?

11 A. I don't know. I presume so.

12 Q. Now there's reference in this paper  
13 that this particular factory was a very dusty  
14 factory, and at an earlier session of your  
15 deposition when you were getting into questions  
16 concerning exposure levels to the common workers,  
17 you were talking about what you called a similar  
18 factory in Uxbridge. Is this the one you were  
19 talking about that we see reported in Exhibit 25?

20 A. Yes.

21 Q. Okay. And at an earlier session of  
22 your deposition, you were making some allegations  
23 with respect to how much exposure Conwed workers  
24 needed based upon this Uxbridge plant. Do you  
25 remember that?

1 Ilgren

2 A. Yes.

3 Q. Now my question is, what information  
4 do you have concerning actual fiber levels that  
5 the workers were exposed to at the Uxbridge plant  
6 that we see here in Exhibit 25?

7 A. I think there's only three sources.  
8 Health & Safety Executive, abbreviated HSE,  
9 documents 19 -- I believe 1979, 1980, and then  
10 Acheson, in the fall 1981 cited as rev. number 1  
11 in the bibliography of this paper Gibbs, et al.,  
12 1994.

13 Q. Now do you know if -- first of all,  
14 have you read those three papers, the Acheson  
15 paper and those two Health & Safety Executive  
16 documents, concerning this factory?

17 A. Yes.

18 Q. And did they report actual air  
19 measurements in those three papers?

20 A. Yes. Actually one other source of  
21 data came from Kevin Brown because he was the  
22 chief treating chest physician at Uxbridge for  
23 Cape Industries, so there's actually four sources.

24 Q. What I'm wondering is, did these  
25 people have the same measurements or did all four

1 Ilgren

2 of these sources do their own air measurements or  
3 report different air measurements?

4 A. I believe they're all the same from  
5 the same source.

6 Q. And do you know when the air  
7 measurements were taken at that plant, what  
8 historical time period?

9 A. There are certainly dates stated in  
10 Acheson, et al., 1981. I can't remember how the  
11 dates are broken down, if they're broken down in  
12 the other documents. I think they have a citation  
13 for some measurements taken in the mid '70s with  
14 estimates of the ones that might have been  
15 attained prior to that.

16 Q. My question is to get the actual air  
17 measurement data from this plant?

18 A. Yes.

19 Q. We would find that data reported in  
20 Acheson's paper?

21 A. Yes.

22 Q. And would that then be the same data  
23 that's reported in these two Health & Safety  
24 Executive papers?

25 A. Yes. I believe Acheson cites one or

1 Ilgren

2 both of the HSE papers as the source of the data.

3 Q. Now, do you know as we sit here today  
4 the actual fiber levels that were measured at this  
5 Uxbridge factory?

6 MR. WILL: Does he recall off the  
7 top of his head, is that what you're asking  
8 him?

9 MR. BROWNSON: Right.

10 A. Some. One of the dustiest  
11 operations, as I recall, was what they call  
12 beating, working as a beater, I'm not quite sure  
13 what he did, it could have been a fiberizer, and I  
14 think a cited level there was an estimated 64  
15 fibers per cc, but there were a series of other  
16 activities with different correlated fiber levels  
17 as well and some of the earlier papers, I can't  
18 recall exactly.

19 Q. Do you have any information as to  
20 what the average fiber level was to which these  
21 workers were exposed who are described in this  
22 paper, Exhibit 25?

23 A. I believe the data are in the sources  
24 for an average, a background, an average.

25 Q. When you say in the sources, you mean

1 Ilgren

2 in this Acheson paper?

3 A. I meant Acheson plus the two other  
4 documents.

5 Q. So if we wanted to find what the  
6 actual average levels were, calculate those, we  
7 could find them in this Acheson paper or these two  
8 Health & Safety Executive papers?

9 A. Yes, I believe so.

10 Excuse me, the other source I know  
11 there are citations of hygiene data definitely in  
12 Acheson 1981. It just occurred to me that there  
13 might also be data in Acheson 1984, which is rev.  
14 number 2. I can't remember. I think most of the  
15 data cited in '81 are simply replicated in '84,  
16 but there might be some additional data in '84  
17 that aren't in '81.

18 Q. Now the only actual data I see in  
19 this paper, Exhibit 25, is down at the bottom of  
20 page 262 where it says, "Measurements of airborne  
21 samples in the late 1960's showed some areas to  
22 contain more than 30 fibers per milliliter, but  
23 prior to 1964, nine counts were probably higher."  
24 You see that?

25 A. Yes.

1 Ilgren

2 Q. That doesn't really tell us much?

3 A. Right, but it does say there is some  
4 data in the 1984 paper.

5 Q. Now, I'm trying to understand your  
6 relationship of this Uxbridge plant with the  
7 Conwed plant, and as I understand it, at the last  
8 session of the deposition you were talking about  
9 this because you viewed it as sort of a similar  
10 exposure or similar plant, is that right?

11 A. My perception was they're both  
12 ceiling tile production plants.

13 Q. And this Uxbridge plant, do you  
14 understand that that used just amosite and  
15 chrysotile and no crocidolite or was there some  
16 crocidolite used there?

17 A. Again, this is indicated in either  
18 and/or the 1981 or 1984 Acheson papers. I think  
19 there was a small amount of crocidolite used at  
20 some period either experimentally or in the  
21 research lab at Uxbridge, which is certainly borne  
22 out by the fact that at least one of their  
23 mesothelioma cases had crocidolite in its lungs.

24 In this particular paper they don't  
25 break down the individual cases, but I think the

Ilgren

1 data were also published or presented at the IARC  
2 meeting. I believe that's where my galley proof  
3 is. I also believe that the individual  
4 mesothelioma cases are expressed in terms of how  
5 much each had in terms of crocidolite or amosite  
6 or chrysotile.  
7

8 Q. Where are those data expressed?

9 A. I believe they're in the -- again, I  
10 might be wrong. I believe that was in the IARC  
11 presentation that Allen Gibbs gave.

12 Q. When was that?

13 A. I think it's a couple of years ago.  
14 I could be wrong on that, but that's my vague  
15 recollection.

16 Q. Are those the data presented in some  
17 published form somewhere, as far as you know?

18 A. If it was an IARC scientific  
19 presentation, it's probably come out in one of the  
20 IARC scientific monographs.

21 Q. But as you sit here today, you can't  
22 give us a specific citation for that?

23 A. I'd have to call Allen.

24 Q. Well, as you read this paper, they  
25 report in here, this is Exhibit 25, that some

1 Ilgren

2 crosidolite was found in somebody but it doesn't  
3 break it down?

4 A. Right.

5 Q. But then it also says -- what I'm  
6 wondering is, have you looked at the last page of  
7 the paper in the first column, there's a reference  
8 to the East London factory where a substantial  
9 amount of crosidolite was used, and this gives the  
10 impression that we're talking about two factories  
11 here, one at Uxbridge and one in East London. Is  
12 that right, they're two factories?

13 A. Yes. Barking was the Newhouse  
14 Thompson study. In fact I think there were some  
15 people -- because Barking was a Cape plant and  
16 Uxbridge was a Cape plant, and I believe there  
17 were some people to come from Barking to go to  
18 Uxbridge.

19 Q. My question is, as I read this paper,  
20 Exhibit 25, there's no indication in this paper  
21 that crosidolite was used in this Uxbridge ceiling  
22 tile plant, the only indication I see is that one  
23 or more of these workers had some crosidolite in  
24 their lungs, and I'm trying to find your  
25 understanding about whether there was actually

1 Ilgren

2 crosidolite used here or whether these workers  
3 could have been the ones that came from Barking or  
4 where this crosidolite came from?

5 A. Do you have the '81 or '84 papers?

6 Q. Not with me, no.

7 A. My perception is that there were  
8 several potential sources of crosidolite at  
9 Uxbridge. One, there might have been experimental  
10 tests done with crosidolite in which they  
11 incorporated for a brief period of time  
12 crosidolite into the product. Two, that there was  
13 some use in the research lab for crosidolite.  
14 Three, that there were perhaps some workers who  
15 might have been exposed briefly at Barking or for  
16 some period of time at Barking to crosidolite when  
17 they made -- I think they made, I can't remember,  
18 pipes or other kinds of boards there.

19 Q. Let me ask this question with respect  
20 to Exhibit 25. These workers, which were the ones  
21 we were originally talking about, would it be fair  
22 to say that some of these workers who have  
23 mesothelioma and the other diseases did not have  
24 crosidolite found in their lung tissues?

25 A. Yes.

1 Ilgren

2 Q. And again, we don't have the exact  
3 breakdown in this exhibit of who did and who  
4 didn't, but it's fair to say that some did and  
5 some didn't, right?

6 A. That's correct.

7 Q. Let's then concentrate on those that  
8 did not have any crocidolite but just had amosite  
9 found in their lungs.

10 A. Right.

11 Q. And I want to go back to my earlier  
12 question of what would be the minimum or least  
13 amount of amosite fibers in a dry gram of lung  
14 tissue that you would consider would be causative  
15 of mesothelioma?

16 A. Right.

17 Q. And you told us that you weren't sure  
18 but that data came out of this factory, so what  
19 I'd like you to do is could you look at the paper  
20 here and try to answer that question?

21 MR. WILL: Object to the form of the  
22 question. I think your preamble misstates  
23 his earlier testimony, but go ahead, I  
24 don't have any objection to him looking at  
25 the document and commenting on the data.

1 Ilgren

2 Q. Let me rephrase the question.

3 Based on the data in Exhibit 25, can  
4 you now give us some answer to the question of how  
5 much amosite per dry gram of lung tissue you need  
6 to cause mesothelioma?

7 A. I'm just looking here to see if they  
8 have the table 4 data, which is fiber counts times  
9 a million by type of pathology in terms of all  
10 fiber lengths or just over five, Mr. Brownson, do  
11 you see how they've broken that down? It looks  
12 like all fiber lengths but --

13 Q. Well, I can't answer it but --

14 A. I would look at table 4 in the  
15 right-hand column where they have amosite, and it  
16 says "Mean, approximately a thousand with standard  
17 deviation of 1,012 for the five cases."

18 Q. That would be a thousand what?

19 A. A thousand million, that's a billion.  
20 A billion fibers per gram lung.

21 Q. It's a thousand times ten to the  
22 sixth or a billion fibers per dry gram of lung  
23 tissue?

24 A. Yes.

25 Q. And if we could try to summarize

1 Ilgren

2 this, table 4 of Exhibit 25 indicates that there  
3 are five mesothelioma cases where lung tissue  
4 fiber burden analyses were done, is that right?

5 A. Yes.

6 Q. And that's out of this Uxbridge  
7 ceiling tile plant?

8 A. Yes.

9 Q. And in those five cases, the mean  
10 amosite fiber burden in the lungs was a billion  
11 fibers per dry gram of lung tissue, correct?

12 A. Yes.

13 Q. Now if we wanted to find what each of  
14 the five actually was, we don't find that here in  
15 this paper, do we?

16 A. No.

17 Q. And are you telling us that or do you  
18 recall or believe that we could find that in these  
19 two Acheson papers that are cited here at the end?

20 A. No. The lung burden data, the only  
21 other place I know where the lung burden data  
22 exists would either be in that possible IARC  
23 presentation or in Allen Gibbs' data books in the  
24 lab. I'm sure he's broken them down.

25 Q. Well, earlier what I was trying to do

1 Ilgren

2 was find from you what your answer would be as to  
3 the minimum amount of amosite found in a lung  
4 tissue fiber burden analysis that you would  
5 believe causes mesothelioma, and you pointed us to  
6 the data out of this factory, and would it be fair  
7 to say that this Exhibit 25 doesn't give us the  
8 individual data in those five cases, it just gives  
9 us a mean of 1 billion fibers?

10 A. Yes.

11 Q. So when you answered earlier that the  
12 minimum amount of amosite would be the minimum  
13 found in these workers, we don't actually have  
14 that here, what we have is a mean amount?

15 A. We've got a standard deviation, I  
16 must say.

17 Q. Could we calculate it from using that  
18 standard deviation?

19 A. Possibly one could. I couldn't at  
20 the moment.

21 MR. BROWNSON: Off the record.

22 (Discussion off the record)

23 Q. To get back to this question, try to  
24 finish up here and move along, your opinion as to  
25 the minimum amount of amosite needed to cause a

1 Ilgren

2 mesothelioma is based upon the data from this  
3 Uxbridge factory, would that be fair to say?

4 A. For lung burden?

5 Q. Right, for lung burden?

6 A. Right.

7 Q. Okay, and we can't specifically  
8 calculate it from this particular paper because  
9 the five mesotheliomas aren't broken down  
10 individually, would that be fair to say?

11 A. And I don't know how to work the  
12 standard deviation analysis.

13 Q. But would it be fair to say that your  
14 opinion on that question is based upon these five  
15 mesothelioma cases, whatever those lung burdens  
16 turn out to be?

17 A. We don't have any other data, to my  
18 knowledge.

19 Q. Okay. So if I wanted to get your  
20 answer as it were, we would have to -- we could go  
21 and find these five cases and look at the actual  
22 lung burdens in those five cases, and whichever  
23 the lowest one would be, would that then be what  
24 you would consider the minimum?

25 A. That being a suggestive minimum, we'd

1 Ilgren

2 like obviously to have more cases, but I think  
3 that would be true.

4 Q. Let me put the question to you a  
5 little differently. Would it be your opinion that  
6 a fiber burden of 1 billion amosite fibers per dry  
7 gram of lung tissue would cause mesothelioma?

8 MR. WILL: Would or could?

9 MR. BROWNSON: Would.

10 A. I'd like to know what sizes.  
11 Obviously it's a tremendous number of fibers.

12 Q. Right.

13 A. I would say most probably, but I'd  
14 like to know how many were so-called lung amosite  
15 fibers over five microns.

16 Q. Well, whatever the size of these  
17 five, the fibers found in these five workers,  
18 would you agree that the authors of this paper,  
19 Exhibit 25, have attributed these five  
20 mesotheliomas to these billion amosite fibers,  
21 whatever size they turn out to be?

22 A. With or without some contribution in  
23 the one -- or I can't remember, one or two cases  
24 with crocidolite.

25 Q. Now let's go back to my hypothetical

1 Ilgren

2 Conwed workers where this whole thing started.

3 A. Yes.

4 Q. Let's assume the hypothetical James  
5 Manisto had the crocidolite and the amosite that  
6 we've already talked about in his lung tissue  
7 fiber burden, but now let's assume we also find  
8 some tremolite there --

9 A. Yes.

10 Q. -- in that lung tissue. Do you have  
11 any opinion as to the minimum amount of tremolite  
12 needed to cause mesothelioma in a lung tissue  
13 fiber burden?

14 A. I think the only data one could look  
15 at would be either from the Libby vermiculite,  
16 vermiculite tremolite cohort from Montana or the  
17 Thetford Canadian chrysotile/tremolite cohort from  
18 Canada. And I don't recall off the top of my head  
19 the levels in the Canadian cohort, but again, I  
20 think we're dealing with somewhere around a  
21 billion tremolite fibers as Fred Pooley -- is what  
22 Fred Pooley found. The Libby data aren't really  
23 published or available. I've looked at some of  
24 them but they're not -- I mean I can't remember  
25 what they were, but again, they were very high.

1 Ilgren

2 Q. Let me ask you this. Do you have an  
3 opinion one way or another as to how much  
4 tremolite fiber per dry gram of lung tissue is  
5 needed to cause mesothelioma?

6 A. I think it's much -- it's at least as  
7 high, if not higher, than the exposure to amosite.

8 Q. And if I understand it, that's not a  
9 firm figure. You're talking about a range?

10 A. A range.

11 Q. And you derive that range from some  
12 data from Libby vermiculite workers and Thetford  
13 Canada chrysotile miners and millers?

14 A. Yes. There might be one or two  
15 others but they'd be the major sources.

16 Q. How about these Charleston, South  
17 Carolina textile workers, do you get data from  
18 them on this question of tremolite?

19 A. I think Frank Green and John Dement  
20 are just publishing those data now. I can't  
21 remember what they show.

22 Q. And again, as I asked before, have  
23 you done any research yourself on this question of  
24 how much tremolite is needed to cause  
25 mesothelioma?

1 Ilgren

2 MR. WILL: By research, do you mean  
3 experimental work?

4 MR. BROWNSON: Right.

5 MR. WILL: Original experiments as  
6 opposed to reading papers?

7 MR. BROWNSON: Right.

8 A. Just on the Libby vermiculite  
9 workers.

10 Q. And what research have you done on  
11 those workers?

12 A. Just looking at trying to get the  
13 lung burden data collated and see what they say.  
14 I can't remember, it's been a long time since I  
15 looked at the data.

16 Q. As I understand it, you didn't  
17 actually take those data, you got that data  
18 from --

19 A. Frank Green or Pat Sebastian.

20 Q. Okay.

21 A. It wasn't as if I did the lung  
22 burdens myself, I didn't actually count the fibers  
23 myself, no.

24 Q. That data is some data that you have  
25 seen in written form but it's not published, would

1 Ilgren

2 that be fair to say?

3 A. Yes.

4 Q. Let's go back to my hypothetical,  
5 Conwed workers, James Manisto, and let's assume  
6 that James Manisto had 1 billion crocidolite  
7 fibers per dry gram of lung tissue, 1 billion  
8 amosite fibers and 1 billion tremolite fibers?

9 A. What sizes?

10 Q. All over five microns. Let's just  
11 assume this hypothetically. Would it be your  
12 opinion that each of those three things would have  
13 had some role to play in the causation of his  
14 mesothelioma?

15 A. It's possible.

16 Q. And let me put the question another  
17 way. Does anybody -- if you were presented with  
18 that hypothetical case --

19 A. Yes.

20 Q. -- is there anybody who can really  
21 say that the tremolite did have a role, the  
22 amosite did have a role, the crocidolite did have  
23 a role, or are you really saying that each of them  
24 could have had a role but nobody really knows for  
25 sure?

1 Ilgren

2 A. I think no one knows for sure. And  
3 if notwithstanding one, say, had not had the  
4 exposure to the tremolite or the amosite, there is  
5 a probability that the crocidolite alone might  
6 cause the meso, and/or in the absence of  
7 crocidolite or tremolite, the amosite, so the net  
8 contribution of all three together, I think I  
9 don't know how one would apportion them.

10 Q. Let me ask you this. If the  
11 hypothetical Mr. Manisto had just a million  
12 crocidolite fibers per dry gram of lung tissue and  
13 nothing else, would you say his mesothelioma was  
14 caused by the crocidolite?

15 A. Could very well have been.

16 Q. And let's say that the hypothetical  
17 Mr. Manisto just had the billion amosite fibers  
18 and nothing else, would you then say the amosite  
19 was the likely cause?

20 A. Yes.

21 Q. Let's say that he just had the  
22 billion tremolite fibers and nothing else, would  
23 you say that's the likely cause?

24 A. Yes. Probably.

25 Q. Once you get some combination of

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1

2 those, that's where it becomes harder to actually  
3 say what did and what didn't, is that what you're  
4 telling us?

5

A. Basically I think, again, it comes  
6 down to is an amphibole is an amphibole is an  
7 amphibole. Is a tremolite fiber that's eight  
8 microns long and a quarter of a micron wide any  
9 more biologically potent than one of an amosite or  
10 crocidolite?

11

Q. Now I understand that you believe  
12 that Calidria chrysotile fiber cannot cause  
13 mesothelioma, and that's because it has no  
14 amphiboles in it, is that a fair summary?

15

A. Yes.

16

Q. Now what I want to do is I want to go  
17 back and understand the reasons you say that  
18 Calidria cannot cause mesothelioma, and we've  
19 covered some of this before, so let me try to  
20 summarize it to move along. I understand that you  
21 believe that the animal data, which is tabulated  
22 in your book Mesothelioma in Animals, leads you to  
23 that conclusion, is that right?

24

A. One basis.

25

Q. That's one basis. And we've talked

1 Ilgren

2 about that already, but as I understand it, you  
3 look at these studies which have actually exposed  
4 animals to Calidria fiber which are reported in  
5 your book, and based upon what's reported in those  
6 studies you've reached the conclusion that  
7 Calidria cannot cause mesothelioma in humans,  
8 correct?

9 A. Again, it's one basis.

10 Q. That's one of the bases, and I want  
11 to just talk for a minute about that basis. I  
12 understand that's not your whole basis but that's  
13 one of them.

14 A. Sure.

15 Q. With respect to that part of your  
16 opinion, are there any other animal studies with  
17 respect to Calidria asbestos that you are aware of  
18 that are not reported in your book that form a  
19 part of that opinion?

20 A. Just the Pinkerton work that we  
21 discussed before, that's the only other set of  
22 animal studies, to my knowledge, that ever used  
23 Calidria fiber.

24 Q. So if we wanted to -- strike that.

25 That part of your opinion that says

Ilgren

1

2 Calidria cannot cause mesothelioma, that's based  
3 on animal studies. The animal studies we're  
4 talking about, are those reported in your book?

5 A. Yes.

6 Q. And then the Pinkerton studies?

7 A. Yes.

8 Q. Right?

9 A. Right.

10 Q. And with respect to those animal  
11 studies, just so I understand it, certain of those  
12 animals exposed to Calidria by injection did  
13 develop mesotheliomas, correct?

14 A. Correct.

15 Q. As reported for instance in the  
16 Suzuki study in 1984, let's use that as an  
17 example.

18 A. Correct.

19 Q. But despite that, it's your belief  
20 that Calidria cannot cause mesothelioma, and I'm  
21 wondering why.

22 MR. WILL: Why vis-a-vis the animal  
23 studies or why vis-a-vis the other?

24 MR. BROWNSON: No, just the animal  
25 studies.

1 Ilgren

2 Q. Let's narrow it down, let's take the  
3 Suzuki paper in 1984 which showed that at certain  
4 doses, certain of the animals did get  
5 mesothelioma.

6 A. Right.

7 Q. And you obviously in some fashion  
8 discount that data, and I'm wondering why.

9 A. Well, there's two papers, there's  
10 Suzuki 1982 and Suzuki 1984. They're two separate  
11 studies, Suzuki 1982 used 10 milligrams of  
12 Calidria and Suzuki 1984 used 2 milligrams and 20  
13 milligrams. I don't recall the highest percentage  
14 of mesotheliomas. I'd like -- do you have the  
15 papers?

16 Q. I actually don't have that paper.

17 A. One basis for discounting Suzuki, as  
18 I recall, and again, I'd have to check the  
19 numbers, I think the highest incidence he obtained  
20 was somewhere around 30 percent, and this was  
21 intraperitoneal injection in the mouse, and as I  
22 recall based on an analysis of the literature,  
23 particularly, say, Freidrich Pott's studies where  
24 he's done very large numbers of intraperitoneal  
25 injections, that up to 25, circa 30 percent of

1 Ilgren

2 tumors thus induced by intraperitoneal injection  
3 might be caused by a combination of spontaneous  
4 incidence, vehicle alone, injection alone and  
5 nonspecific fibrous nonfibrous dust alone  
6 treatments.

7 Q. Okay, so --

8 A. One basis is it's a background --  
9 so-called background incidence.

10 Q. I understand, that's what the  
11 conclusion you basically derive in your book is,  
12 that in these animal studies there's a certain  
13 background incidence of mesothelioma, which is not  
14 related to the specific fiber being injected or  
15 inhaled, as the study may be?

16 A. Right.

17 Q. And are you saying then that with  
18 respect to these injection studies, approximately  
19 a 20 percent level of mesotheliomas constitutes  
20 this background?

21 A. I can't recall. I think it's  
22 somewhere 20 to 30 percent, so one basis would be  
23 background. A second basis would be species  
24 mouse. It's my understanding that the mouse is  
25 less reproducible or these sorts of investigations

Ilgren

done on the mouse are less reproducible than ones found in the rat, hence the rat is really the species of choice these days for intraperitoneal injection studies.

Another reason why perhaps I would discount at least part of the Suzuki would be that in 1982, we only used five animals. It was a control, so to speak, for a zeolite, principally, a zeolite study, and among other reasons again, I'd have to take the papers out.

Q. You're not saying, though, are you, that in mice generally not exposed, not injected with asbestos, there's a 20 percent rate of mesothelioma?

A. No.

Q. That's not part of it in your view?

A. Yes.

Q. Do you have any data that tells you what the background incidence of mesothelioma in mice is?

A. Uninjected, sitting around?

Q. Right, just a bunch of mice sitting in a cage eating cheese.

A. If the reports exist, they're in the

Ilgren

1 book. And they're pretty rare.

2 Q. So with respect to this 20 percent of  
3 mice that get mesothelioma that you do not  
4 attribute to the injected asbestos, you're saying  
5 a very small amount of those could be just  
6 background mesotheliomas and then the rest of them  
7 are something else?

8 A. Yes.

9 Q. And I'm trying to figure out what the  
10 something else is.

11 A. The injection of saline alone I think  
12 can produce up to 6 or 8 percent.

13 Q. Of mesotheliomas in mice?

14 A. Well, see, we don't have a lot of  
15 data. As I recall, Suzuki also had saline  
16 injections in which he didn't find any  
17 mesotheliomas, but if you go back to the work of  
18 Pott, admittedly these are in rats, and you look  
19 at the saline, a great number of saline injections  
20 in some of the studies, he got 6 or 8 percent  
21 mesothelioma, so I think one can attribute it to  
22 spontaneous genetics to the saline vehicle in  
23 which the fiber was injected, to a nonspecific  
24 effect of the nonfibrous elements coming together  
25

Ilgren

1

2 and clumping.

3 Q. Are you saying that the chrysotile  
4 injected had absolutely no role to play in those  
5 20 percent that got mesothelioma?

6 A. Well, I mean it's also a question of  
7 the artificiality of the test system whereby the  
8 chrysotile under the circumstance of inhaling it  
9 as a dispersed aerosol may not have any effect but  
10 the chrysotile when injected might have an effect.

11 Q. What I'm asking, let me rephrase the  
12 question, is in terms of Calidria chrysotile  
13 injected into mice by Suzuki.

14 A. Right.

15 Q. Are you saying that injection of  
16 chrysotile could have had some role in those  
17 mesotheliomas or are you saying that the injected  
18 chrysotile just absolutely had no role?

19 A. I don't believe one can look at the  
20 Suzuki studies and conclude that Calidria  
21 chrysotile on the basis of those studies can  
22 induce mesotheliomas.

23 Q. In those mice?

24 A. That was a specific effect.

25 Q. Was the converse also true, can you

1 Ilgren

2 look at Suzuki's studies and say that the Calidria  
3 asbestos injected in those mice had no role or is  
4 that an ambiguous result?

5 A. I would assume probably no role.

6 Q. But is it safe to say that you can't  
7 say that with certainty?

8 MR. WILL: What do you mean by  
9 certainty?

10 MR. BROWNSON: Well, I'm trying to  
11 -- his answer was he would probably assume  
12 it had no role and "probably" strikes me as  
13 a qualifier.

14 A. I would do the usual medical  
15 probability certainty qualifier, I would say it's  
16 probably within the realm of medical scientific  
17 certainty, not causative.

18 Q. Well, if control mice had a lower  
19 rate of mesothelioma and if Calidria-injected mice  
20 had a higher rate than control mice, are you  
21 saying that the injection of the Calidria had no  
22 role to play in that increased rate of  
23 mesothelioma in those mice?

24 A. I'm sorry, I'm a bit tired today.

25 Q. By the way, we can take a break at

Ilgren

1

2 any time.

3

MR. WILL: Bob, I'm not trying to be

4

funny. I think from what his answer said,

5

they talked about injection per se may be a

6

factor, so when you say injection of

7

Calidria, are you including the injection

8

factor or are you trying to focus just on

9

the Calidria factor?

10

Q. Well, let me ask if you can answer

11

the original question. If not, maybe we need to

12

go to something else. Let's go back to the

13

original question. Can you answer that question?

14

A. Just repeat the original question.

15

(Record read)

16

A. I think within our discussion of

17

control and background, there's an apparent

18

difference, but I don't believe it's a real

19

difference.

20

Q. So you believe that the difference

21

between the control mice and the Calidria-injected

22

mice is based on something other than the

23

Calidria-injected into the peritoneum of those

24

mice.

25

A. Yes, I do.

Ilgren

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Q. And let's take the animal studies as a whole, the Calidria-exposed animals, is it your opinion that the difference in effect of Calidria -- strike that.

Is it your opinion that the difference in mesotheliomas in Calidria-exposed animals where it appears, because it doesn't appear everywhere, is based on something other than the Calidria to which those animals were exposed?

A. Yes.

Q. Now you stated that your opinion that Calidria cannot cause asbestosis is based on a number of things, one of which was these animal studies?

A. Yes.

Q. Let's go now to the other basis for your opinion.

MR. WILL: You said asbestosis, I think we've been talking about meso.

Q. I'm sorry, let me ask another question.

You said that your opinion that Calidria cannot cause mesothelioma is based in

1 Ilgren

2 part on the animal studies which we've now talked  
3 about, in part on other things. Let's now talk  
4 about the other things.

5 A. Yes.

6 Q. Before we do, maybe this is a good  
7 time to just take a short break.

8 (Recess taken)

9 Q. Before we move on, going back to the  
10 animal studies and this prior discussion we had,  
11 you had mentioned that 6 to 8 percent of  
12 mesotheliomas in injection studies were caused  
13 just by the simple fact of injecting a needle, is  
14 that what that was?

15 A. I can't remember. I wrote about this  
16 in that 1989 NATO ASI paper. The percentages are  
17 broken down there for needle alone, for saline  
18 alone.

19 Q. And where did you get that data, was  
20 this out of some other studies?

21 A. Pott studies, Stanton studies,  
22 there's a series of studies.

23 Q. So that was reported in your paper?

24 A. Yes.

25 Q. Again, this wasn't injection research

1 Ilgren

2 that you actually did, you're reporting from some  
3 of these other studies?

4 A. Correct.

5 Q. Let's move on to the question where  
6 we quit about other bases for your opinion that  
7 Calidria cannot cause mesothelioma other than the  
8 animal studies. What are the other bases?

9 A. Would be epidemiological, physical,  
10 chemical, lung burden, and animal studies as well.  
11 Just the four.

12 Q. So the animal studies we've already  
13 talked about, right, or we missed something?

14 A. Well, I guess vis-a-vis animal  
15 studies which did not use Calidria, for example,  
16 the inhalational studies where animals were dosed  
17 with chrysotile.

18 Q. But this would be other types of  
19 chrysotile?

20 A. Exactly.

21 Q. Okay. So let's take these other  
22 bases, which as I understand it are  
23 epidemiological, physical, chemical  
24 characteristics and lung burden, those are the  
25 three others?

1 Ilgren

2 A. Right.

3 Q. Let's start with epidemiological,  
4 what epidemiological studies are there that show  
5 that Calidria cannot cause mesothelioma?

6 A. Calidria or chrysotile.

7 Q. I'm talking just about Calidria.

8 A. I'm sorry, I thought you were talking  
9 about -- I mean, as you know, there's never been a  
10 formal analysis of Calidria-exposed workers, but I  
11 would say --

12 MR. WILL: Go ahead.

13 A. -- I would say that there are several  
14 bases for saying that humans exposed to Calidria  
15 probably don't develop mesotheliomas.

16 Q. Let's back up here because that's my  
17 question. You are of the opinion that Calidria  
18 cannot cause mesothelioma in humans?

19 A. Yes.

20 Q. Let's just start over here, and that  
21 opinion is based on several things. The first  
22 thing is animal studies, and we've already talked  
23 about that.

24 MR. WILL: Bob, I want to object to,  
25 I think he told you in the last deposition

Ilgren

that he didn't think chrysotile in general caused mesothelioma. Calidria is a chrysotile, so all of that material in general would also apply to his opinion about Calidria. If you want to focus on which parts of the studies and things are specific to Calidria, that's fine.

MR. BROWNSON: I understand that, but here my question is can Calidria cause mesothelioma, and I'm trying to understand the reasons you say it does not, and to the extent those reasons include information about other types of chrysotile that you relate to this question, that's fine. You can tell us about that. But the question is can Calidria cause mesothelioma and what are the reasons you say it cannot.

A. Well, there were, as you know, the work force at King City that mined, milled the Calidria chrysotile, none of whom, to my knowledge, ever developed mesothelioma nor any asbestos-related disease, to my knowledge.

Q. Now let's stop there.

A. Sure.

Ilgren

1

2 Q. I'm trying to follow this through  
3 logically. You say Calidria cannot cause  
4 mesothelioma for a number of reasons, one is  
5 animal studies. I think we've talked about that.

6 A. Yes.

7 Q. The second then is epidemiology, and  
8 is it fair to say that there has been no formal  
9 epidemiological study of Calidria-exposed workers?

10 A. Yes.

11 Q. But are there other  
12 chrysotile-exposed worker, epidemiological studies  
13 that you think bear on the question of Calidria?

14 A. Sure.

15 Q. And what are those?

16 A. The lack of mesotheliomas in workers  
17 who appeared to have been exposed to pure  
18 chrysotile under different settings. The gas mask  
19 workers who worked only with chrysotile. Certain  
20 friction product industry people who worked only  
21 with chrysotile. The instance of mesotheliomas in  
22 certain cement workers, the mesothelioma incidents  
23 in paper mill workers, I think it was Bill Weiss  
24 in '77 study, there is, I would say,  
25 epidemiologically speaking, eight or ten relevant

1 Ilgren

2 analyses that I think support the view that  
3 chrysotile won't make mesotheliomas.

4 Q. Okay, and all of those studies are  
5 with respect to Canadian chrysotile, would that be  
6 fair to say?

7 A. No.

8 Q. Other than Canadian chrysotile, what  
9 other kind of chrysotile was involved in those  
10 studies?

11 A. Well, there's Obalangero Italian  
12 chrysotile. There is the studies, the so-called  
13 demographic epidemiological studies in Africa of  
14 the miners in Swaziland and Rhodesia where no  
15 mesotheliomas have been reported. I think that's  
16 basically it. Italian and Africa.

17 Q. So you -- it's your opinion that  
18 there are epidemiological studies of workers  
19 exposed to pure chrysotile uncontaminated by any  
20 amphiboles?

21 A. No.

22 Q. Okay.

23 A. Well, to my knowledge, the Obalangero  
24 Italian chrysotile as it's mined does not contain  
25 amphibole. I believe that's the case. I'm not

1 Ilgren

2 entirely sure. I believe that there is very  
3 little, if any, tremolite in the African  
4 Rhodesian -- again, there might be some, I don't  
5 recall, but I think it's minimal.

6 Q. Let me put it to you another way. Is  
7 it your belief that the mesotheliomas that show up  
8 among chrysotile-exposed workers in  
9 epidemiological studies is caused by some other  
10 amphibole exposure that those workers have had,  
11 whether it's tremolite or amosite or crocidolite?

12 A. Yes.

13 Q. Now let's go back then to the  
14 Calidria-exposed workers.

15 A. Yes.

16 Q. And I think you've already told us  
17 that as far as you know, there's no formal  
18 epidemiological study of any workers exposed just  
19 to Calidria, is that fair to say?

20 A. Yes.

21 Q. But you are aware of -- well, let me  
22 strike that.

23 Are you aware of informal studies of  
24 Calidria-exposed workers?

25 A. Yes.

1 Ilgren

2 Q. And what would those be?

3 A. The existence and follow-up -- well,  
4 the follow-up of the King City miners and millers  
5 done between I think 1962 to the present time.

6 Q. Other than the workers at the mining  
7 mill in King City, California, are you aware of  
8 any other group of Calidria-exposed workers who  
9 have been studied but not in some formal reported  
10 epidemiological study, in some informal way?

11 A. Calidria?

12 Q. Right.

13 A. As the Union Carbide fiber?

14 Q. Right.

15 A. No.

16 Q. So if we want to look at workers who  
17 have been exposed to Calidria is the only group of  
18 such workers of whom you're aware of the miners  
19 and millers in King City or are there any others,  
20 that's what I'm trying to get at?

21 A. I know. I think we've got to get the  
22 definitions --

23 MR. WILL: Just answer the -- go  
24 ahead. His question was do you know of  
25 anybody else other than miners and millers

1 Ilgren

2 in King City that were only exposed to  
3 Calidria.

4 A. Calidria is a form of chrysotile or  
5 Calidria is the Union Carbide-specific product.

6 Q. Right. The Union Carbide-specific  
7 Calidria?

8 A. No.

9 Q. Okay, now let's talk about the miners  
10 and millers in King City, California. Have you  
11 done any -- first of all, have you actually  
12 examined or seen any of those workers?

13 A. I met them, I met a few of them.

14 Q. And would that be at some tour you  
15 took of the mine and mill?

16 A. Yes.

17 Q. What I'm wondering is, have you done  
18 any medical examination as a physician of any of  
19 those workers?

20 A. No.

21 Q. Have you done any epidemiological  
22 study or analyses of those workers?

23 A. I've reviewed the medical records.

24 Q. Of who? All of the workers?

25 A. Of all of the workers.

Ilgren

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2

Q. Okay, and how many were there?

3

A. I'd have to go and check my notes. I

4

recall that there were somewhere around 460.

5

Q. And when did you make this review?

6

A. Early May. If I -- of 1995.

7

Q. Okay, and however many they were, you

8

think there was around 460 records?

9

MR. WILL: Records.

10

Q. Records of 460 workers, give or take

11

a few?

12

A. Workers.

13

Q. Okay, so let me ask you about this

14

review you did. In May of 1995, you reviewed the

15

records of some 460 or so workers who worked at

16

the mine or milling in California?

17

A. Yes.

18

Q. And as I understand, you haven't

19

actually physically examined any of those workers,

20

what you saw were records?

21

A. Correct.

22

Q. Now, did these records include x-ray

23

films?

24

A. No.

25

Q. Did they include radiology reports?

1 Ilgren

2 A. Yes.

3 Q. Were you ever provided with any of  
4 the x-ray films in connection with this record  
5 review that you've described?

6 A. No.

7 Q. And in terms of the records that you  
8 reviewed, where did you get the records?

9 A. From Mr. Ed Ryan.

10 Q. And Mr. Ryan is Union Carbide's  
11 lawyer in Chicago, is that right?

12 A. Yes.

13 Q. And was this review that you made in  
14 connection with the Chicago Board of Education  
15 building cases that Mr. Ryan is defending?

16 A. Yes.

17 Q. Do you still have those records or  
18 have you returned them?

19 A. They're being returned.

20 Q. Okay. Have you met Dr. Duane Hyde?

21 A. No.

22 Q. Have you spoken to Dr. Duane Hyde?

23 A. Yes.

24 Q. And you know who he is, he's a  
25 physician in King City, California?

1 Ilgren

2 A. Yes.

3 Q. Retired, I guess?

4 A. Yes.

5 Q. Have you seen any reports prepared by  
6 Dr. Hyde concerning these workers at King City,  
7 California?

8 A. Yes.

9 Q. And how many reports?

10 A. As I recall, one.

11 Q. I'm going to show you before we mark  
12 it, I'll just show you, is this the one that  
13 you've seen?

14 A. I believe so.

15 MR. BROWNSON: Why don't we mark  
16 that as I guess 26.

17 (Whereupon, letter dated July 31st,  
18 1989 from Dr. Duane Hyde to John L. Myers  
19 marked Ilgren Exhibit 26 for  
20 identification, as of this date.)

21 Q. Exhibit 26 is a July 31st, 1989  
22 letter from Dr. Duane Hyde to a John L. Myers of  
23 KCAC, Inc., and I'll ask you have you ever seen  
24 this letter before today?

25 A. I believe so.

1 Ilgren

2 Q. And you believe this is the letter  
3 you were just talking about that you saw from Dr.  
4 Hyde?

5 A. Yes.

6 Q. Okay. Now in this letter, Exhibit  
7 26, Dr. Hyde makes reference to a prior report he  
8 had prepared. If you look up at the top, he says,  
9 "This updated my February 19th, 1988 letter."  
10 Have you ever seen the February 19th, 1988 letter?

11 A. I may have but I don't recall. I've  
12 certainly seen this letter.

13 Q. Okay. Do you know what the February  
14 19th, 1988 letter said?

15 A. I can't recall.

16 Q. Do you know what the occasion was  
17 that caused Dr. Hyde to write this July letter of  
18 July 31st, 1989?

19 MR. WILL: Do you mean beyond what  
20 it says in the letter?

21 MR. BROWNSON: Right.

22 Q. I'm wondering if you have any  
23 information about what led up to this letter.

24 A. No.

25 Q. Have you seen any other

1 Ilgren

2 correspondence among Myers and Hyde, either from  
3 Myers or to Myers, which is related to this report  
4 or seems to be?

5 A. No.

6 Q. So what you had seen before would be  
7 this report and you might have seen the other  
8 report of February 19th?

9 A. Yes.

10 Q. And where did you get -- when you saw  
11 this report before today, how did it come into  
12 your possession, in what context? And who did it  
13 come from?

14 A. I think from Mr. Gerson, but I don't  
15 recall. Probably Mr. Gerson.

16 Q. And was that provided to you in  
17 connection with this work you were doing,  
18 reviewing the records of these workers for this  
19 Chicago case, or was it provided in connection  
20 with some other work you were doing?

21 A. Other work. I think it was just  
22 general work on the effects of Calidria fiber.  
23 Maybe a year ago.

24 Q. And your communications with Dr.  
25 Hyde -- let me ask you about that. First of all,

Ilgren

1

2 have you actually met with Dr. Hyde?

3 A. No.

4 Q. Did you talk to him by telephone?

5 A. Yes.

6 Q. And do you remember if you talked to  
7 him after you came into possession of this letter  
8 or before?

9 A. I only -- as I recall, I talked to  
10 him once, and I don't recall whether it was before  
11 or after.

12 Q. Do you remember if your conversation  
13 with him or if in your conversation with him, you  
14 reviewed the matters that he describes in this  
15 letter?

16 A. I don't remember what we talked  
17 about.

18 Q. Okay. Now this letter, Exhibit 26,  
19 I've highlighted toward the bottom of the first  
20 page a statement by Dr. Hyde which reads, "Because  
21 the program has been in existence for only 26  
22 years and because of its limited population size,  
23 it is too soon to determine definitely whether or  
24 not asbestos-related disease may occur." Do you  
25 see that statement?

1 Ilgren

2 A. Yes.

3 Q. Okay. First of all, do you agree  
4 with that statement?

5 A. Not entirely.

6 Q. What portions of it do you agree with  
7 or disagree with?

8 A. Well, there are now 30-year workers,  
9 and I think we've gotten to the point where a  
10 sufficient time has elapsed that one might expect  
11 to see some asbestos-related disease, if there was  
12 some asbestos-related disease.

13 Q. And do you know as of the date of  
14 this letter of July 31, 1980 -- strike that. As  
15 of July 31st, 1989, the program had been in  
16 existence for 26 years. Do you agree with that  
17 part of it?

18 A. Yes.

19 Q. Are you saying that it's now 1995, so  
20 we got an additional six years so that's where you  
21 get the 30 years?

22 A. I'm just aware of men that have  
23 worked between --

24 MR. WILL: Are we six years passed  
25 that?

Ilgren

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2

THE WITNESS: All right, fair

3

enough.

4

MR. WILL: Listen to his question,

5

answer his question.

6

Q. You made the statement that we're now

7

30 years out, and I understand what you meant by

8

that is we today in 1995?

9

A. Yes.

10

Q. What I want to do is go back to

11

Exhibit 26, Dr. Hyde's letter of 1989. At that

12

point he said that the program had been in

13

existence for 26 years. You agree with that part

14

of his statement?

15

A. Yes.

16

Q. And then he says because of its

17

limited population size, do you agree or disagree

18

that there was a limited population size that

19

would cause him to be uncertain as to whether any

20

asbestos-related disease will occur?

21

A. I don't know what the population size

22

would have been.

23

Q. Let me ask you this. Of the 450 or

24

so workers who Dr. Hyde talks about and whose

25

records you reviewed, first of all, I assume those

Ilgren

1  
2 are the same workers?

3 A. Yes.

4 Q. You said about 460, he says about  
5 450, so it sounds like we got the same group of  
6 people, right?

7 A. Yes.

8 Q. Of those workers, do you know how  
9 many as of today had worked at the mine or mill  
10 for 30 years? In other words, how many of those  
11 were original workers?

12 A. I think there's at least ten today.

13 Q. And the records that you reviewed,  
14 were those sufficient in detail to tell you how  
15 long these people had worked there?

16 A. No.

17 Q. But you were able to find at least  
18 ten of them who had worked for 30 years?

19 A. Mr. Ryan showed me a document where  
20 the people who worked 20 and 30 years, I think 20,  
21 25 and 30 years, are listed.

22 Q. And did this appear to be some  
23 document that Mr. Ryan prepared or was it some  
24 document that appeared to come from KCAC or could  
25 you tell?

1 Ilgren

2 A. I couldn't tell, I think he prepared  
3 it.

4 MR. WILL: If you don't know, don't  
5 guess.

6 THE WITNESS: I'm sorry.

7 Q. Now when you reviewed the 450 or 60  
8 or so records -- first of all, did you actually  
9 review all of them?

10 A. I reviewed what I was supplied with.

11 Q. Were you supplied with all 450 or so?

12 A. Yes.

13 MR. WILL: Excuse me just a second.

14 (Witness and counsel confer)

15 MR. BROWNSON: You've had an  
16 off-the-record conversation with Mr. Will.  
17 What was the last question pending before?

18 MR. WILL: The reason, Bob, there's  
19 no mystery, I think there was a  
20 misunderstanding between the two of you  
21 that I was aware of from having talked with  
22 Ed before. Ask him the question again  
23 about how many workers he had records to  
24 review.

25 Q. How many workers' records did you

Ilgren

1

2 have to review?

3 A. About 375.

4 Q. And those were the records that you  
5 got from Mr. Ryan?

6 A. Yes.

7 Q. Okay. Now, did that group of records  
8 appear to be the complete medical file of those  
9 375 or so workers or did it appear to be selected  
10 excerpts from the medical file of those workers,  
11 from what you could tell?

12 A. I couldn't tell.

13 Q. Were there radiology reports for all  
14 of the workers whose records you reviewed?

15 A. No.

16 Q. About how many of those workers in  
17 your best recollection had radiology reports?

18 A. I can't recall.

19 Q. Was it more than half of them or less  
20 than half?

21 A. I haven't tabulated those.

22 Q. Were there pulmonary function records  
23 or reports on some of those workers?

24 A. Yes.

25 Q. And about how many pulmonary

Ilgren

1

2 functions did you see?

3 A. I can't recall.

4 Q. It would be fair to say, in any  
5 event, that some amount of the workers' records  
6 that you saw had radiology reports and some amount  
7 had pulmonary functions, you did see those data  
8 for some workers?

9 A. Yes.

10 Q. And in addition to the medical  
11 records, did there also appear to be included in  
12 this group of records, employment records, from  
13 either Union Carbide or KCAC, Inc.?

14 A. Yes.

15 Q. And were there such employment  
16 records for all of the workers whose records you  
17 reviewed or just for some of them?

18 A. Some.

19 Q. And can you give me any estimate as  
20 to how many of those there were?

21 A. No.

22 Q. And physically what did these records  
23 look like? Was there a separate folder or file  
24 for each worker?

25 A. Yes.

1 Ilgren

2 Q. And would that be like a manila  
3 folder? I'm just wondering what the physical  
4 layout of these were.

5 A. Manila folder.

6 Q. So for example, there would be a  
7 manila folder for Mr. Smith?

8 A. Yes.

9 Q. And then whatever records there were  
10 on Mr. Smith would be in that folder?

11 A. Yes.

12 Q. So there were approximately 375  
13 manila folders?

14 A. 460 manila folders.

15 Q. Okay, but I don't get the difference  
16 between the 375 and the 460. Were some of them  
17 empty?

18 A. Yes.

19 Q. So there were about 460 manila  
20 folders but only about 375 of them actually  
21 contained records that you could review?

22 A. Correct.

23 Q. Do you know what happened to the  
24 records in the other folders that were empty?

25 A. No.

1 Ilgren

2 MR. WILL: Assuming there ever were  
3 any records in those folders.

4 MR. BROWNSON: Right.

5 Q. Do you know where the manila folders  
6 came from? I mean before Mr. Ryan got his hands  
7 on them.

8 A. No.

9 Q. Now Dr. Hyde had testified in a  
10 different matter that the medical records were  
11 maintained either at his clinic or at the King  
12 City Memorial Hospital. Could you tell from  
13 looking at these manila folders whether they were  
14 folders that looked like they came out of Dr.  
15 Hyde's office or did they look like they were  
16 hospital folders?

17 A. I couldn't tell.

18 Q. Did you make any inquiry to determine  
19 where the x-ray films were?

20 A. No.

21 Q. And with respect to those workers who  
22 had employment records, were those employment  
23 records stuck in their manila folders or were  
24 those filed separately when you reviewed them?

25 A. In the manila folders.

1 Ilgren

2 Q. And when you spoke to Dr. Hyde on the  
3 telephone, was this after you had come into  
4 possession of the records or was this before?

5 A. Before.

6 Q. So you have not had a chance to speak  
7 to Dr. Hyde concerning specific individuals whose  
8 records you reviewed, would that be fair to say?

9 A. Fair.

10 Q. And the records, as I understand it,  
11 are currently in your possession but in the  
12 process of being shipped back to Mr. Ryan?

13 A. Yes.

14 MR. WILL: Clarify how many records,  
15 he doesn't have all of them.

16 Q. The 375?

17 A. No.

18 Q. Where did you review the records?

19 A. Most of them in Chicago.

20 Q. So you actually went to Mr. Ryan's  
21 office and reviewed the records there physically?

22 A. Yes.

23 Q. And did you then obtain copies of  
24 certain of the records?

25 A. Yes.

1 Ilgren

2 Q. And which ones did you obtain copies  
3 of?

4 A. The ones I didn't have time to  
5 review, finish reviewing in Chicago.

6 Q. I see, so you reviewed some in  
7 Chicago, you didn't get done so you took some with  
8 you to finish your review?

9 A. They were sent to me.

10 Q. Those you've now completed and now  
11 you're sending those back?

12 A. Correct.

13 Q. Okay. And then with respect to these  
14 particular records, had you ever seen any of those  
15 before this review you've told us about with Mr.  
16 Ryan?

17 A. No.

18 Q. Do you know who it was who collected  
19 those records to get them together for Mr. Ryan  
20 to --

21 A. No.

22 Q. Do you know how long it took to  
23 collect the records?

24 A. No.

25 Q. In any event, in addition to the

1 Ilgren

2 physical manila folders with records in them, was  
3 there any sort of additional index or reports or  
4 summaries?

5 MR. GOLDMAN: You mean in addition  
6 to the document that Ed Ryan showed him?

7 Q. Well, it would include that document.

8 A. I think so. I think there was a  
9 listing of the workers, but I can't recall.

10 Q. So someone had prepared just a list  
11 of the workers?

12 A. As I recall.

13 Q. Now is this that same list you told  
14 us about earlier that broke out the people with  
15 the long exposures?

16 A. No.

17 Q. So as you recall it, there was a  
18 separate list then that somebody had prepared of  
19 the workers with the longer exposures?

20 A. Yes.

21 Q. And what did that list look like?

22 A. Just a one or two-page list.

23 Q. How were the workers categorized?  
24 Was it 20 years of exposure, 30 years?

25 A. Yes.

1 Ilgren

2 Q. For instance, was there a group of  
3 workers who had 30 years of exposure?

4 A. Yes, as I recall.

5 Q. Okay, and about how many workers were  
6 in that group?

7 A. I can't recall specifically. I  
8 believe around ten.

9 Q. And in addition to those with 30  
10 years of exposure, was there a breakdown then with  
11 those who had 25 years of exposure?

12 A. I believe so, but I can't remember  
13 exactly.

14 Q. Do you recall as best you can that  
15 this was broken down in five-year increments or  
16 was it one-year increments or something else?

17 A. I believe there were only those who  
18 had worked 20, 25 and 30 years.

19 Q. And in the group of 25-year workers,  
20 can you give us some estimate of how many workers  
21 were in that group?

22 A. I don't recall.

23 Q. How about the 20-year workers?

24 A. I think there were 20 or 30.

25 Q. And would there have been more than

1 Ilgren

2 30 in the 25-year group?

3 A. I don't recall.

4 Q. So if we could summarize, there were  
5 approximately ten, give or take some, in the  
6 30-year group, approximately 20 to 30 in the  
7 20-year group, and then some number in the 25-year  
8 group that you can't remember?

9 A. Right.

10 Q. Was the 25-year group generally of  
11 that same range, in other words, it wasn't 200  
12 people, was it?

13 A. No.

14 Q. Maybe a dozen or two or something in  
15 that order?

16 A. I really don't -- maybe five or ten.

17 Q. Okay, and were the records of these  
18 people who had the 20,25 and 30-year exposures  
19 kept or indexed separately so that you had easy  
20 reference to them?

21 A. No.

22 Q. Were these files kept alphabetically  
23 or haphazardly or chronologically? What was the  
24 order of them?

25 A. Alphabetical.

1 Ilgren

2 Q. Now in your review of these records,  
3 it sounds like you spent some time in Chicago  
4 reviewing them. How long did you spend in  
5 Chicago?

6 A. Two days.

7 Q. And did you spend that entire two  
8 days reviewing these records?

9 A. Most of the two days, yes.

10 Q. And in addition to that, then, you  
11 didn't finish so you had some sent home with you?

12 A. Yes.

13 Q. How long did you spend on those?

14 A. Another day or two.

15 Q. So after this total review of, say,  
16 three to four days in Chicago and Philadelphia,  
17 did you manage to get through all 375 or so?

18 A. Yes.

19 Q. So I assume that you also as part of  
20 that review saw these people with the 20 to  
21 30-year exposures?

22 A. I believe so.

23 Q. Now did you prepare any report or  
24 letters or notes concerning your review of the  
25 records?

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A. Notes.

3

Q. And what form did those notes take?

4

Are they typed up or handwritten?

5

A. Typed.

6

Q. And have you provided those notes to

7

anybody?

8

A. No.

9

Q. So they're still in your possession?

10

A. Yes.

11

Q. Have you been asked or do you intend

12

to further refine those notes into some sort of

13

report or letter?

14

A. I haven't been asked to do that.

15

Q. Are you doing that or are the notes

16

just sitting there?

17

A. They're sitting.

18

Q. Now in your review -- at the time you

19

reviewed these records in May of 1995, did they

20

appear to be current? In other words, there were

21

1994, 1995 records involved?

22

A. For a few people.

23

Q. Okay. Did the records indicate to

24

you how many people were still employed as of 1995

25

and how many were former employees?

1 Ilgren

2 A. No.

3 Q. You couldn't tell that from what they  
4 had there?

5 A. No.

6 Q. Could you tell, however, from  
7 reviewing the records that some of them were  
8 former employees?

9 A. Yes.

10 Q. Because the records would just stop  
11 at like some date?

12 A. It was termination notice or  
13 something.

14 Q. And do you have any estimate as to  
15 how many of the workers were current employees and  
16 how many were former employees?

17 A. No.

18 Q. Have you made any request or inquiry  
19 for the records of the remaining people who just  
20 had the manila folders without records in them?

21 MR. WILL: Assuming there are such  
22 records..

23 Q. In other words, are you trying to  
24 find or locate those records?

25 A. I requested those.

Ilgren

1

2

Q. And who did you make that request to?

3

A. Mr. Ryan.

4

Q. And do you know if Mr. Ryan is making  
5 any inquiry or work in trying to find those?

6

A. I don't know.

7

Q. So you just simply don't know what  
8 the status of those are?

9

A. Correct.

10

Q. Now, did you draw any conclusions  
11 yourself from your review of these records?

12

A. Yes.

13

Q. And what conclusions did you draw?

14

A. No asbestos-related disease based on  
15 what I saw.

16

Q. Now do you know if the group of 450  
17 or 60 or so manila folders you were provided  
18 constituted all present and former workers who  
19 have worked in either the mine or the mill at King  
20 City since it was opened?

21

A. I don't know.

22

Q. Do you have any indication that there  
23 may have been other workers at the mine or mill  
24 who are not included in the 460 or so?

25

A. No.

1 Ilgren

2 Q. At least among the 375 or so that you  
3 did see, you did not see evidence of  
4 asbestos-related disease, is that what you're  
5 telling us?

6 A. Correct.

7 Q. And with respect to these 375 or so  
8 workers, could you tell how many of those people  
9 worked at the mine?

10 A. No.

11 Q. Could you tell how many of those  
12 workers worked in the mill? In other words, was  
13 there something in their records that would tell  
14 you where they worked?

15 A. Occasionally, but I couldn't tell how  
16 many worked in the mill.

17 Q. Are you familiar with the term  
18 "bagger"?

19 A. Yes.

20 Q. In those 375 records, did you see  
21 some who were identified as baggers?

22 A. I believe a few.

23 Q. Do you have any estimate of how many?

24 A. No.

25 Q. But there were some that were so

1 Ilgren

2 identified?

3 A. I believe so.

4 Q. Okay. From what you could tell of  
5 these records, were all of these people employed  
6 somewhere in the King City operation, that is the  
7 mine or the mill or the office or the truck driver  
8 or somewhere involved with that operation? Is  
9 that who these people were?

10 A. Yes.

11 Q. In other words, they weren't Union  
12 Carbide employees from Niagara Falls, New York or  
13 someplace, they all appeared to be from these  
14 operations in King City?

15 A. Yes.

16 Q. And do you have any breakdown for us  
17 as to how many were men and how many were women?

18 A. No, the majority were men.

19 Q. Could you tell if some of them were  
20 truck drivers?

21 A. I think so but I can't quite recall.

22 Q. Okay. Now, I take it I think you  
23 told us you didn't see any mesotheliomas in these  
24 375 workers, correct?

25 A. Correct.

1 Ilgren

2 Q. Did you see any lung cancers?

3 A. I don't believe so.

4 Q. Were there any pleural plaques  
5 reported on any of the x-ray reports that you saw?

6 A. I think one unilateral plaque. I'd  
7 have to go and recheck, I think it's just one  
8 unilateral plaque.

9 Q. And did you make some reference in  
10 your notes to that particular reference?

11 A. Yes.

12 Q. Did you see any pleural thickening  
13 reported in any of the radiology reports?

14 A. I believe for a couple.

15 Q. Now Dr. Hyde in his letter, Exhibit  
16 26, references one worker on the last page whose  
17 x-rays he sent to Mount Sinai and Dr. Selikoff, do  
18 you see that?

19 A. Yes.

20 Q. Were you able to determine who that  
21 worker was? Did you come across that worker?

22 A. I don't recall. I don't believe so.  
23 I just don't recall a correspondence.

24 Q. Did you see any record, report or  
25 correspondence from Mount Sinai in the group of

Ilgren

1

2 375?

3 A. I may have but I don't recall.

4 Q. If you did, do you know if you made a  
5 reference to that in your notes?

6 A. I may have.

7 Q. Could you tell from your review of  
8 the records how many of these workers were  
9 smokers?

10 A. Not precisely.

11 Q. Do you have some general sense that  
12 you can give us as to how many were smokers, did  
13 it appear to be half or 10 percent or 90 percent?

14 A. Like the majority, but I couldn't  
15 say.

16 Q. Were there smoking histories given in  
17 the records that you saw?

18 A. As I recall, there was a smoking  
19 history for many of them.

20 Q. Was there some sort of form or check  
21 list for the pre-employment physicals of these  
22 workers that were included in the records that you  
23 reviewed?

24 A. I believe so, yes.

25 Q. And from what you could tell, did

1 Ilgren

2 there appear to be some sort of regular, whether  
3 it's annual or otherwise, follow-up to these  
4 workers that had a check list that was included in  
5 the records?

6 A. I believe so.

7 Q. And do you know if the pre-employment  
8 form or check list had a category for smokers or  
9 for smoking?

10 A. I believe so.

11 Q. And based upon your review, were you  
12 able to determine the amount of smoking? In other  
13 words, was there some reference to one pack or two  
14 packs?

15 A. I believe -- again, I don't recall.  
16 I believe there's a pack year.

17 MR. WILL: In the form you're  
18 talking about?

19 A. Yes, I believe so.

20 Q. Did most or all of these records have  
21 a medical history included?

22 A. Some. Not much.

23 Q. Some but not most. So it would be a  
24 minority of them?

25 A. I can't recall.

1 Ilgren

2 Q. Now Dr. Hyde at his deposition in the  
3 Chicago case mentioned that Dr. Hilton Lewinsohn  
4 had come out to King City in about 1985 and taken  
5 a look at these records. Did you see any reports  
6 or records or documents of any type in the medical  
7 records that made reference to this review by Dr.  
8 Lewinsohn?

9 A. No.

10 Q. Have you ever seen Dr. Lewinsohn's  
11 report?

12 A. Yes.

13 Q. I think in an earlier session of your  
14 deposition you told us that you had seen his  
15 report. Have you seen any updated material from  
16 Dr. Lewinsohn concerning these workers other than  
17 that report?

18 A. No.

19 Q. Now other than Dr. Lewinsohn, do you  
20 know anyone else who has reviewed the records of  
21 these workers?

22 A. No.

23 MR. WILL: Other than Dr. Lewinsohn?

24 MR. BROWNSON: Right.

25 A. Well, Dr. Hyde.

1 Ilgren

2 Q. Now I understand Dr. Barrett has  
3 reviewed some records of these workers. Are you  
4 familiar with that review of Dr. Peter Barrett?

5 A. I just know that he made a review,  
6 I'm not familiar with anything about it.

7 Q. So as far as you know, that review  
8 was done independently of yours, in other words  
9 you didn't collaborate with Dr. Barrett on a joint  
10 review?

11 A. No.

12 Q. And have you seen any reports or  
13 documents that Dr. Barrett generated in connection  
14 with his review?

15 A. No.

16 Q. Let's go back to the Exhibit 26, and  
17 I was talking about this reference that Dr. Hyde  
18 made in the last paragraph of the first page that  
19 is highlighted on the exhibit?

20 A. Yes.

21 Q. And you had told us earlier that you  
22 disagreed with a portion of this, I want to follow  
23 up now and continue and ask you what specific  
24 things you disagree with in that statement.

25 A. Well, I think there's been sufficient

1 Ilgren

2 time to note asbestos-related disease.

3 Q. Okay, and would that include  
4 mesothelioma?

5 A. Yes.

6 Q. And how many of the approximately 375  
7 records that you reviewed as of May of 1995 had a  
8 20-year or greater employment?

9 A. I can't recall.

10 Q. Was there any indication in the  
11 records that you reviewed as to the exposures that  
12 people had to asbestos?

13 A. No.

14 Q. Was there any indication in the  
15 records as to which of those people were exposed  
16 to asbestos?

17 A. No.

18 Q. So you're saying that as of 1995, if  
19 there was asbestos-related disease, you would  
20 expect to see some evidence of it?

21 A. Yes.

22 Q. But wouldn't you need to know how  
23 many of those workers were exposed at least 20  
24 years?

25 A. Yes.

1 Ilgren

2 Q. Is that data contained in your notes?

3 A. I think so. I think there's some --

4 Q. Now, could you tell from your review  
5 of the records as to whether any of these  
6 individuals had made a workers' compensation  
7 claim?

8 A. No.

9 Q. Dr. Hyde in his letter Exhibit 26 in  
10 the second to the last paragraph on the first page  
11 states that there were annual pulmonary function  
12 tests on the workers. You had told us earlier  
13 that you saw some pulmonary function data but you  
14 didn't see it on all of them, is that right?

15 A. Correct.

16 Q. From what you could see, did it  
17 appear that these workers were getting annual  
18 pulmonary function exams?

19 A. Many of them did.

20 Q. And could you tell from your review  
21 of the records whether the pulmonary function  
22 exams were being given only to those people  
23 exposed to asbestos as opposed to other people?

24 A. No.

25 Q. You did see that some appeared to be

1 Ilgren

2 getting the annual pulmonary function exams and  
3 some did not?

4 A. Yes.

5 Q. And I guess what I'm wondering is  
6 were you able to correlate that with any  
7 particular jobs or exposure to asbestos or  
8 anything else?

9 A. No.

10 Q. Were you able to determine when the  
11 annual pulmonary function exams began?

12 A. No.

13 Q. And were you able to determine from  
14 the records whether the annual pulmonary function  
15 exams were being done in any way in conjunction  
16 with OSHA requirements?

17 A. No.

18 Q. If you look at Dr. Hyde's letter  
19 where we're talking about the pulmonary function  
20 exams in that second to last paragraph, it says  
21 that those have been done since 1972. Do you see  
22 that reference?

23 A. Yes.

24 Q. Do you know why they were begun in  
25 1972?

1 Ilgren

2 A. No.

3 Q. Are you familiar with the fact that  
4 the OSHA asbestos regulation began in about 1972?

5 A. Yes.

6 Q. And do you have any indication one  
7 way or another if these annual pulmonary function  
8 exams were begun in connection with or conjunction  
9 with the OSHA requirements?

10 A. No.

11 Q. Then he says there's been annual  
12 sputum cytology from '80 to '83. Do you know what  
13 he's talking about there?

14 A. Yes.

15 Q. And what's that?

16 A. Looking at the sputum saliva for  
17 cellular changes.

18 MR. GERSON: Can we go off the  
19 record for one minute.

20 MR. BROWNSON: Sure.

21 (Discussion off the record)

22 Q. In your review of the records did you  
23 see reports of this sputum cytology?

24 A. Yes.

25 Q. What form did these reports take?

1 Ilgren

2 What was reported there, what did they look like?

3 A. It was, I don't recall exactly, just  
4 a form where they reported number of cells, type  
5 of changes, normal dysplastic, metaplastic cancer.  
6 Some note about smoking just half page form  
7 perhaps.

8 Q. And as far as you know, does the  
9 sputum cytology have anything to do with  
10 asbestos-related changes?

11 A. Presumably.

12 Q. Well, what they're looking for there  
13 really is any cancers or precursor to cancers, is  
14 that correct?

15 A. Yes.

16 Q. In layman's terms?

17 A. Yes.

18 Q. Whether or not it's related to  
19 asbestos or not, would that be fair to say?

20 A. Yes. That's correct.

21 Q. Okay. Then they speak of an annual  
22 stool, this is Dr. Hyde, guaiac?

23 A. Guaiac.

24 Q. I have to confess I don't know what  
25 that is?

1 Ilgren

2 A. Looking for blood in the stool.

3 Q. And in your view, does that have any  
4 relevance to any asbestos-related disease?

5 A. No.

6 Q. It's more of a gastrointestinal sort  
7 of thing?

8 A. Colon cancer screen.

9 Q. Before May of 1995, had you received  
10 any information on the medical condition of the  
11 King City workers at the mine and mill?

12 MR. WILL: You mean any detailed  
13 documents as opposed to just something a  
14 lawyer might have said like --

15 MR. BROWNSON: Right. Any medical  
16 records on these workers.

17 A. No.

18 Q. Have you ever seen any medical  
19 records concerning workers at either the Atlas or  
20 the Johns Manville facilities?

21 A. No.

22 Q. At or near Coalinga?

23 A. No.

24 Q. You know what I'm talking about when  
25 I refer to the Atlas or Johns Manville facilities?

1 Ilgren

2 A. Yes.

3 Q. Are you aware of anyone, any  
4 physician or anyone else who has reviewed those  
5 records of those workers and studied those  
6 workers?

7 A. No.

8 Q. Were you able in your review of the  
9 records of the King City workers to correlate any  
10 of the particular workers with particular levels  
11 of exposure?

12 A. No.

13 Q. Have you seen the data -- and I may  
14 have asked you this before, I forgot, but have you  
15 seen the data from Dr. Harrison Rhodes and other  
16 industrial hygienists concerning the air levels at  
17 the King City mine and mill?

18 A. Yes.

19 Q. And you're familiar with the fact  
20 that this was generally done on a quarterly basis  
21 sometimes more often over the years?

22 A. Seemed like once a year. I wasn't  
23 familiar with quarterly basis.

24 Q. In any event, it was done on a  
25 regular basis, you've seen certain of those

1 Ilgren

2 records?

3 A. Yes.

4 Q. Do you know if you've seen all of  
5 them?

6 A. I don't know.

7 Q. But from your review of those  
8 records, are you familiar with the fact that they  
9 would indicate that certain operations in the mill  
10 had higher exposures than others?

11 A. Yes.

12 Q. And do you remember seeing reference  
13 to the bagging area?

14 A. Yes.

15 Q. And do you remember seeing reference  
16 that those levels were generally the highest  
17 airborne fiber levels in the mill?

18 A. Yes.

19 Q. And what I'm wondering is, were you  
20 able to tell from reviewing the medical records  
21 which of the workers would have been exposed to  
22 those air levels in the bagging area?

23 A. No.

24 MR. WILL: Other than those that  
25 indicated they were baggers.

Ilgren

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2 Q. That's why I asked the earlier --

3 A. It's part of the same question you  
4 asked before.

5 Q. I had asked earlier about the  
6 baggers, would it be fair to say what we do know  
7 is that at least some of these workers were  
8 identified as baggers, whatever that might mean?

9 A. Yes.

10 Q. And do you think from your own review  
11 of both the industrial hygiene data and the  
12 medical records that we would be able to draw any  
13 correlation between these people described as  
14 baggers and what was called the bagging area in  
15 this industrial hygiene area or hygiene data?

16 A. Just for those marked as baggers  
17 perhaps.

18 Q. So is it your belief that the people  
19 described in the medical records as baggers would  
20 be the people who worked in the bagging area of  
21 the mill?

22 A. Yes.

23 Q. Okay. And do you have any  
24 information as to approximately how many of these  
25 baggers there were?

Ilgren

1

2

A. No.

3

Q. Do you know whether any of the baggers had fell into these categories of the 20, 25 and 30-year exposures?

6

A. I don't recall.

7

Q. Is there any further work that you intend to do or are in the process of doing with respect to the review of the records of these King City workers?

11

A. Yes.

12

Q. And what's that?

13

A. Well, I asked for the employment duration information, the number of baggers and eventually follow-up for ones for which we have very little information.

17

Q. And you've made this request to whom?

18

A. Mr. Ryan.

19

Q. And do you have any information as to whether any of that data is available?

21

A. I don't know.

22

Q. In any event, if it does become available, what is it that you want to do or would like to do with that data?

25

A. Just want to see how the workers that

1 Ilgren

2 were presumably exposed the most and the longest  
3 are doing now.

4 Q. Okay, based upon what you know about  
5 the exposures to Calidria fiber in the mill, is it  
6 your understanding that the highest exposures were  
7 in the bagging area or do you have some other  
8 understanding?

9 A. As I recall, that's the case. I  
10 don't recall the levels in any detailed way for  
11 the very specific jobs.

12 Q. I'm just asking in a general sense  
13 the higher exposures were in the bagging area?

14 A. Yes. That's my perception.

15 Q. Is it your understanding that the  
16 mill itself has operated as what they call wet  
17 process?

18 A. Yes.

19 Q. I may have asked you this before, but  
20 have you visited the mill?

21 A. Yes.

22 Q. You have. On how many occasions?

23 A. Once.

24 Q. And when was that?

25 A. Three months ago.

1 Ilgren

2 Q. And on that visit which has been more  
3 recent than when Trevor and I were out there, you  
4 saw -- first of all, was the mill in operation at  
5 that point?

6 A. Yes, it was.

7 Q. Did you notice that it was what they  
8 called the wet process throughout the mill?

9 A. Yes.

10 Q. And then in the bagging area, the  
11 fiber would be in a dry state? Did you observe  
12 that?

13 A. Yes.

14 Q. Was there any other part of the mill  
15 or part of the process where the fiber was in a  
16 dry state that you could see other than when it  
17 came off the end of this bagging area?

18 A. I don't believe so. I don't recall.

19 Q. And did you also visit the mine?

20 A. Yes.

21 Q. And was the mine in operation when  
22 you visited it?

23 A. Yes.

24 Q. And at that point how many workers  
25 were working in the mine?

1 Ilgren

2 A. Two.

3 Q. In addition, when you visited the  
4 facility, were there truck drivers driving between  
5 the mine and the mill?

6 A. Yes.

7 Q. And about how many of those were  
8 there that you could see?

9 A. Two.

10 Q. In terms of workers, as you  
11 understand this operation, out there with the mine  
12 and the trucks and the mill, do you have some  
13 general understanding as to which types of workers  
14 were exposed to airborne Calidria fiber?

15 A. Generally.

16 Q. And do you have any understanding  
17 whether the miners in the mine itself were exposed  
18 to airborne Calidria fiber?

19 A. Yes.

20 Q. And what is your understanding of  
21 that?

22 A. They were.

23 Q. And with respect to the levels they  
24 may have been exposed to, have you seen data on  
25 that?

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1

2 A. Yes.

3 Q. And would these be these industrial  
4 hygiene data by Dr. RHodes and McDaniels and those  
5 people?

6 A. Yes.

7 Q. With respect to the truck drivers  
8 operating between the mine and the mill, do you  
9 have any understanding as to whether they were  
10 exposed to airborne Calidria fiber?

11 A. I think so.

12 Q. Have you seen any data on what their  
13 exposure may have been?

14 A. I believe so.

15 Q. Would this again be in the same  
16 category, the Union Carbide industrial hygiene  
17 data?

18 A. Yes.

19 Q. And with respect to the mill we've  
20 talked about that you've seen the industrial  
21 hygiene data there?

22 A. Yes.

23 Q. Other than the mine, the truckers and  
24 the mill, are there any other parts to this King  
25 City facility that you are aware of where these

1 Ilgren

2 375 workers could have been?

3 A. No.

4 Q. Could you make any determination from  
5 the records that you saw as to whether any of  
6 these people were office workers?

7 A. Yes.

8 Q. And what did you learn about that?

9 A. Just there was some mention they  
10 worked in the office.

11 MR. BROWNSON: I guess that's all.

12 We're going to move on to a new area, so  
13 maybe now is the time to take our break.

14 (Lunch recess: 11:55 a.m.)

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## Afternoon Session

3

1:20 p.m.

4

E D I L G R E N, M.D., previously

5

sworn, resumed:

6

BY MR. BROWNSON:

7

Q. I have a couple more questions, Dr.

8

Ilgren, concerning the Union Carbide -- or I mean

9

the King City workers. Going back to your review

10

of the records that we've discussed before lunch,

11

I'm not entirely clear exactly how this review

12

came about. You got the records from Mr. Ryan,

13

who is Union Carbide's lawyer in Chicago, correct?

14

A. Yes.

15

Q. And was it your understanding that it

16

was Mr. Ryan's office who actually collected the

17

records or how did they get to his office in

18

Chicago?

19

A. Don't know.

20

Q. Were you involved in any of the work

21

out in California in collecting the records and

22

locating them or any of that sort of thing?

23

A. No.

24

Q. When you made your visit out there

25

recently that you just told us about, did you make

Ilgren

1  
2 any visit to the hospital or to the -- well, did  
3 you make any visit to the hospital to see how the  
4 records were kept and where they were kept and  
5 that kind of stuff?

6 A. No.

7 Q. Did you make any inquiries of  
8 anybody, whether at KCAC or the hospital or Dr.  
9 Hyde's office or anywhere else, about how these  
10 records are kept and in order to familiarize  
11 yourself with where they were and what they were  
12 and that sort of thing?

13 A. No.

14 Q. So was your visit related in any way  
15 to the records or was it related to just visiting  
16 the facility?

17 A. Facility.

18 Q. Did you get any information from Mr.  
19 Ryan's offices who actually did the physical  
20 collecting of the records out in California?

21 A. No.

22 Q. And other than Mr. Ryan, have you  
23 spoken to anyone else on the topic of reviewing  
24 these King City worker records?

25 A. Mr. Stang.

1 Ilgren

2 Q. And who is Mr. Stang?

3 A. He's an associate of Mr. Ryan.

4 Q. Okay. And when you -- just so I'm  
5 clear when you first -- strike that.

6 I take it that you had heard in the  
7 past from somebody that the workers out there had  
8 not gotten sick or did not have asbestos-related  
9 disease?

10 A. True.

11 Q. Do you remember when you first heard  
12 that?

13 A. Couple of years ago.

14 Q. And do you know who told you that?

15 A. Mr. Gerson.

16 Q. And did Mr. Gerson indicate at that  
17 point where he got that information from?

18 A. No.

19 Q. Did Mr. Gerson show you then or later  
20 any documentation to that effect?

21 A. No.

22 Q. Was the first documentation you saw  
23 to that effect that letter that we've marked as  
24 Exhibit 26?

25 A. Yes.

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Q. And did you see that letter before or after you went to Chicago to review the records?

A. Before.

Q. Do you know whose idea it was to actually collect the King City records and review them?

A. Not really.

Q. Were you aware that this was going to be done or in the process of being done before you went out to visit in Chicago to actually see them?

A. Yes.

Q. And can you give us a time frame of when you first became aware that this process was under way of collecting and reviewing the records?

A. The actual process of collecting the records.

Q. Right, because I mean I assume it took a little time, it didn't probably happen in a day.

A. I don't know.

Q. At some point would it be fair to say somebody told you "We're collecting the King City records, we want you to review them"?

A. Right.

1 Ilgren

2 Q. Was that Mr. Ryan who asked you to do  
3 that?

4 A. Yes.

5 Q. And do you remember how far in  
6 advance of your actual review in Chicago that you  
7 got that first notification?

8 A. No.

9 Q. Was it just a matter of days or was  
10 it weeks?

11 A. I don't remember. Probably weeks.

12 Q. And then when you finally laid eyes  
13 on the records for the first time, was it Mr.  
14 Ryan's office in Chicago?

15 A. Yes.

16 Q. And you mentioned to us earlier that  
17 the records were arranged alphabetically.

18 A. Yes.

19 Q. Is that by last name of the employee?

20 A. Yes.

21 Q. And then you told us that each was in  
22 an individual file folder. Was there like then a  
23 name on the tab of each folder, is that how it  
24 worked?

25 A. Yes.

1 Ilgren

2 Q. Okay. And was this the full name of  
3 the employee that was on the folder?

4 A. Yes.

5 Q. So for instance on those 85 or so  
6 folders that have no records in them, at least  
7 there is the name of Smith Joseph or somebody on  
8 the tab?

9 A. Yes.

10 Q. Okay, let's move on now. We were on  
11 the topic of your opinion concerning the fact that  
12 Calidria asbestos does not cause mesothelioma, and  
13 you said that was based on a number of factors,  
14 the first is animal data, the second was this  
15 experience of these King City workers that we've  
16 talked about, and what are the other factors, if  
17 any, that you base that opinion upon?

18 A. Within the epidemiology? Repeat the  
19 question, I'm sorry.

20 Q. What, if any, other factors are there  
21 that you base your opinion on that Calidria  
22 asbestos does not cause mesothelioma other than  
23 the animal data we've talked about and the records  
24 of the King City workers that we've talked about?

25 MR. WILL: Are you excluding the

1 Ilgren

2 epidemiological study of other chrysotiles  
3 that he mentioned as well?

4 Q. I'm including that, although I think  
5 you've talked about that, and what I'm trying to  
6 do is just have you list and catalogue the various  
7 factors that you base your opinion on.

8 A. You mean vis-a-vis, say, physical  
9 chemical, as we said before, or lung burden.

10 Q. Right.

11 A. Physical chemical nature of Calidria  
12 chrysotile would be another one.

13 Q. And what is it about the physical and  
14 chemical nature of Calidria chrysotile that forms  
15 the basis of your opinion that it cannot cause  
16 mesothelioma?

17 A. Principally it's amphibole-free.

18 Q. And we've talked about that. Other  
19 than the fact that it's amphibole-free, are there  
20 other things relating to its physical or chemical  
21 nature that forms a basis of your opinion?

22 A. It would be highly soluble, very  
23 thin, very short, so it's rapidly cleared. I  
24 think they're the principal ones, there's a number  
25 of subthemes.

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Q. Now with respect to being highly soluble, do you mean by that that it is -- once it's in the lungs, it is cleared through chemical process?

A. Yes.

Q. Okay. And what particular chemical process is it that clears it from the lungs, dilutes it or breaks it down?

A. I would assume it's acids and lung juices and the like.

Q. And do you have any opinion as to how long Calidria fiber will last in the lungs?

MR. WILL: Under what circumstances?

Q. Let me put it to you this way. Would you say that all Calidria fiber that a Conwed worker breathed up until 1974 would now be cleared from their lungs? If we did a lung tissue fiber burden today would we see any of that or wouldn't we see it?

A. With no subsequent exposure after 1974?

Q. Right.

A. I'd be surprised if there was any substantial amount.

1 Ilgren

2 Q. Okay, so are you saying that the bulk  
3 of the Calidria fiber would be cleared from the  
4 lungs within a 20-year period?

5 A. I would think so.

6 Q. Okay. You also mentioned that it's  
7 thin, and again does that relate to its solubility  
8 or is this more easily dissolved because it's  
9 thinner, is that the idea there?

10 A. Yes.

11 Q. Then you said it's short and rapidly  
12 cleared. And what did you mean by that?

13 A. Just it's very short so it  
14 facilitates macrophage clearance.

15 Q. And now in addition to the factors  
16 which you have listed which are animal data, King  
17 City workers, chemical and physical properties and  
18 epidemiology of other types of chrysotile, are  
19 there other facts or data upon which you base your  
20 opinion that Calidria cannot cause mesothelioma?

21 A. Did we touch on the chrysotile lung  
22 burden story?

23 Q. I don't know.

24 A. Divisional retention of chrysotile in  
25 amphibole, the studies that show in cases of

Ilgren

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2 mesothelioma the amphibole was retained and the  
3 chrysotile was cleared, that sort of thing.

4 Q. Are you saying there that if you do a  
5 lung tissue fiber burden analysis some years after  
6 exposure, what you find is that more of the  
7 amphibole is retained in the lung, whereas the  
8 chrysotile has been dissolved away?

9 A. Yes.

10 MR. WILL: Or cleared.

11 Q. Or cleared, however you would  
12 describe it.

13 A. Sure.

14 Q. Are there other facts or data upon  
15 which you base your opinion or have we now covered  
16 the categories?

17 A. Those are the general categories.

18 Q. Okay. Now when this discussion  
19 started, we were talking about the specific Conwed  
20 mesothelioma cases, and we had discussed the cases  
21 of Mr. Bergstrom and Mr. Manisto and the  
22 crocidolite. Do you have any information that any  
23 of the other Conwed cases, which may at least be  
24 claimed to be mesotheliomas, are crocidolite other  
25 than those two?

1 Ilgren

2 A. I can't remember.

3 Q. Okay. I'd like to -- well, you  
4 mentioned earlier that you thought at least one or  
5 two of those cases was not related or perhaps not  
6 related to asbestos exposure at all. Do you  
7 recall which of those?

8 A. I'd have to look at the files again.

9 Q. Now, Mr. Will has provided me since  
10 the time of your last deposition with two letters,  
11 one of January 13, 1995 and one of January 25th,  
12 1995, where he sent your files concerning the  
13 mesothelioma cases, and I wanted to ask you just a  
14 couple of things because I think we can  
15 short-circuit this a little bit.

16 If we just take a look at them, for  
17 instance, look at the first page under Mr. Will's  
18 cover letter there, that it reads "Analysis  
19 pathology of Donald Broeffle, analysis of  
20 pathology," and this is a typewritten summary, and  
21 I'm wondering is this a summary that you prepared?

22 A. Yes.

23 Q. So when we see these typewritten  
24 summaries in these records, these are your  
25 summaries?

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A. Yes.

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Q. And if we look through the records, I notice that on a couple of these summaries they've been crossed out with pencil or pen kind of. Take a minute. There's one. And I'm just wondering who did that or what's that all about or is that something you did?

A. It looks like my scribbling, but I don't know.

Q. Do you know if that has any relevance to your comments?

A. I don't recall what I was doing here.

Q. Let me just back you up to the last one you were just looking at was Stanley Fleisch, and that's also got some handwriting. If you turn the page there's some comments and arrows and that sort of thing in the margins. Is that your notes?

A. Right, it's mine.

Q. I don't want to go through every one of these in detail, but are those of significance to your opinions or is that just some kind of doodling you did?

A. That just says I think I was just in the process of putting this together into

1 Ilgren

2 different other subsections, one of which was  
3 called I think "Asbestos-Related Disease or  
4 Potential," so that just says "To ASB-Related  
5 Disease," I was just looking through.

6 Q. So when we're looking -- I think what  
7 happened here is what we're seeing are preliminary  
8 drafts and final drafts that all got copied in  
9 your records, is that significantly what this is?

10 A. Yes, whatever I had I copied up.

11 Q. So when we see these arrows and  
12 handwritten notes and scribbling and crossing out,  
13 is that because we're looking at a preliminary  
14 draft as opposed to actually some substantive  
15 comments that you're making?

16 A. Yes. They're kind of editorial.

17 Q. Okay. I wanted to just ask you one  
18 other thing about these records. I guess they're  
19 in no particular order, but I have tabbed with the  
20 yellow tab, I think it's Mr. Broeffle's. Yes, it  
21 is. That is a page 8 of a report by a pathologist  
22 named Jerome Kleinerman, if you go back there.

23 A. Okay.

24 Q. I'm just wondering, are you familiar  
25 with Dr. Kleinerman?

1 Ilgren

2 A. As a person?

3 Q. Right, as a physician, by reputation  
4 or otherwise.

5 A. No.

6 Q. Have you ever seen reports from Dr.  
7 Kleinerman before?

8 A. No.

9 Q. Now, I have highlighted in yellow at  
10 the tab page on page 8 his statement that Mr.  
11 Broeffle's mesothelioma was caused by asbestos.  
12 I'm paraphrasing.

13 A. Right.

14 Q. I was just wondering was Broeffle one  
15 of the cases that you thought was not caused by  
16 asbestos or do you agree with that conclusion?

17 A. I'd have to go through it again, I  
18 can't remember.

19 Q. Can you just take a minute and do  
20 that?

21 A. Sure.

22 MR. WILL: I may have some notes.

23 (Discussion off the record)

24 Q. Do you know if Mr. Broeffle is one of  
25 the people who you believe had the same

1 Ilgren

2 mesothelioma not caused by asbestos?

3 MR. WILL: Maybe you ought to ask  
4 him if he thinks he really had  
5 mesothelioma.

6 Q. Do you think Mr. Broeffle has a  
7 mesothelioma?

8 A. Probably not.

9 Q. And what do you base that opinion  
10 upon?

11 A. Well, at least three things. One  
12 biological behavior in his case is very  
13 atypical -- in other words, he apparently has at  
14 least twelve-year survival after the 1980  
15 resection, which is very unusual. At post mortem,  
16 if my notes are correct, they said that there was  
17 tissue taken from the left lower lobe of the lung  
18 consistent with pulmonary adenocarcinoma, and a  
19 stain that might be quite helpful in  
20 distinguishing carcinoma from mesothelioma was not  
21 done, the so-called DPAS stain.

22 Q. Okay. So do you have an opinion that  
23 this is not a mesothelioma or are you saying that  
24 you're skeptical of whether it is or not?

25 A. I'm very skeptical.

Ilgren

1  
2 Q. And are you saying then that Dr.  
3 Kleinerman has made an incorrect diagnosis?

4 A. I suppose I am.

5 Q. Now, I think that forecloses my  
6 second question. Let me ask you this. Assuming  
7 hypothetically that Mr. Broeffle has a malignant  
8 mesothelioma, do you have any indication that that  
9 mesothelioma would not be as a result of asbestos  
10 exposure, based upon your review of his case?

11 A. The only thing I saw was I believe  
12 radiotherapy for ankylosing spondylitis.

13 Q. And where did you see that reference?

14 A. Here we go again.

15 (Discussion off the record)

16 A. There is a clinical note -- let's go  
17 back off for a second.

18 Q. My question is going to be this. I'm  
19 trying to figure out when this radiation therapy  
20 occurred, if there's a reference to it.

21 A. I thought I had found it. I think I  
22 had it wrong. The only thing I can see quickly  
23 here is that he had x-ray evidence of ankylosing  
24 spondylitis and a blood test positive for HLAB27  
25 but no radiotherapy. I don't see the

1 Ilgren

2 radiotherapy.

3 Q. So radiotherapy would not be a  
4 potential cause of mesothelioma in Mr. Broeffle's  
5 case?

6 A. Probably not. I don't think he  
7 received it, though I can't say for sure.

8 Q. And you're familiar with the  
9 literature, I take it, that suggests that perhaps  
10 radioactive therapy such as chemotherapy could be  
11 a cause of mesothelioma, correct?

12 A. Yes.

13 Q. But doesn't that literature suggest  
14 that what the cause is is actual radiation therapy  
15 as opposed to just for instance a chest x-ray?

16 A. Yes.

17 Q. So is there -- to go back to my  
18 original question. Do you see anything or have  
19 you seen anything in the case of Mr. Broeffle  
20 which would suggest a cause other than asbestos  
21 exposure for his mesothelioma. Assuming it is  
22 that?

23 A. No.

24 Q. I would like to show you an IARC  
25 scientific publication number 90 from 1989, and

1 Ilgren

2 it's a paper by Maltoni and Minardi, which I  
3 believe this is the one included in your book, and  
4 I just wanted to make sure that this is the one  
5 you make reference to.

6 A. This is the one.

7 Q. Before lunch we were talking about  
8 the Suzuki paper, and I told you that I didn't  
9 have that paper with me when you asked if you  
10 could look at it, but I do have this paper, and I  
11 wanted to take a minute to follow up and look at  
12 this one, and I guess we might as well mark it  
13 Exhibit 27.

14 (Whereupon, IARC paper from 1989  
15 marked Ilgren Exhibit 27 for  
16 identification, as of this date.)

17 Q. Just for the record, Exhibit 27 is a  
18 paper which is included in your book entitled  
19 Mesothelioma in Animals, correct?

20 A. Yes.

21 Q. And I think you may even have made  
22 reference to this paper this morning, I'm not  
23 sure.

24 A. Perhaps.

25 Q. Whether you did or not, this is an

1 Ilgren

2 IARC paper of 1989, correct?

3 A. Right.

4 Q. And just so we're clear, this was in  
5 an IARC session entitled "Nonoccupational Exposure  
6 to Mineral Fibers" edited by Bignon, Peto and  
7 somebody else?

8 A. Saracci.

9 Q. But they're not the actual authors of  
10 this paper?

11 A. No.

12 Q. I wanted to refer you to page 49 of  
13 the paper where they're talking about this being  
14 an intraperitoneal injection experiment with  
15 Sprague Dawley rats and Swiss mice.

16 A. Right.

17 Q. I'm looking at table 4, and they  
18 appear to be reporting peritoneal mesotheliomas as  
19 a result of these injections, correct?

20 A. Right.

21 Q. And they report the different types  
22 of asbestos and water controls that they're  
23 injecting, and one of the things they report is  
24 California chrysotile?

25 A. Right.

1 Ilgren

2 Q. Now that California chrysotile  
3 they're talking about there, that's Calidria  
4 chrysotile, correct?

5 A. I don't know.

6 Q. That was my question. Do you have  
7 any information one way or another where that  
8 California chrysotile came from?

9 A. I wrote to Maltoni twice and he  
10 didn't respond, so since it said here Mount Sinai  
11 School of Medicine, I wrote to Suzuki and he said  
12 he didn't know, so I don't know.

13 Q. So we don't know if that's Calidria  
14 or not specifically?

15 A. Right.

16 Q. We do know that it came from -- the  
17 samples analyzed in this experiment came from --  
18 or not analyzed but used -- came from Mount Sinai  
19 School of Medicine?

20 A. Yes.

21 Q. And it's described as California  
22 chrysotile?

23 A. Yes.

24 Q. Okay, so it might be Calidria and it  
25 might not?

1 Ilgren

2 A. Yes.

3 Q. Okay. In any event, when they talk  
4 about tumor-bearing animals in table 4, is this a  
5 mixture of both rats and mice, as you understand  
6 it?

7 A. No, rats alone.

8 Q. This is rats alone?

9 A. See here it says rats as a subscript  
10 or superscript A to describe this experiment, so  
11 they're all rats.

12 Q. But in any event, in this particular  
13 California chrysotile, they got 72.5 percent  
14 tumors and peritoneal mesotheliomas in these rats,  
15 right?

16 A. Right.

17 Q. And the water controls, they got  
18 zero?

19 A. Right.

20 Q. So when you told us earlier this  
21 morning we were discussing the Suzuki injection  
22 experiment, you indicated that Suzuki had gotten  
23 about 20 percent mesotheliomas or 25, I think with  
24 Calidria asbestos, right?

25 A. Right.

1 Ilgren

2 Q. And you were questioning whether that  
3 was caused by the actual Calidria and you listed a  
4 number of other factors that could have caused it,  
5 one of which was the saline solution, is that  
6 correct?

7 A. Right, plus other things.

8 Q. What I'm wondering is, on this  
9 particular study, which we're looking at now,  
10 Exhibit 27, when it says water controls, do you  
11 know is that a saline control?

12 A. Probably saline.

13 Q. So would it be fair to say that these  
14 water control injections, those rats both got the  
15 needle and they got the saline?

16 A. Right.

17 Q. Okay, and none of them got  
18 mesothelioma?

19 A. Not in this study.

20 Q. Have you attempted to make any  
21 follow-up on your inquiry to Suzuki about just  
22 what this California chrysotile is that we see  
23 here?

24 A. He just simply said "Call Maltoni."

25 Q. Did you do that?

1 Ilgren

2 A. Again? A third time?

3 Q. You did it twice?

4 A. I did it twice.

5 Q. And he didn't know?

6 A. No, he wouldn't respond.

7 Q. I see.

8 A. I faxed Maltoni.

9 Q. Is there anything else that you can  
10 think of that we could do to try to answer that  
11 question? Could we ask, for example, Minardi?

12 A. You can ask Art Langer for a letter.

13 Q. Do you think Art Langer might be able  
14 to find that out?

15 A. Perhaps.

16 Q. I want to move on to a different  
17 topic, and that is the issue of asbestosis among  
18 the Conwed workers. Are you familiar with the  
19 fact that certain of the Conwed workers have  
20 exhibited interstitial fibrosis?

21 A. Yes.

22 Q. And have you reviewed records of any  
23 particular Conwed workers with interstitial  
24 fibrosis?

25 A. No.

1 Ilgren

2 Q. Are you familiar with the fact that  
3 certain of the Conwed workers have exhibited  
4 pleural plaques on x-ray?

5 A. Yes.

6 Q. And have you reviewed any of the  
7 records of those particular workers?

8 A. No.

9 Q. And are you familiar with the fact  
10 that certain of the Conwed workers have exhibited  
11 pleural thickening on x-ray?

12 A. I believe so.

13 Q. Have you reviewed any of those  
14 records?

15 A. No.

16 Q. Now let me go back to this issue of  
17 interstitial fibrosis. Is your definition of  
18 asbestosis, parenchymal or interstitial fibrosis?

19 A. Yes. Plus caused by asbestos with a  
20 characteristic diffused bilateral, more often  
21 lower lobe interstitial fibrosis which begins as a  
22 parabronchial thickening.

23 Q. So you require interstitial fibrosis,  
24 number one, and you require it bilaterally?

25 A. And asbestos bodies.

Ilgren

1

2 Q. So you also require asbestos bodies?

3 A. Yes.

4 Q. In order to make a diagnosis of  
5 asbestosis, that's what I'm asking?

6 A. Yes. I pretty much agree with the  
7 ATS pathology definition.

8 Q. So if we were to summarize your  
9 opinion as to what is required for diagnosis of  
10 asbestosis, we could look to the American Thoracic  
11 Society guidelines?

12 A. You could look to Craighead, et al.,  
13 C-r-a-i-g-h-e-a-d, one word, et al.

14 Q. So if someone was to ask you in the  
15 case of a particular Conwed worker as to your  
16 opinion as to whether that worker has asbestosis  
17 or not, those would be the guidelines you would  
18 look to to make that diagnosis?

19 A. Yes.

20 Q. And have you actually made such a  
21 diagnosis in any of the Conwed records that you've  
22 reviewed?

23 A. No.

24 Q. Or agreed or confirmed or disagreed  
25 with the diagnosis?

1 Ilgren

2 A. No.

3 Q. Have you been asked to do that?

4 A. No.

5 Q. Now, with respect to the diagnosis of  
6 asbestosis, is that something that you've ever  
7 done in a clinical practice?

8 A. Including pathology? Microscopical?

9 MR. WILL: He's a pathologist, not a  
10 pulmonologist.

11 MR. BROWNSON: Right.

12 Q. I take it that you have not had a  
13 clinical practice where you actually see  
14 asbestotic patients?

15 A. No.

16 Q. For treatment, clinical treatment?

17 A. No.

18 Q. Now as a pathologist, have you seen a  
19 pathology tissue samples of asbestosis?

20 A. Yes.

21 Q. And have you seen those in the  
22 context of making a diagnosis or was that in the  
23 context of research or learning or what?

24 A. Diagnosis, research, litigation.

25 Q. And again, you haven't done that,

1 Ilgren

2 though, with any of the Conwed workers?

3 A. No.

4 Q. Now, you make or a statement is made  
5 in your witness disclosure in this case that  
6 pleural plaques, although probably specific for  
7 asbestos, do not carry any future cancer risk nor  
8 impose any significant functional impairment, and  
9 my question is, is that your opinion today?

10 A. Yes.

11 Q. Are you aware that there is a school  
12 of thought abroad today that thinks that pleural  
13 plaques do impose functional impairment?

14 A. Yes.

15 MR. WILL: By that, do you mean  
16 foreign, the United States or just  
17 circulating in the medical community?

18 Q. I meant circulating in the medical  
19 community?

20 A. Yes.

21 Q. And that's been reported in the  
22 literature, and I don't want to get that into  
23 detail here but I want to establish the fact that  
24 you're familiar generally with that concept and  
25 that literature?

1 Ilgren

2 A. Yes.

3 Q. Now, at the last session of your  
4 deposition, we were discussing a little bit the  
5 idea of exposure and how much exposure would be  
6 necessary to cause asbestosis, and I don't want to  
7 spend a lot of time on this, but as I understand  
8 it, you hold opinions that a certain level of  
9 exposure to asbestos is necessary both in dose and  
10 duration to cause asbestosis, is that correct?

11 A. Yes.

12 Q. And could you describe for us again  
13 what your current opinion is on that?

14 A. Circa 25 to 50 fiber years.

15 Q. Now does that relate to fiber type or  
16 are we talking about any fiber type there?

17 A. I think it's based on any fiber type.

18 Q. And are you of the belief that that  
19 is a minimum or threshold level for exposure or is  
20 that a level that is a mean or median or how would  
21 you describe it?

22 A. I believe it's a threshold figure.

23 Q. And we got --

24 MR. WILL: Excuse me, we're clear  
25 that you're talking now about asbestos in

Ilgren

1  
2 general, because I think in the second  
3 session of his deposition he gave you the  
4 calculations for Calidria and said that  
5 would be different. I want to be clear.

6 Q. I know he did that but let's clarify  
7 that because I thought you told me a minute ago  
8 that this was asbestos in general, the 25 to 50  
9 fiber years?

10 A. Chrysotile -- that specific figure,  
11 as I indicated in the last deposition, was a  
12 figure cited from Julian Peto, 1985, and that  
13 would have been based on the Rochedale textile  
14 plant analysis which they presumed was largely  
15 chrysotile, but there was also substantial  
16 crocidolite there.

17 Q. Now, would you agree with me that if  
18 -- I'm going to ask this in the form of a  
19 hypothetical question -- if there is interstitial  
20 fibrosis bilaterally in a Conwed worker such that  
21 he meets the ATS guidelines for asbestosis, and if  
22 that Conwed worker's only occupational exposure to  
23 asbestos was at the Conwed plant, would you agree  
24 with me that that particular worker has had  
25 sufficient exposure to asbestos at the Conwed

1 Ilgren

2 plant to cause asbestosis?

3 MR. WILL: Without knowing how long  
4 he worked there or what he did?

5 MR. BROWNSON: Right.

6 (Record read)

7 A. I would assume so.

8 Q. I'm just trying to establish the fact  
9 that hypothetically if a worker's only exposure to  
10 asbestos was at Conwed and if he does have  
11 asbestosis, it would follow that that exposure  
12 caused the asbestosis?

13 A. Okay.

14 Q. Have you made any analysis of any of  
15 the Conwed cases specifically to attempt to make  
16 that determination, that is whether a worker at  
17 Conwed has had enough exposure to cause  
18 asbestosis?

19 A. No.

20 Q. And just so I'm clear on this, if you  
21 were asked to make such an analysis and shown  
22 records and data and such to do so, would you base  
23 your analysis upon the Rochedale data that you  
24 were telling us about at the last deposition or  
25 would you base it upon some other data set?

1 Ilgren

2 A. In terms of a fiber year threshold?

3 Q. Right.

4 A. I think the Rochedale is fairly good.

5 Q. So if we wanted to work through your  
6 analysis and find the basis for your analysis,  
7 that is the data we would look at and that you  
8 would look at to do that?

9 A. It's a good data set.

10 Q. Okay. Have you seen this, a paper by  
11 Julian Peto and other authors, it's just recently  
12 published, in fact it may still even be in press,  
13 about what they call continuing increase in  
14 mesothelioma mortality in Britain?

15 A. I haven't -- could I see it for a  
16 minute?

17 A. Julian Peto sent me -- I haven't seen  
18 this, but he sent me a galley proof or something.

19 Q. Are you familiar with the notion by  
20 Peto that he apparently intends to publish that  
21 there is what he describes as, he uses the term  
22 epidemic, but continuing increase of mesothelioma  
23 mortality in Britain?

24 A. Yes.

25 Q. And as I understand it, Peto and his

1 Ilgren

2 co-authors apparently attempt to ascribe this to  
3 exposures to building workers, plumbers and gas  
4 fitters. Are you familiar with that?

5 A. Vaguely.

6 Q. My question is, have you seen any  
7 data which indicates what the exposure to these,  
8 what is described as building workers, plumbers  
9 and gas fitters, have had to asbestos in Britain?

10 A. Say that again.

11 Q. Have you seen any data which would  
12 indicate what the exposure is?

13 A. Kind of fiber type?

14 Q. Fiber type and fiber levels and  
15 duration of exposure that these sorts of workers  
16 have had in Britain.

17 A. Yes.

18 Q. You have?

19 A. Yes.

20 Q. And what data are those?

21 A. Good example would be the data from  
22 Harris of Devonport dockyard workers cutting  
23 pipes, amosite pipes or sawing pipes or doing  
24 that --

25 Q. Incidentally, does your book

Ilgren

1  
2 Mesothelioma in Animals attempt to compile and  
3 discuss papers concerning animal studies which  
4 cause mesothelioma but not other tumors, correct?  
5 In other words, if there was some animal study  
6 where they were looking at fibrosis in rats, you  
7 didn't attempt to include that in your book, did  
8 you?

9 A. I believe I tried to include any  
10 long-term asbestos study, say, that might have --  
11 they might have been trying to induce fibrosis,  
12 but if they didn't get mesotheliomas and there was  
13 an appropriate duration, then I also would have  
14 included the study, I believe. If it's a negative  
15 study where they had only found fibrosis but it  
16 was, say, a two-year study, it should be included.

17 Q. Okay, so I understand this, let's say  
18 someone was doing a rat study for fibrosis and it  
19 was an inhalation study or an injection study, but  
20 no -- and let's say some fibrosis was found but no  
21 mesotheliomas were found.

22 A. Right.

23 Q. You may have included that in your  
24 book because that would have some bearing on the  
25 question of mesothelioma in animals?

Ilgren

1

2

A. Right.

3

Q. In a negative way?

4

A. Right.

5

Q. Okay.

6

MR. WILL: Are you going to mark

7

that Peto article that he looked at?

8

MR. BROWNSON: No.

9

Q. Actually, I mean I could -- I brought

10

it up only because I was trying to find out if you

11

knew these data about the exposures he's talking

12

about.

13

At the last deposition we looked at

14

what I call the two Mellon Institute reports, and

15

they were marked as Exhibits 23 and 24. And I'll

16

show them to you now.

17

My question is with respect to these

18

two Mellon Institute studies, which are Exhibits

19

23 and 24, is there some reason you did not

20

include those two in your book?

21

MR. WILL: He's already answered

22

that question the last time.

23

A. I received the papers after I

24

submitted the material for publication.

25

Q. Now have you done any updating or

1 Ilgren

2 further work in connection with the topic of  
3 mesothelioma in animals since the time your book  
4 was published?

5 A. I just collect the animal  
6 mesothelioma literature. I haven't updated the  
7 book.

8 Q. Do you have any plans to update it?

9 A. Perhaps.

10 Q. If you did update the book or if you  
11 published a supplemental or updated study along  
12 the same lines as Mesothelioma in Animals, would  
13 you include these two reports?

14 A. Probably.

15 Q. Have you done any further work since  
16 the last session of your deposition in December in  
17 looking into or investigating either of these two  
18 reports?

19 MR. WILL: It was November. But  
20 anyway, go ahead.

21 A. No.

22 MR. BROWNSON: Thank you.

23 A. Can I keep this, this Gibbs, et al.?

24 Q. Yes.

25 (Whereupon, document dated April

1 Ilgren

2 22nd, 1974 entitled "Airborne Asbestos Dust  
3 Levels" marked Ilgren Exhibit 28 for  
4 identification, as of this date.)

5 Q. Our next exhibit, which is 28, is a  
6 document dated April 22nd, 1974 entitled "Airborne  
7 Asbestos Dust Levels," et cetera. Have you seen  
8 this document before?

9 A. No.

10 Q. Just take a moment and look through  
11 it.

12 A. Okay.

13 Q. Now that you've had a chance to look  
14 at it a little more briefly, do you recall ever  
15 seeing this before?

16 A. No, I've never seen it before.

17 Q. Would you agree with me that it  
18 appears to be a report prepared by Harrison Rhodes  
19 and Mr. Klebeer of Union Carbide in 1974?

20 A. Yes.

21 Q. You are familiar at least by name and  
22 reputation with Mr. Rhodes?

23 A. Yes.

24 Q. I wanted to take you back to table 1  
25 at the end of this report or near the end.

1 Ilgren

2 A. Okay.

3 Q. Which is entitled "Airborne Asbestos  
4 Fiber Counts Dumping of Calidria Asbestos  
5 Pellets." Have you ever seen this data before?

6 A. No.

7 Q. Whether in the form of this table or  
8 presented in any other form?

9 A. No.

10 Q. I'll ask you the next question,  
11 although I guess I know the answer. It's reported  
12 here under "Ceiling concentrations," there's a  
13 reference to ceiling tile manufacturer high purity  
14 pellets, with some data reported. Do you know  
15 what that ceiling tile manufacturer workplace was?

16 A. No.

17 Q. And specifically do you know if that  
18 was Conwed?

19 A. No.

20 Q. Okay. Have you been given any  
21 information that Union Carbide Calidria asbestos,  
22 whether it was open fiber pellets, was used in the  
23 manufacture of any ceiling tile other than Conwed  
24 ceiling tile?

25 A. Could you say that again, I'm sorry.

1 Ilgren

2 Q. Do you have any information that  
3 Union Carbide Calidria asbestos was used in any  
4 ceiling tile other than Conwed ceiling tile?

5 A. No.

6 Q. Have you been shown any data or do  
7 you have any information as to what paper  
8 manufacturing operations Union Carbide Calidria  
9 asbestos was used in?

10 A. As in companies?

11 Q. Right.

12 A. No.

13 Wait.

14 No. I just thought I heard Reader's  
15 Digest used a lot of the paper, but I don't know  
16 who they got the paper from.

17 Q. Now going back to the Uxbridge plant  
18 we were talking about this morning, the ceiling  
19 tile plant in England. Do you know what  
20 chrysotile they used, was that Canadian  
21 chrysotile?

22 A. I don't know.

23 Q. Are you aware that Union Carbide was  
24 shipping Calidria chrysotile to England for  
25 paper-making operations back in the '60s?

Ilgren

1

2

A. Yes.

3

Q. And do you know what those  
4 paper-making operations were in England? Where  
5 this asbestos was used?

6

A. Some I think was printed paper,  
7 sanitary napkins, I can't remember. There's a  
8 number of different uses.

9

Q. Okay. Do you know if the ceiling  
10 tile operation at Uxbridge would fall under the  
11 rubric of paper-making in Great Britain?

12

A. I wouldn't think so.

13

(Whereupon, letter dated October 29,  
14 1984 from H.B. Rhodes to Mr. J.L. Myers  
15 marked Ilgren Exhibit 29 for  
16 identification, as of this date.)

17

Q. I'd like to show you now Exhibit 29,  
18 which is an October 29, 1984 letter or memo from  
19 H.B. Rhodes to Mr. J.L. Myers, and ask you have  
20 you ever seen this before?

21

A. No.

22

Q. And first of all, based upon your  
23 prior review of Union Carbide correspondence, do  
24 you understand this to be Harrison Rhodes, from  
25 what it looks like?

1 Ilgren

2 A. Yes.

3 Q. And Mr. J.L. Myers, that would be  
4 John Myers in King City?

5 A. Yes.

6 Q. Now have you ever seen the label or  
7 warning that is attached to this letter?

8 A. I seem to think I saw it on the bag  
9 in King City.

10 Q. When you were out there a few weeks  
11 ago?

12 A. I believe so. I'm not entirely sure,  
13 but I believe so.

14 Q. And have you had any input of any  
15 sort into writing or drafting or changing or  
16 presenting the warnings on the Calidria asbestos?

17 A. No.

18 Q. Has anyone ever asked you about that?

19 A. No.

20 Q. Now look at the warning that's  
21 attached here, which is the second page of Exhibit  
22 28, and it reads "Chrysotile asbestos, warning  
23 cancer hazard." Do you agree?

24 MR. WILL: That's part of what it  
25 says.

1 Ilgren

2 Q. Among other things, but that's the  
3 bold letters at the top. Do you agree that  
4 Calidria asbestos is a cancer hazard, as they seem  
5 to be saying here?

6 A. Perhaps in phenomenal doses with  
7 smoking.

8 Q. Have you been given any information  
9 by Union Carbide or anyone else as to why it was  
10 decided to go with this particular warning we see  
11 in Exhibit 28 on the Calidria bags?

12 A. No.

13 MR. WILL: You're assuming that that  
14 was used on Calidria bags.

15 MR. BROWNSON: I am assuming that,  
16 right. That's what it says.

17 (Whereupon, multipage document dated  
18 January 18, 1985 marked Ilgren Exhibit 30  
19 for identification, as of this date.)

20 Q. Exhibit 30, which you are now looking  
21 at, is a document that I'd like you to take a  
22 minute and look at, and my question will be, have  
23 you ever seen this before? And what it is is a  
24 stapled bundle of separate letters that have been  
25 sent out to various employees at King City.

1 Ilgren

2 A. I've never seen these.

3 Q. Now you are, of course, familiar with  
4 the OSHA workplace asbestos standard which began  
5 in 1972?

6 A. Yes.

7 Q. Which is referenced here in these  
8 letters?

9 A. Yes.

10 Q. And would you agree with me that  
11 workers at the mine and mill in King City are  
12 subject to those OSHA regulations concerning  
13 asbestos?

14 MR. WILL: You're asking him for a  
15 legal opinion or just his understanding?  
16 He's not in a position to give any sort of  
17 legal opinion.

18 MR. BROWNSON: That's true.

19 Q. Do you have an understanding that  
20 these workers would be covered by the asbestos  
21 standard?

22 A. I think they're under MSHA for some  
23 reason, not OSHA.

24 Q. MSHA being Mine Safety Hazard  
25 Administration?

1 Ilgren

2 A. Yes.

3 Q. Which is, if I can use laymen's  
4 terms, the OSHA for miners?

5 A. I presume so.

6 Q. Okay, now what I want you to do is if  
7 you look through these letters, these are  
8 addressed to particular employees and they just  
9 give last names, the first one is Mrs. Hernandez,  
10 then there's Mr. Harris, Mr. Perez actually, it  
11 does have first names, the first one is Delores  
12 Hernandez, and I'd like you to look through these  
13 and tell me if you recognize any of these names as  
14 being among the names on the 460 worker files that  
15 you saw?

16 A. Yes.

17 Q. Which ones do you recognize?

18 A. Hernandez.

19 Q. That's Delores Hernandez, the first  
20 one?

21 A. Yes. I believe Steve Perez. There  
22 were some Valladarez. I don't know whether it was  
23 Jorge. Clyde Bailey. Pedro Godinho. Manuel  
24 Segobia, Leo Trevino, John Godinho, Isabel Flores  
25 senior. That's it.

Ilgren

1

2

Q. Let's look at Exhibit 30. I want you

3

to take a look at it here, and let's start by

4

looking at the first letter which concerns Mrs.

5

Delores Hernandez, and it's a letter to her from

6

D.J. Garcia, safety and health supervisor,

7

Calidria Corporation of January 18, 1985.

8

A. Right.

9

Q. And it references CAL/OSHA asbestos

10

regulations.

11

A. Right.

12

Q. And realizing you're not a lawyer, do

13

you have an understanding that what they're

14

talking about are an OSHA-type asbestos regulation

15

enforced in California for these workers at King

16

City?

17

A. Yes.

18

Q. And again without asking you to

19

render a legal opinion, is it fair to characterize

20

this letter and this series of letters as notices

21

sent out to various workers at King City that an

22

OSHA asbestos limit had been exceeded in one of

23

their work areas at some point in time and so a

24

letter was sent out?

25

A. Yes.

1 Ilgren

2 Q. Now some of these employees on  
3 Exhibit 30, if you look at some of the letters,  
4 they indicate what the employee was actually  
5 doing?

6 A. Yes.

7 Q. And let's go to the first one of  
8 those.

9 A. Trevino.

10 Q. Mr. Leo Trevino, it indicates that  
11 he's an 038 bagger operator. First of all, do you  
12 know what 038 means?

13 A. No.

14 Q. And based upon your tour of the mill  
15 and what you understand from other information  
16 about the mill, do you know what a bagger operator  
17 is?

18 A. Yes.

19 Q. And what is that?

20 A. Takes the dried palletized or  
21 unpalletized asbestos and puts it into, just as I  
22 understand, works the bagging machine, so the  
23 stuff goes into the bag basically.

24 Q. And then there's also reference to  
25 Mr. John Godinho except he's called an 039 RG24

1 Ilgren

2 bag operator.

3 A. Yes.

4 Q. And I'm wondering if based upon your  
5 information and your tour of the plant, if you  
6 know what the differences are there separate  
7 baggers for RG24 and RG144?

8 A. Yes.

9 Q. Also Mr. Raul Santibanez is listed as  
10 an RG244 bagger operator?

11 A. Yes.

12 Q. John Godinho, did we get him before?

13 A. Yes.

14 MR. WILL: I think Manuel Segobia is  
15 your next one.

16 MR. BROWNSON: I know, I'm just  
17 trying to put this in some order. It looks  
18 like our bagger operators are Leo Trevino,  
19 John Godinho, Raul Santibanez.

20 A. Juan Villaseñor, two from the back.

21 Q. And Juan Villaseñor, and I'm trying  
22 to correlate these with the names you recognize  
23 from the medical records. You recalled Trevino  
24 and John Godinho?

25 A. Right.

1 Ilgren

2 Q. So now that you've had a chance to  
3 look at Exhibit 30, do you remember those two  
4 gentlemen being bagger operators?

5 A. No.

6 Q. There's also a reference to a Mr.  
7 Manuel Segobia as a pelletizer operator. Are you  
8 familiar with what the pelletizer is?

9 MR. WILL: It's palletizer,  
10 p-a-l-l-e-t.

11 A. I think it refers to pellet  
12 formation.

13 MR. WILL: Do you know what it  
14 refers to?

15 THE WITNESS: No, I don't know.

16 Q. I thought too that it was a  
17 pellet-making machine, although it says  
18 palletizer, as Trevor Will pointed out, so you  
19 don't know specifically what that would be?

20 A. No.

21 Q. Then Mr. Isabel Flores senior is  
22 listed as press/dryer circuit operator. Do you  
23 know what that particular job is?

24 A. Yes.

25 Q. And what's that?

1 Ilgren

2 A. It's to compress and take the water  
3 out of a lot of the wet slurry chrysotile.

4 Q. And based upon information you've  
5 received and/or your own visit to the mill, do you  
6 have any opinion or knowledge as to whether that  
7 is an operation involving the wet operation or the  
8 dried asbestos?

9 A. Well, it's actually two operations,  
10 there's the press and then there's the dryer  
11 circuit, so he's doing two jobs. The press, as I  
12 recall, is more on the wet side, the drying  
13 operation is --

14 MR. WILL: Starts wet and ends up  
15 dry.

16 A. Well, it's put through a long  
17 cylinder, as you probably saw, rotating. But it's  
18 not, as I recall, open to the atmosphere.

19 Q. Okay. Now, you said you had not seen  
20 these particular letters in Exhibit 30 before.  
21 Have you seen any other letters of this general  
22 type in any of the employee medical files that you  
23 reviewed?

24 A. No.

25 Q. Did you see any information of any

**5                      A.        No.**

7 (Whereupon, document dated May 12,  
8 1982 marked Ilgren Exhibit 31 for  
9 identification, as of this date.)

13 Q. Now we have Exhibits 31 and 32, which  
14 are both entitled "UCC Plenum Test Dust Count."  
15 And my question is, have you seen either of these  
16 before?

18 Q. Now take a look at the 31 is the big  
19 one, if you'd look at on the third page of the  
20 exhibit, there's a letter or a memo which kind of  
21 describes what they're doing here, and just take a  
22 look at that because I wanted to ask you some  
23 questions.

25 Q. Okay. Let's look first Exhibit 31,

1 Ilgren

2 it's titled "May 12th, 1982 Plenum Test," and this  
3 is something that --

4 MR. WILL: I don't mean to pick on  
5 you, but that's not the title of it.

6 A. Subject --

7 MR. WILL: The subject is plenum  
8 test.

9 MR. BROWNSON: Thank you for that  
10 important correction.

11 Q. And this was done somewhere, but what  
12 it is, if I can summarize, is a test chamber that  
13 was set up to see how dusty various Union Carbide  
14 Calidria asbestos is, whether in the form of  
15 tailings or pelletsore. Do you see that?

16 A. Yes.

17 Q. And there's various data reported in  
18 tabular form, table 1, for example. table 2,  
19 table 3 reports their findings. Do you see that?

20 A. Yes.

21 Q. Now have you ever seen data of this  
22 type reported for where someone is testing  
23 Calidria asbestos to see what sort of dust it  
24 generates or aerosol that it generates?

25 A. No.

Ilgren

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Q. Have you ever seen any published data concerning aerosolization or dustiness of chrysotile in general?

A. Yes.

Q. And what would that be?

A. A whole series of different papers. Graham Gibbs, he's published a lot. There's a whole series of different papers.

Q. And in those papers have you ever seen any data reported for Calidria asbestos in particular for dustiness or aerosolization?

A. No.

Q. Have you read those papers?

A. The general chrysotile papers?

Q. Right.

A. Yes. But not for a while.

Q. Do you consider yourself to be an expert in this area, that is the dust-generating capacity or aerosolization capacity or whatever you want to call it, of chrysotile asbestos?

A. No.

Q. Has anyone at Union Carbide or representing Union Carbide ever told you that Union Carbide had run tests of this sort that we

1 Ilgren

2 see in Exhibit 31 and 32?

3 A. Not that I recall, no.

4 Q. And I take it then that you don't  
5 know why these particular tests were run in 1982?

6 A. No.

7 Q. The Gibbs that you mentioned who has  
8 published papers you had seen concerning dustiness  
9 of chrysotile, that was which Gibbs?

10 A. Graham.

11 Q. Graham Gibbs. Okay.

12 Q. For some reason I can't find those  
13 papers so we'll move on.

14 Now as I understand your opinion, it  
15 is that chrysotile asbestos, in uncontaminated  
16 form, at least, will not cause mesothelioma,  
17 correct?

18 A. Correct.

19 Q. And that it is chrysotile asbestos in  
20 uncontaminated form will probably not cause lung  
21 cancer, correct?

22 A. Not necessarily.

23 Q. And by that, do you mean that it will  
24 not cause lung cancer or it will cause lung  
25 cancer?

1 Ilgren

2 A. It may in very high doses with  
3 fibrosis and smoking.

4 Q. So would it be fair to summarize your  
5 opinion with respect to lung cancer by saying that  
6 chrysotile asbestos in uncontaminated form can  
7 cause lung cancer but only if there's been a high  
8 enough dose to cause fibrosis and the person is a  
9 smoker?

10 A. Probably, yes.

11 Q. And with respect to asbestosis, it's  
12 my understanding that it is your opinion that  
13 uncontaminated chrysotile can cause asbestosis but  
14 you need the doses that we've talked about earlier  
15 today, relatively high doses, correct?

16 A. I believe so.

17 Q. Now, have you done any work over the  
18 course of your career, whether for Union Carbide  
19 or otherwise, in connection with asbestos  
20 regulations dealing with chrysotile?

21 A. No.

22 Q. Have you ever testified before  
23 Congressional committees or regulatory agencies in  
24 that regard?

25 A. No.

1 Ilgren

2 Q. Are you generally familiar with the  
3 federal government regulations as they exist  
4 concerning chrysotile?

5 A. To some extent.

6 Q. Are you familiar with the fact that  
7 the federal government today through both the EPA  
8 and OSHA does not distinguish among fiber type in  
9 its asbestos regulations?

10 A. I believe so, yes.

11 Q. Do you know what the current OSHA  
12 level is for asbestos in the non-construction  
13 workplace?

14 A. I can't remember. Point 2.

15 MR. WILL: PEL level, is that what  
16 you want to know? There's a variety of  
17 levels.

18 MR. BROWNSON: That's a good point.

19 Q. PEL, permissible exposure level?

20 A. I can't remember.

21 Q. If I told you that the current OSHA  
22 asbestos standard is point 1 fiber per cc by phase  
23 contrast microscopy, does that ring a bell with  
24 you?

25 A. Yes, it does.

1 Ilgren

2 Q. So you're generally familiar with  
3 that?

4 A. Yes.

5 Q. And again, that's the permissible  
6 exposure level, not the excursion level, correct?

7 A. I think so.

8 MR. WILL: Do you know?

9 THE WITNESS: No.

10 MR. WILL: Don't be guessing then.

11 Q. I wanted to show you the next  
12 exhibit, which for some reason has a paper clip on  
13 it and not a staple. Let me have her mark it  
14 here.

15 (Whereupon, document dated December  
16 3, 1990 marked Ilgren Exhibit 33 for  
17 identification, as of this date.)

18 Q. And this is Exhibit 33. My question  
19 is, have you ever seen that before? And for the  
20 record, it's a December 3, 1990 report and letter  
21 by Union Carbide to the docket officer of the  
22 Occupational Safety and Health Administration.

23 A. No.

24 Q. At page 2 of that, the part I think  
25 I've highlighted under "Executive Summary."

1 Ilgren

2 A. Yes.

3 Q. You see that there. The statement is  
4 made, "Union Carbide supports OSHA's proposal to  
5 reduce the PEL of point 2 fiber per cc to half, to  
6 point 1 fiber per cc. In most cases this change  
7 would be feasible to achieve and could promote  
8 employee health." Do you agree with that  
9 statement?

10 MR. WILL: What? Which part of it?

11 MR. BROWNSON: That a change from  
12 point 2 to point 1 fiber per cc could  
13 promote employee health.

14 A. No.

15 Q. And why do you disagree with that  
16 statement?

17 A. Because I think the amount of  
18 Calidria chrysotile required -- we're talking  
19 about Calidria chrysotile, right? We're talking  
20 about Calidria?

21 Q. Well, in this deposition we have  
22 been, although I think if you read this  
23 throughout, I'll represent to you this talks about  
24 all asbestos fiber types.

25 A. Well, what do you want -- I see, so

1 Ilgren

2 in this instance we're talking about asbestos  
3 tremolite, anthophyllite and actinolite.

4 Q. Right, and asbestos in this context  
5 is defined as crocidolite, amosite and chrysotile?

6 A. So it's all fiber types.

7 Q. All fibers we're talking about?

8 A. Perhaps for crocidolite.

9 Q. Other than for crocidolite, do you  
10 agree with that statement that changing the OSHA  
11 permissible exposure level from point 2 to point 1  
12 fiber per cc could promote employee health?

13 A. Probably not.

14 Q. Now if you go to page 27 of this  
15 exhibit, it's signed by a gentleman named Robert  
16 E. Plevan, Ph.D., assistant director of  
17 occupational health. Do you know who that is?

18 A. No.

19 Q. Have you ever heard the name?

20 A. No.

21 (Whereupon, document dated December  
22 31 marked Ilgren Exhibit 34 for  
23 identification, as of this date.)

24 Q. This is now Exhibit 34, which is a  
25 similar type document, it's a letter or report

Ilgren

1  
2 from Union Carbide to OSHA concerning a change in  
3 the permissible exposure level for asbestos. And  
4 you can look at it as long as you want, but I'm in  
5 particular going to about the middle of it, there  
6 is an attachment after the tables which is titled  
7 "Testimony for the Hearing on OSHA's Proposed  
8 Rule," et cetera, by Robert Plevan. Do you see  
9 that?

10 A. Yes.

11 Q. And I take it this is the same Robert  
12 Plevan we saw in the --

13 MR. WILL: He has no way of knowing.

14 Q. -- previous exhibit. Let me get to  
15 this, but if you read this, this gives you more  
16 description as to who this Robert Plevan is and  
17 what his background is, and I'd like you to just  
18 look at that and then tell me after reviewing  
19 those qualifications if that helps you recall  
20 whether you have any recollection of this man?

21 A. No recollection.

22 Q. Have you ever been to the Union  
23 Carbide headquarters in Danbury, Connecticut?

24 A. No.

25 Q. Other than going to the mine and mill

1 Ilgren

2 at King City about a few weeks ago, have you ever  
3 been to any of the other Union Carbide facilities?

4 A. No.

5 Q. Have you ever been to any of the  
6 customer plants where Calidria asbestos was being  
7 used in process?

8 A. No.

9 Q. Are you aware generally of the  
10 asbestos regulations in other countries other than  
11 the United States?

12 A. Very vaguely.

13 Q. Very vaguely, okay.

14 Are you aware of the fact that Great  
15 Britain regulates chrysotile asbestos although at  
16 a different standard than crocidolite?

17 A. I believe so.

18 Q. Now at the last session of the  
19 deposition, I want to bring you back to a  
20 different topic, we were talking about this paper  
21 by Yeager and Kagan and Langer and others  
22 concerning the dosing of the human macrophage  
23 cells in vitro. You're familiar with that?

24 A. Yes.

25 Q. And at that time you advised us that

Ilgren

1  
2 you were aware of what you called a  
3 supplementation or a continuation of that study in  
4 abstract form?

5 A. Yes.

6 Q. Published by Diane Russo?

7 A. Yes.

8 Q. I wanted to ask you some more  
9 questions about that. At the last deposition we  
10 marked as Exhibit 13, the list you had prepared of  
11 the papers, both published and unpublished, that  
12 you have consulted in connection with your  
13 opinions, do you remember that list?

14 A. Yes.

15 Q. And just again for the record, this  
16 is a list you prepared?

17 A. Appears to be.

18 Q. If we go to the reference of the  
19 Russo paper --

20 MR. BROWNSON: For the record, I  
21 should note, Trevor, that I in my  
22 inadvertent doodling put a blue arrow next  
23 to it so I'd have an easy reference.

24 MR. WILL: Apparently highlighted  
25 something above it too.

1 Ilgren

2 MR. BROWNSON: That was something  
3 different.

4 Q. But in any event, the Russo paper  
5 reference is found at page 76 of your list, as we  
6 see here, page 7?

7 A. Yes.

8 Q. When we left the last deposition, I  
9 had requested a copy of this and I got a letter  
10 back from Mr. Will, I don't know if you're  
11 familiar with this or not, but his response was  
12 with respect to this Russo paper, I could find it  
13 in the literature and I should go ahead and do it.  
14 I want to tell you that since that time, I haven't  
15 been able to find it in the literature and I'm  
16 wondering, do you maintain a copy of that paper?

17 A. Yes.

18 Q. And as far as you know, is this  
19 reference given at page 7 of Exhibit 13, the  
20 correct reference for the Russo paper?

21 A. I believe so.

22 Q. You want to take a look at it?

23 A. I believe that's the right reference.

24 Q. Now you stated that it was in a  
25 volume called "Fed Proc."

Ilgren

1

2 A. Yes.

3 Q. Can you tell us what that is?

4 A. Federal proceedings.

5 Q. And is it fair to characterize that,  
6 if I could, as a compilation of abstracts?

7 A. Yes.

8 Q. In other words, it doesn't -- it's  
9 not a journal or periodical in which actual papers  
10 are published but it's a reference material,  
11 reference series of books containing abstracts of  
12 various medical and scientific papers?

13 A. I believe so.

14 Q. And prior to the reference to Fed  
15 Proc on your citation, it says "Environ tox II,"  
16 which I assume stands for environmental toxicology  
17 Roman numeral II?

18 A. Right.

19 Q. Do you know what that means?

20 A. I think it was just some kind of  
21 perhaps presentational setting that they had where  
22 one session was entitled Environmental Toxicology.  
23 Maybe that's morning, I, afternoon, II.

24 Q. But in any event, as you told us, you  
25 actually have a copy of the paper?

1 Ilgren

2 A. Yes.

3 MR. BROWNSON: I'd like to request,  
4 if it's all right, Trevor, that we get Dr.  
5 Ilgren's copy since I was unable to take  
6 your helpful advice and find it in the  
7 literature.

8 (Witness and counsel confer)

9 Q. Now again going back to the Russo  
10 reference, and I'll give you the exhibit here,  
11 again what we're talking about here is an abstract  
12 of something, correct?

13 A. Right.

14 Q. And it's listed as page 679, is that  
15 a correct page reference?

16 A. I assume so, I'm not sure.

17 Q. Would it be fair to infer from that  
18 that this abstract comprises one page or less?

19 A. Half a page.

20 Q. And also in the reference after Fed  
21 Proc in brackets, you've put number 2574. Do you  
22 know what that refers to?

23 A. Abstract number.

24 Q. Now do you know where -- do you know  
25 if an actual paper was published from which this

1 Ilgren

2 abstract is derived?

3 A. I don't believe so.

4 Q. In any event, have you ever seen a  
5 published full length paper?

6 A. Entitled "Russo, et al."

7 Q. Right.

8 A. No.

9 Q. Do you know if the abstract you're  
10 referencing here, Russo, et al., 1988, is an  
11 abstract for one of the earlier 1981 or 1983  
12 papers on this topic or is it an abstract for  
13 something additional?

14 A. I believe additional.

15 Q. Do you know that for sure one way or  
16 another?

17 MR. WILL: You mean off the top of  
18 his head without going back?

19 MR. BROWNSON: Yes.

20 A. I'd have to recheck it.

21 Q. And are you aware of any published  
22 study on the topic of dosing human macrophage  
23 cells with Calidria asbestos other than the  
24 original Yeager, Kagan, Russo study in 1983?

25 A. No.

1 Ilgren

2 Q. Now at the last session of the  
3 deposition, we were talking at some length  
4 concerning work by Pinkerton, Kent Pinkerton.

5 A. Right.

6 Q. I don't want to get into that again  
7 in depth, in fact I don't want to get into it at  
8 all, but have you had any -- since the time of our  
9 last deposition have you had any further contacts  
10 with Pinkerton --

11 A. Yes.

12 Q. -- concerning this data?

13 A. Yes.

14 Q. And can you describe for us what that  
15 has been?

16 A. Several telephone calls and a  
17 meeting.

18 Q. Do you know when and where the  
19 meeting was?

20 A. It was last May at University of  
21 California, Davis. His office. At Davis.

22 MR. WILL: By last May?

23 THE WITNESS: May 1995.

24 Q. Just last month, you mean?

25 MR. WILL: This is June.

1 Ilgren

2 A. What month is it?

3 Q. What was the topic at that meeting?

4 A. Can we take a small break just a  
5 second?

6 (Pause)

7 A. The Pinkerton data.

8 Q. Was the meeting instigated by you or  
9 by him?

10 A. By me.

11 Q. And what specific topic about the  
12 Pinkerton data caused you to instigate this  
13 meeting? In other words, what were you looking  
14 for specifically?

15 A. Just wanted to have his personal  
16 input on writing up and finalizing the data.

17 Q. And are you saying you wanted his  
18 personal input on you writing up --

19 A. Together.

20 Q. -- data?

21 A. Him and I.

22 Q. And is that a project that's in the  
23 works where he and you are going to write up this  
24 data?

25 A. Yes.

Ilgren

1

2 Q. Has it been written up in any form?

3 A. You mean published?

4 Q. Well, I assume it's not been

5 published, but has it been published?

6 A. No.

7 Q. Has it been written up in written

8 form by you in some preparatory stage to

9 publishing it?

10 A. Yes.

11 Q. Is it your intent to try to publish

12 it at some point?

13 A. Yes.

14 Q. And who would the authors of that

15 publication be as you understand them at this

16 point?

17 A. Let's see. Pinkerton, Crapo, Morgan

18 and myself.

19 Q. And would Crapo be James Crapo,

20 C-r-a-p-o?

21 A. Yes.

22 Q. Would Morgan be Keith Morgan?

23 A. Arthur.

24 Q. Oh, Arthur Morgan, okay.

25 Are you familiar with Keith Morgan?

1 Ilgren

2 A. Toronto in Canada?

3 Q. In Canada.

4 A. Just heard him lecture once.

5 Q. So he wasn't present at this meeting?

6 A. Who?

7 Q. At Pinkerton's office, was he?

8 A. Who?

9 Q. Keith Morgan, he has nothing to do  
10 with this project?

11 A. No.

12 Q. So when you made the reference to  
13 Morgan, maybe I'm just mixed up, the Morgan you're  
14 talking about is Arthur Morgan, not Keith Morgan?

15 A. Yes, that's correct.

16 Q. And as far as you know, this proposed  
17 paper you're talking about with respect to this  
18 Pinkerton data, is that going to have some text to  
19 it or is it just going to be publishing the  
20 tabular results?

21 A. Would have text.

22 Q. Right.

23 A. Of course.

24 Q. And have you reached some conclusion  
25 about this data that would be reported in the

Ilgren

1

2 text?

3

A. Preliminary.

4

Q. And are you and Pinkerton in

5

agreement on the conclusions or are you still kind

6

of talking about them?

7

A. I believe we're in agreement.

8

Q. Do you have any idea when this will

9

be submitted for publication?

10

A. Hopefully in a month.

11

Q. And do you know who it's going to be

12

submitted to?

13

A. No.

14

Q. I'm not going to mark this yet but a

15

minute ago I was looking for a reference by Graham

16

Gibbs, who you had mentioned?

17

A. Yes.

18

Q. And I've now found one and I want to

19

just show it to you and ask you if that's the

20

Graham Gibbs we're talking about.

21

A. Yes.

22

Q. And does this paper that I'm showing

23

you now report this data about dustiness and

24

aerosolization that we were talking about a minute

25

ago or is this something else?

1 Ilgren

2 A. It's something else. It appears to  
3 be something else.

4 Q. Generally this paper just concerns  
5 itself with how much fiber of various asbestos  
6 types there is in a given mass or a given volume  
7 or a given weight, I'm not entirely sure, but is  
8 that --

9 A. Dimension, length and width  
10 dimensions.

11 Q. That's not what you were talking  
12 about a minute ago when we were talking about  
13 dustiness?

14 A. Just absolute numbers of fibers.

15 Q. Right, so this is something different  
16 than dustiness?

17 A. Yes.

18 Q. Okay.

19 (Recess taken)

20 MR. BROWNSON: I'm going to mark one  
21 more exhibit.

22 (Whereupon, curriculum vitae marked  
23 Ilgren Exhibit 35 for identification, as of  
24 this date.)

25 A. All right.

Ilgren

1  
2 Q. The next exhibit I marked 35 is a  
3 curriculum vitae of yours that Mr. Will provided  
4 to me since the time of your last deposition and I  
5 received it on January 30th, I don't know exactly  
6 when he sent it, but around that time. And  
7 there's been some changes from your prior CV which  
8 we had previously marked as exhibits in this case,  
9 and I'll confess I didn't go through this and  
10 compare line by line, but my question was what  
11 changes have been updated or made on this CV, as  
12 we see on Exhibit 35, from the prior ones which I  
13 actually have with me. The first one was Exhibit  
14 1, we also have an Exhibit 2, which is an old CV.  
15 I don't know if you want to see that or not, you  
16 probably don't need to.

17 A. No. Are you ready?

18 Q. Yes.

19 A. The initials after the name were  
20 modified so that MAC path was deleted, MRC path  
21 associate neuropathology was deleted and MA OXON  
22 was deleted.

23 Q. Why was the MA OXON deleted?

24 A. I can't remember.

25 Q. And why were the other two deleted?

1 Ilgren

2 A. Well, MAC path was a  
3 misunderstanding. I'm not a member of the  
4 American College of Pathologist. And MRC path  
5 associate neuropathology was deleted because the  
6 Royal College said that individuals who were only  
7 associates are not allowed to use whatever you  
8 want, what do you call that?

9 Q. Initials?

10 A. Initials, thanks.

11 Q. And now what other changes are there?

12 A. At the bottom the member of faculty  
13 of biological and agricultural sciences and  
14 subfaculty of biochemistry, University of Oxford,  
15 that was deleted because I am not presently a  
16 member.

17 Q. Now I know this was a long time ago,  
18 but when I had last questioned you about the CV,  
19 you indicated that you were not sure what your  
20 current status was, I think somewhere along those  
21 lines of being on that faculty. Have you gotten  
22 further information since that time that can  
23 clarify that?

24 A. Yes.

25 Q. And what's that?

1 Ilgren

2 A. April 1992 on page 1, professional  
3 experience, five lines from the bottom, the  
4 university told me that I was on the faculty up  
5 until April 1992.

6 Q. Now, are there any other changes in  
7 this CV, Exhibit 35, compared to Exhibit 1?

8 A. Yes.

9 Q. And what are those?

10 A. Well, on page 1 of the CV, how do I  
11 identify this -- as Exhibit 1. On the first page  
12 of the CV, that's Exhibit 1, the entire section  
13 "Education" has been deleted. The section under  
14 "Professional experience" has been edited or  
15 annotated so that to begin with the category  
16 "Student worker at Bryn Mawr College 1973" was  
17 deleted. The next line "Doctorate of medicine"  
18 was incorporated into a new section on the CV,  
19 Exhibit number 35, entitled "Degrees and  
20 Certifications." The date in the old CV, Exhibit  
21 1, of 1971 for doctorate of medicine was corrected  
22 from 1971 to 1974.

23 The next heading under "Research and  
24 Professional Experience" in Exhibit 1 was deleted.  
25 The next entry under "Research and/or Professional

Ilgren

1  
2 Experience" on Exhibit 1 entitled "1974, assistant  
3 pathologist" has been amended so that it is now  
4 the first entry under "Professional experience" of  
5 Exhibit number 35, and it no longer reads "1974,  
6 assistant pathologist, New York Hospital," it  
7 presently reads "June 1974, intern and resident in  
8 pathology, New York Hospital..."

9 The entry once removed under  
10 "Research and/or Professional Experience" on page  
11 1 of Exhibit 1 entitled "1975 diplomate of  
12 National Board of Medical Examiners" has now been  
13 incorporated as the second entry on page 2 of  
14 Exhibit number 35. It's 1975, diplomate, Board of  
15 Medical Examiners.

16 The second entry up from the bottom  
17 on page 1 of Exhibit 1, "Licensed in medicine and  
18 surgery, 1975," has been incorporated into the  
19 section "Degrees and certifications" on page 2 of  
20 Exhibit 35 so that it is now "1975, licensure,  
21 medicine and surgery..."

22 The final entry on page 1 of Exhibit  
23 1, which is "1976, board certified, American Board  
24 of Pathology, Anatomic Pathology," has been  
25 modified and put on page 2 under "Degrees and

1 Ilgren

2 certifications" of Exhibit number 35, so that it  
3 now reads with the date corrected from 1976 to  
4 1977 to read "Board certification, American Board  
5 of Pathology, Anatomic Pathology."

6 The entry on the top of page 2, the  
7 first entry on the top of page 2 of Exhibit 1,  
8 which formerly read "1976, visiting worker, the  
9 Imperial Cancer Research Fund," has been modified  
10 to read on page 1 under "Professional experience"  
11 of Exhibit 35, "March 1977-visiting  
12 histopathologist, the Imperial Cancer Research  
13 Fund, London, Dr. LSC Pang..."

14 Q. Can I just stop you there. What was  
15 that change all about? What's the difference  
16 between visiting research worker and visiting  
17 histopathologist?

18 A. I think what I did is I went back to  
19 a letter or a form which gave my so-called title  
20 as visiting histopathologist rather than visiting  
21 scientist.

22 Q. Okay, go ahead, is there anything  
23 else?

24 A. Yes. Let's see. The second entry on  
25 page 2 of Exhibit 1, which formerly read "1977,

1 Ilgren

2 visiting scientist, University Southern  
3 California, San Diego Zoo," is now "May 1977,  
4 visiting pathology investigator..." found on page  
5 1 under "Professional experience" of Exhibit 35.

6 Q. Let me ask you this, can I stop you  
7 on that one. That's on Exhibit 35, that's listed  
8 as visiting pathology investigator, with capital  
9 letters, which indicates to me it could actually  
10 be a title. Is that actually a title you were  
11 given or is that a description of what you were  
12 doing?

13 A. I can't remember, I believe it was a  
14 title.

15 Q. Okay. That would be with Mr.  
16 Benirschke?

17 A. Professor Benirschke.

18 The third entry on page 2 of Exhibit  
19 1 entitled "1977, Traveling Research Fellow..." is  
20 now under a new category on page 2 of Exhibit 35  
21 entitled "Fellowships and Grants," and the entry  
22 there is "June 1977, traveling research  
23 fellowship." "Traveling," by the way, is  
24 misspelled, it should be two L's instead of one.

25 MR. GOLDMAN: It's acceptable either

1 Ilgren

2 way, I know that as a fact.

3 A. I stand corrected, it's acceptable  
4 either way.

5 Q. Can I stop you on that one too?

6 A. Yes, sure.

7 Q. Again, that's indicated with the  
8 letters in caps. Is that again a title or is that  
9 a description?

10 A. Which one?

11 Q. "Traveling research fellowship." Is  
12 that a description of what you were doing or an  
13 actual title of a research fellowship?

14 A. I think it was a description of an  
15 actual research fellowship, as closely as I  
16 remember. And also the date -- cancel that. The  
17 next entry on page 2 of research and professional  
18 experience of Exhibit 1.

19 Q. I will ask the additional question of  
20 with respect to the new CV, Exhibit 35. I'm  
21 interested in your telling us what corrections or  
22 what would we say substantive changes would be as  
23 opposed to just reorganizing things and shuffling  
24 them around?

25 A. A major modification in Exhibit 1 of

1 Ilgren

2 the old CV was a deletion of the entire section  
3 entitled "Research Experience" which occupied  
4 pages 5, 6, 7 and 8.

5 Q. And in the new CV 35 that is deleted?

6 A. Deleted completely.

7 Q. Why was that deleted?

8 A. This old CV was originally intended  
9 for grant applications, and I really didn't feel  
10 that it was appropriate for -- it seemed like such  
11 a non-standard thing to have in a resume of this  
12 sort. The section entitled "Memberships" on page  
13 3 of Exhibit 35 now had both the so-called  
14 starting date and ending date.

15 Page 10 of Exhibit 1, which was the  
16 original or the older CV, has been deleted. That  
17 is entitled "Doctoral Dissertation Summary." And  
18 I deleted it for the same reason I deleted the  
19 research experience.

20 Q. Can I just go back to the memberships  
21 on page 3 of the new CV since I don't have the old  
22 one in front of me, which dates were changed on  
23 those memberships?

24 A. Well, St. Edmund Hall, Oxford, goes  
25 from 1976 to 1981.

1 Ilgren

2 Q. On the new CV?

3 A. Yes. British Society Developmental  
4 Biologists goes from 1979 to 1981. Tuberous  
5 Sclerosis Association goes from 1981 to 1985.  
6 Neurofibromatosis Foundation goes from 1981 to  
7 185. Under memberships, the "Technical services  
8 group, Washington" entry was deleted. The Oxford  
9 University Computer Center Users Group was  
10 deleted. The faculty of biological sciences  
11 subfaculty of biochemistry were deleted. That  
12 would be that.

13 Under "Publications" on Exhibit 1,  
14 page 14, I deleted rev. 41.

15 Q. And again, I don't have that in front  
16 of me.

17 A. It's Ilgren 1992, "Potential  
18 Hypersusceptibility to the Induction of  
19 Mesotheliomas in Hamsters..." And that was sent  
20 back for major alterations and revisions, which I  
21 never did.

22 Q. Just so I'm clear, on the prior CV  
23 Exhibit 1, there were how many publications?

24 A. There were 41 on Exhibit 1 and  
25 there's 39 on Exhibit 35.

1 Ilgren

2 Q. So reference 41 on the previous CV  
3 was deleted and the other one was deleted?

4 A. Looks like Ilgren 1991, "Potential  
5 health effects, rev. 40, from glow dose exposure  
6 to tremolite." I think I deleted it because it  
7 was an abstract, not a full paper.

8 Q. So the two publications, the two last  
9 publications 40 and 41 of the first CV, Exhibit 1,  
10 have now been deleted on the new CV?

11 A. Yes.

12 Q. I'm sorry, publication 40 was deleted  
13 because that was an abstract?

14 A. Yes.

15 Q. And 41 was deleted why?

16 A. Because I never finished it. I  
17 submitted it and they sent it back for alterations  
18 and I never altered it.

19 Q. Who was it who sent it back?

20 A. I think Environmental Health  
21 Perspective.

22 Q. Do you have any plans to resubmit  
23 that after making alterations?

24 A. If I get the time perhaps.

25 Q. Do you recall when it was that they

1 Ilgren

2 sent that back?

3 A. 1992, 1993, somewhere in that. That  
4 would appear to be all of the corrections that I  
5 can find.

6 Q. Now I have a couple of questions on  
7 the new CV which I'm looking at, Exhibit 35, under  
8 the heading "Fellowships and Grants." The last  
9 listing is August of 1990 to September of 1991,  
10 W.R. Grace & Company research project. Have you  
11 applied for any fellowships or grants since that  
12 time?

13 A. No.

14 Q. Obviously you haven't had any since  
15 that time, right?

16 A. Right.

17 Q. With respect to on page 3 under the  
18 heading of "Invited Lectures," there's a lecture  
19 in 1991, American College of Chest Physicians,  
20 Environmental Lung Disease Fourth International  
21 Conference. And what I'm wondering is with  
22 respect to that particular lecture, did that  
23 result in a written paper?

24 A. Just the abstract that I took off of  
25 the reference list.

1 Ilgren

2 Q. And has that abstract been published  
3 anywhere?

4 A. I don't believe so. It was just in  
5 the book that was handed out.

6 Q. So it would be the abstract would  
7 have been contained in a handout book for  
8 participants at the conference?

9 A. Exactly.

10 Q. Then were there any proceedings  
11 published following that conference?

12 A. I don't believe so.

13 Q. Is that the sort of abstract that  
14 goes into Fed Proc or are those abstracts that we  
15 find in Fed Proc something different?

16 A. I don't know.

17 Q. But in any event, would it be fair to  
18 say that this particular abstract is not cited in  
19 Fed Proc?

20 A. I don't think so.

21 Q. Do you know if you ever submitted it  
22 to them?

23 A. No, I never submitted it to them.

24 Q. Now with respect to that particular  
25 conference, who was it who invited you to that

1 Ilgren

2 conference?

3 A. I'd have to go back and check, I  
4 think it was -- I don't remember.

5 Q. I guess let me put it a little  
6 differently. The reason I was asking the question  
7 is it was sponsored by American College of Chest  
8 Physicians, which I note that you're not a member  
9 of, and I'm wondering is that a conference where  
10 only members of the American College of Chest  
11 Physicians are present or is that open to anybody?

12 A. Open.

13 Q. So they sponsor it, if you will, and  
14 then anybody can participate?

15 A. I believe so, yes.

16 Q. And do you recall if you participated  
17 by invitation of someone or did you just show up  
18 or how did that work?

19 A. I believe it was invitation, but I'd  
20 have to check the correspondence.

21 Q. That's all the questions I've got on  
22 the CV, but I need before we conclude --

23 (Recess taken)

24 BY MR. BROWNSON:

25 Q. Dr. Ilgren, at the first session of

Ilgren

1  
2 your deposition we asked you how much you have  
3 charged Union Carbide for your work in connection  
4 with this case, and I wanted to just follow up on  
5 that since it's been nearly a year now. In the  
6 past year, how much have you charged Union Carbide  
7 for your work on this case?

8 A. I don't know.

9 MR. WILL: Just this as opposed  
10 to --

11 A. I don't know.

12 Q. Do you have a figure as to how much  
13 you've charged Union Carbide generally for  
14 asbestos-related work during the past year?

15 A. I don't have a figure.

16 Q. Is your rate still \$200 an hour?

17 A. Yes.

18 Q. And do you have any idea how many  
19 hours you've devoted to asbestos-related matters  
20 for Union Carbide in the last year?

21 A. It was over a thousand, I think.

22 Q. And some portion of that's for this  
23 case and some portion would be for other cases?

24 A. Just there's just Conwed and Chicago.

25 Q. Conwed being this case and Chicago

1 Ilgren

2 being the Chicago board of education case?

3 A. Yes.

4 Q. And over that period of time in the  
5 past year, what percentage of your total income  
6 from professional services has this constituted?

7 A. Maybe a third.

8 Q. And I was trying to limit that  
9 question to -- I don't care to know about any  
10 income you have from investments or other sources  
11 but just in terms of your professional services I  
12 was asking, so it's about a third of that income,  
13 professional service income?

14 A. Yes.

15 Q. And of the remaining two-thirds of  
16 your professional service income over the past  
17 year, what portion of that has come from  
18 litigation-related activities?

19 A. 90 percent probably.

20 Q. And has all that litigation been  
21 related to asbestos litigation or is it other  
22 kinds?

23 A. Other kinds.

24 Q. Has any of that been related to  
25 asbestos litigation?

1 Ilgren

2 A. Some. I couldn't tell you what. I  
3 would think most of it is not asbestos-related.

4 (Discussion off the record)

5 Q. One final question just to finish up  
6 this matter of the consultations and legal cases.  
7 As I understand it, in the past year, one-third of  
8 your income from professional services has been  
9 from the two Union Carbide cases, and then I'm  
10 unclear about the remaining two-thirds. I think  
11 you said 90 percent of the remaining two-thirds is  
12 for litigation?

13 A. Right.

14 Q. So of total income from professional  
15 services for the past year, would it be fair to  
16 say that about 95 percent of that comes from legal  
17 matters, litigation matters?

18 A. Yes, 90, 95.

19 MR. BROWNSON: Okay, very good,  
20 that's all I've got. Thank you.

21 EXAMINATION BY

22 MR. WILL:

23 Q. I have one or two questions by way of  
24 clarification.

25 Doctor, you were asked a number of

1 Ilgren

2 questions this morning by Mr. Brownson concerning  
3 the number of fibers that you would have to find  
4 in the lung of a particular type of asbestos in  
5 order to ascribe mesothelioma to that type of  
6 asbestos fiber. And my question is, were those  
7 numbers that you gave to Mr. Brownson absolute  
8 minimums? That is, if the counts were below that  
9 would you say that the fiber did not cause the  
10 mesothelioma?

11 A. I don't think it's hard and fast,  
12 those numbers aren't written in stone. Given the  
13 fact that there aren't those many papers out  
14 there, I would say there is no absolute.

15 Q. For example, you gave the figure of a  
16 million crocidolite fibers. If you found somebody  
17 where a mesothelioma and lung burden was done and  
18 it came back, say, 800,000 crocidolite fibers,  
19 what would your view be on whether crocidolite  
20 caused that mesothelioma?

21 A. Well, it would be suspicious  
22 particularly if they were largely long fiber as  
23 opposed to short fiber.

24 Q. And you mentioned that there hadn't  
25 been very many studies of this type done, I think

1 Ilgren

2 you said that as part of your earlier answer.

3 A. For crocidolite.

4 Q. How about for amosite or tremolite?

5 A. I mean I don't have an exact number  
6 of how many lung burden analyses of mesothelioma  
7 cases have been done, but I would say that there  
8 might be a couple of dozen out there the most.

9 Q. You were also asked some questions  
10 both in this session of your deposition and in the  
11 session last November about how many fiber years  
12 of exposure one would need to cause asbestosis.  
13 In both instances I believe you referred to the  
14 data from the Rochedale plant.

15 A. Correct.

16 Q. And the figure I believe you gave is  
17 25 to 50 fiber years, is that correct?

18 A. Correct.

19 Q. If the exposure was to Calidria  
20 asbestos, would you expect it to take more or less  
21 or the same number of fiber years to create  
22 asbestosis?

23 A. Much more.

24 MR. WILL: That's all I have.

25 MR. BROWNSON: One final question.

1 Ilgren

2 BY MR. BROWNSON:

3 Q. With respect to the income for  
4 professional services, where did the other 5 to 10  
5 percent come from?

6 A. What?

7 Q. Where did the other 5 to 10 percent  
8 come from?

9 A. I think it was the Glutamate  
10 Association. As in MSG.

11 MR. BROWNSON: That's all I've got.

12 Thank you.

13 MR. WILL: We do want to read and  
14 sign and we'll be providing corrections for  
15 the entire deposition after we get this  
16 part. And we give the reporter the  
17 original exhibits, and please make copies  
18 of those with the copies that you send out.

19 (Time noted: 4:10 p.m.)

20

21

22 Subscribed and sworn to before me

23 this \_\_\_\_\_ day of \_\_\_\_\_, 1995.

24

25

## C E R T I F I C A T E

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

I, SARA DEUTSCH, a 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 5<sup>th</sup> day of July,  
1995.

S. Deutsch  
SARA DEUTSCH

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June 22, 1995

I N D E X

Witness

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ILGREN

FOR IDENTIFICATION

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| 26 | Letter dated July 31st, 1989 from Dr. Duane Hyde to John L. Myers                                | 566 |
| 27 | IARC paper from 1989                                                                             | 626 |
| 28 | Document dated April 22nd, 1974 entitled Airborne Asbestos Dust Levels                           | 643 |
| 29 | Letter dated October 29, 1984 from H.B. Rhodes to Mr. J.L. Myers                                 | 647 |
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