

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF GENESEE

GEORGE L. THOMAS, Personal
Representative for the
Estate of KIM ANN THOMAS,
Deceased,

Plaintiff,

vs.

GENERAL MOTORS CORPORATION,
et al.

Defendants.

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)
) CASE NO. 02-75326-NP
) HON. ROBERT YUILLE

DEPOSITION OF
RICHARD A. LEMEN, Ph.D.

November 11, 2005

1:00 p.m.

Holiday Inn Express
713 Transit Avenue
Canton, Georgia

Frances Buono, RPR, CCR-B-791

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1 (Reporter disclosure made pursuant to
2 Article 8.B. of the Rules and Regulations of the
3 Board of Court Reporting of the Judicial Council
4 of Georgia.)

5 RICHARD A. LEMEN, Ph.D.,
6 having been first duly sworn, was examined and
7 testified as follows:

8 EXAMINATION

9 BY MR. BURMEISTER:

10 Q. Would you state your name for the record,
11 please?

12 A. Yes. It is Richard Allen Lemen.

13 Q. Dr. Lemen, when were you first contacted
14 in this case?

15 A. Probably about a month ago.

16 Q. What information have you been provided
17 with?

18 A. I have been provided -- well, I have been
19 provided documents on household exposure and General
20 Motors, but I have had these documents, in addition
21 to the ones I have been shown, in my own possession
22 so they are not new documents to me.

23 Q. I guess I don't quite understand your
24 answer.

25 A. Well, I have a set of documents that I

1 brought to the deposition that were given to me by
2 the Plaintiff's attorney, and most of the articles --
3 as a matter of fact, I think almost all of the
4 articles, except for a PowerPoint presentation, have
5 been articles that I already have in my possession.

6 Q. And could you identify for the record,
7 please, the articles that you were given by
8 Plaintiff's counsel and describe, if you will after
9 that, the nature of the PowerPoint presentation that
10 you were given?

11 A. The first I will start with are three
12 volumes of studies called Household Exposure Studies,
13 Volume I through III, they contain various articles
14 and they contain National Safety Council documents,
15 IHF documents, and others that fall into the category
16 of household exposure.

17 They are pretty straightforward. I don't
18 think there is anything in there that is a surprise
19 to me or would be a surprise to you.

20 Q. How many articles are there?

21 A. I haven't counted them, but there is three
22 three-ring binders. I guess we could count them, but
23 I have never done that. I would say probably around
24 maybe 40, 50 articles. That may be a low count, but
25 maybe somewhere in that neighborhood.

1 Q. When were you given these articles?

2 A. Well, I was given this set this week, but
3 I, as I said earlier, I had the set, not the same
4 set, but I have the same articles in my possession.

5 Q. And --

6 A. Are you ready --

7 Q. -- you mentioned the PowerPoint
8 presentation. How did that come?

9 A. That is in a notebook titled General
10 Motors Documents. The beginning of the General
11 Motors Documents are a series of articles, a copy of
12 attendees at the Saranac Lake Seventh Symposium, and
13 also both the '55 and '52 symposium, I believe.

14 And then there are articles in here that I
15 presume deal with various dust situations from a
16 document called The Health Protection And Foundry
17 Practice. There is a series of other documents
18 dealing with General Motors.

19 Then the PowerPoint presentation, I don't
20 know who put that together, to be honest with you. I
21 presume someone in the Plaintiff's attorney's office
22 put it together, but it is a series of articles that
23 deal with the -- I am trying to think of a way to
24 explain it.

25 There is Johns-Manville documents that are

1 in here, there is Mellon Institute documents, there
2 is a series of National Safety Council documents, of
3 course Industrial Hygiene Foundation documents dating
4 back to the '30s up through the '60s.

5 Q. Have you watched this PowerPoint?

6 A. No, they are printed out. I have not seen
7 it, I have just seen the printed pages of the
8 PowerPoint.

9 Q. How many pages is it?

10 A. It is about an inch thick, so that is
11 probably about maybe two or 300 pages. I am
12 comparing that to what a 500 sheet stack of paper
13 would be. It looks like it is about two-thirds of
14 that.

15 Q. Is this something like from an opening
16 statement or closing argument or something, or
17 what --

18 A. I don't know. It doesn't have any format
19 on it. It doesn't tell me where it comes from. It
20 just has a series of PowerPoints that are here. I
21 don't know how it was used or whether it was used.
22 For what purpose, I can't answer that question.

23 Q. Okay.

24 A. The last thing in the book is a copy of a
25 chapter out of Dr. Castleman's book dealing with

1 Friction Materials Institute as well as General
2 Motors.

3 Q. Okay.

4 A. And that's it for what I was given.

5 Q. So that we will have an opportunity to
6 know exactly what you were given, I would like to at
7 this time mark as Exhibit 1 the three volume set of
8 binders that contain the articles you mentioned at
9 the outset.

10 As Exhibit 2 we will mark what you
11 described as the GM materials. And then the final
12 deposition exhibit in this series, Exhibit 3, will be
13 the PowerPoint presentation that has been printed out
14 which you believe is about two or 300 pages long?

15 A. That is within the notebook of General
16 Motors.

17 Q. Okay. Well then why don't we just make
18 that part of Exhibit 2, the General Motors notebook?

19 A. Okay.

20 (Defendants' Exhibits 1 and 2 were
21 marked for identification.)

22 Q. (By Mr. Burmeister) And so there is a
23 total of four three-ring binders that you have been
24 given?

25 A. Yes, sir.

1 Q. Now, have you seen a copy of the
2 Deposition Notice for this discovery only deposition,
3 Dr. Lemen?

4 A. No, I haven't.

5 Q. It is indicated that it was a discovery
6 only deposition and that you should bring to it
7 copies of any documents that you received, reviewed,
8 relied upon, or generated in connection with this
9 case.

10 Have you brought all of those materials
11 with you to the deposition, doctor?

12 A. I brought all those materials. In
13 addition, I brought a copy of my Asbestos Timetables,
14 not prepared for this case, but generally for cases
15 where I am asked to discuss state-of-the-art issues.

16 And I also brought, within that timetable,
17 a document titled Scientific Knowledge Concerning
18 Neighborhood Exposure To Asbestos And Disease, and
19 that material comes out of the timeline, but I pulled
20 it out as a separate publication.

21 And finally I brought a copy of my
22 curriculum vitae.

23 Q. Why didn't we mark then as Exhibit
24 Number 3 your overall asbestos timeline.

25 A. Got it.

1 Q. Exhibit 4 will be the abridged version of
2 that timeline which deals solely with familial or
3 neighborhood type exposures.

4 A. Yes, sir.

5 Q. And we have plenty of copies of your CV so
6 we don't need that, I guess, right now.

7 A. Okay.

8 (Defendants' Exhibits 3 and 4 were
9 marked for identification.)

10 Q. (By Mr. Burmeister) Anything else that
11 you relied upon or generated or prepared for this
12 case?

13 A. That's the totality of what I brought with
14 me today.

15 MR. DELUCA: Mr. Burmeister, this is Aaron
16 DeLuca, I would like to mark his CV as
17 Exhibit 5.

18 MR. BURMEISTER: That's fine. This is a
19 discovery dep so I didn't think we needed to
20 clutter the record with that, but we can.

21 THE WITNESS: That's done.

22 (Defendants' Exhibit 5 was marked for
23 identification.)

24 Q. (By Mr. Burmeister) Now, Dr. Lemen, have
25 you talked with anybody about this case?

1 A. No, except for Mr. DeLuca.

2 Q. What is your understanding of your role in
3 this case? What have you been asked to do?

4 A. I have been asked to do, as I understand
5 it, three things. The first thing would be to answer
6 any questions you might have on general
7 state-of-the-art knowledge concerning asbestos and
8 related diseases.

9 Second thing I have been asked to do is to
10 concentrate on answering questions that may be asked
11 of me concerning household exposures.

12 And the third thing that I have been asked
13 to do is to review the General Motors documents that
14 were given to me and to be ready to answer questions
15 concerning those if they should arise.

16 Q. And you have not been asked, have you, to
17 opine on specific causation in this case?

18 A. No. I have not been given any medical
19 records or any other type of records in relationship
20 to the Plaintiff in this case.

21 Q. Now, do you have some general
22 understanding of the nature of the alleged exposure
23 to asbestos in this case?

24 A. My understanding is very simple, that this
25 is a woman, as I understand, who developed

1 mesothelioma whose father worked in a General Motors
2 facility, and that the type of exposure was to mixed
3 asbestos fibers, including chrysotile as well as
4 amosite. Beyond that, I have no more information.

5 Q. Now the timeline that we have marked as
6 exhibits?

7 A. Yes, sir.

8 Q. Give me a sense of -- well, let's just
9 take the one that you pulled out of the larger
10 state-of-the-art timeline. Where does that begin and
11 where does that end?

12 A. In the timeline it would begin on page --
13 just a moment.

14 Q. Well, I am interested more in the date?

15 A. Oh, the date it begins? Okay. I
16 misunderstood you. I guess the date that it begins
17 would be back into the 1940s and talking about
18 general issues of take-home exposure in the
19 industrial hygiene literature.

20 And for example, a 1943 U.S. Public Health
21 Service publication called Manual Of Industrial
22 Hygiene and Medical Service In The War Industries,
23 which talks about shower facilities, changing
24 facilities, et cetera, these are not related to just
25 asbestos, but in general they are codes of good

1 industrial hygiene practice.

2 Another example that goes back even
3 further than that would be talking about a physician
4 in 1897 that actually talked about take-home exposure
5 from workers wearing street clothing to work and then
6 wearing the clothing home and their necessity for
7 discarding that clothing before they left the
8 workplace.

9 Other citations are in 1913 and 1930s. We
10 have Drinker and Hatch talking about controlling dust
11 and clothing. And that brings us up to the asbestos,
12 which starts in around 1965 with the publication of
13 Newhouse and Thompson concerning the community
14 exposures that occurred in the London area from
15 people living near sources of asbestos. And from
16 there it goes further.

17 And one thing that I cite, which
18 summarizes most of this from that point on, is a
19 document to Congress by NIOSH in 1995 that I
20 participated in that was a report that was requested
21 by the Congress concerning family take-home exposure
22 issues.

23 And I mean I can go through each study if
24 you want me to, but that is a pretty good summary of
25 the time frame that I am talking about.

1 Q. Could you fax the part of the timeline
2 that deals just with this familial exposure state of
3 the art, if you will, to us?

4 A. I guess we could, yes, I will just take it
5 out of there and it will be about three pages.

6 Q. That would be great. I think the court
7 reporter has our fax number, we had some faxes sent
8 out earlier today.

9 A. Actually, it will be four pages.

10 Q. -- Dallas.

11 A. Actually it will be four pages. Somebody
12 is going to take it out and fax it. I guess we can
13 go ahead, is that all right?

14 MR. BARNABY: Yes.

15 THE WITNESS: We can go ahead and keep
16 talking.

17 MR. BURMEISTER: Okay. The fax number --

18 MR. DELUCA: He has it.

19 THE WITNESS: He has it.

20 Q. (By Mr. Burmeister) Now, you mentioned
21 just in passing, I guess, a reference to Muriel
22 Newhouse, and she is considered one of the founding
23 mothers, if you will, of epidemiology in the world,
24 isn't she?

25 A. I don't know if she is a founding mother

1 of epidemiology, she certainly is one of the more
2 famous women in this field. I would put her in the
3 same category as Harriet Hardy or Alice Hamilton.

4 Q. And you consider Dr. Newhouse to be an
5 authoritative and reliable source of information on
6 asbestos-related issues?

7 A. Yes, I have always. I don't always agree
8 with everything she says, but I mean, I certainly
9 consider her that and fortunately had the opportunity
10 to talk to her in 1975 and meet her for the first
11 time.

12 Q. Okay. One of the studies that she is most
13 famous for is the study of 13,800 workers over a
14 40-year period using exclusively chrysotile in an
15 asbestos products manufacturing facility; is that
16 correct?

17 A. Which one are you talking about, which
18 publication was that out of?

19 Q. I think the first one was in 1982, and
20 then she subsequently updated it several years later.
21 Dr. Berry wrote the original paper with her of
22 13,800 --

23 A. Right, I am familiar with it now.

24 Q. Okay. And she then followed it up, I
25 think, with a ten year or more update, do you recall

1 that?

2 A. I do.

3 Q. Okay. And the conclusion that she and
4 Dr. Berry and the other authors drew in those
5 studies, which were massive studies by any standard,
6 weren't they?

7 A. Well, the number of people was a large
8 study.

9 Q. Certainly a long, long-term study,
10 correct?

11 A. Well, I don't have the study right in
12 front of me but yes, it would be considered that.

13 Q. Okay. 40 or 50 years is certainly a long
14 time to study somebody, isn't it?

15 A. Yes.

16 Q. Okay.

17 A. I just don't remember --

18 Q. The conclusion that they drew as a result
19 of this 50-year study of chrysotile exposed workers
20 was that there was no excess mortality from any cause
21 over this entire period; isn't that true?

22 A. Again, I don't remember the exact
23 conclusions of the study, but I believe that that was
24 somewhere in the neighborhood of what they said.

25 Q. Okay. Now, you mentioned an article. The

1 article that you mentioned, I should say, from
2 Dr. Newhouse appeared where in 1965?

3 A. The Newhouse article appeared in -- just a
4 second, I think I have got a reference to it right
5 here. Just a second. I thought -- here it is.
6 Well, I thought I did, just a second. Right. Here
7 it is. British Journal of Industrial Medicine,
8 Volume 22, Page 261.

9 Q. Now, in 1965, actually the last day of the
10 year, another report publication in the field of
11 asbestos hazards was published by the New York
12 Academy of Science, wasn't it?

13 A. Correct.

14 Q. And that was the result of Dr. Selikoff's
15 famous conference on the subject?

16 A. Correct.

17 Q. And in that publication Dr. Selikoff
18 published several articles, right?

19 A. Correct.

20 Q. And perhaps his most famous was the one in
21 which he studied asbestos insulation workers; is that
22 right?

23 A. Yes.

24 Q. Okay. And the conclusion that he came to
25 and reported to the world at large that got the

1 Annals of the New York Academy of Science at the end
2 of December 1965 was that asbestosis and its
3 complications were regarded as significant hazards
4 among asbestos insulation workers in the
5 United States at that time; is that right?

6 A. Yes.

7 Q. And that is quite a famous statement of
8 the state of the art with respect to the Asbestos
9 Workers Union, isn't it?

10 A. Yes.

11 Q. And are you aware of any similar statement
12 that has been made in the peer review widely
13 disseminated and distributed medical and scientific
14 literature which says: "We may conclude that
15 asbestos-related disease is a significant risk among
16 members of families whose parents work in automobile
17 plants"?

18 A. I don't have any that talk about parents
19 that work in automobile plants. There are other
20 studies that deal with workers in multiple types of
21 industries, but I don't know of any that deal with
22 automobile plants.

23 Q. And do you know of any that deal with --
24 well first of all, do you know anything about the
25 automobile plant or plants that are involved in this

1 particular case, the Thomas case?

2 A. No, I don't.

3 Q. So you don't know what was made there or
4 assembled there; is that correct?

5 A. No, I don't.

6 Q. Okay. Now, Doctor, you probably don't
7 remember me but we encountered each other a year ago
8 last summer in Detroit in a case called Chapen, do
9 you remember that case?

10 A. Yes.

11 Q. And I just want to bring myself up to
12 date. Since the Chapen case you were up here in
13 Detroit for, have you published any additional or new
14 articles or studies?

15 A. Well, I think you are familiar with my
16 paper on Asbestos In Brakes?

17 Q. Right. But that has just been published
18 when you testified in Detroit, correct?

19 A. Right. And I have two letters to the
20 editor in response to that article that had been
21 published since that time, one letter addresses the
22 comments that Dr. Teta had, the second letter -- and
23 they are both in the American Journal Of Industrial
24 Medicine. The second letter addresses the comments
25 that Dr. Art Langer and Victor Roggli made about my

1 paper.

2 Q. And are both the citations for those
3 letters to the editor on the CV that Mr. DeLuca asked
4 be marked?

5 A. Yes, they are.

6 And then the next paper that I have
7 published since that time was -- let me just turn to
8 my CV so I can give you the exact citations. The
9 next paper was titled Asbestos-Related Disease Risks
10 Still Exist, and it was published in the European
11 Journal Of Oncology, Volume 10, Number 1, Pages 9
12 through 30. That was in 2005.

13 The last article I published was a book
14 chapter titled Epidemiology Of Asbestos-Related
15 Diseases And The Knowledge That Led To What Is Known
16 Today, which is in Asbestos Risk Assessment,
17 Epidemiology And Health Effects, edited by Dr. Dodson
18 and Dr. Hammar and published by Taylor and Frances,
19 and it is my article or my chapter is from Page 201
20 to Page 308.

21 I believe those would be the three or four
22 articles that I have -- or two were letters or
23 responses to letters to the editor and two are
24 articles. That is it.

25 Q. Now, Doctor, in connection with the work

1 with Dr. Dodson and Dr. Hammar for their textbook
2 Epidemiology Of Asbestos-Related Diseases, did you do
3 any original research on the whole issue of household
4 exposures?

5 A. Well, I didn't do any original research.
6 I reviewed what had been done in the past and
7 basically the knowledge that is in that chapter would
8 correspond to the knowledge that is in my timeline.

9 Q. I see. And have you ever published a
10 paper that deals with the issue of household
11 exposure?

12 A. Well, the 1995 Report to Congress was one
13 that I worked on. I don't claim authorship on that
14 by any means, but that did deal with take-home
15 exposure. Many of the articles that I have written
16 have had sections that deal with take-home exposure,
17 but I have not done any personal studies as original
18 research on take-home exposure.

19 Q. Okay. Doctor, do you have any information
20 on what the time-weighted average exposure is for
21 someone in a household where one of the parents works
22 in an occupation where there is some occupational
23 exposure to asbestos?

24 A. I don't know the answer to that. I know
25 that Dr. Nicholson had looked at asbestos in homes,

1 but I don't believe it was in relationship to people
2 that brought it home from their workplace, so I am
3 not sure that any data such as what you are asking
4 exist.

5 Q. Do you have any data on peak exposures
6 that can occur in that setting?

7 A. No.

8 Q. There has been a request in the room that
9 we take a two-minute break, so if you could
10 accommodate us, we would appreciate it.

11 A. That is fine.

12 Q. Thank you.

13 (Recess taken from 1:35 to 1:40 p.m.)

14 Q. (By Mr. Burmeister) Dr. Lemen, would you
15 agree with me that people who have no known exposure
16 to asbestos-containing products can and do have
17 asbestos in their lungs?

18 A. Yes.

19 Q. And the level of asbestos that you can
20 find in people who have no known exposure to
21 asbestos-containing products is up to one million
22 fibers per gram of tissue, lung tissue?

23 A. Well, it varies by whose writing and who
24 is doing the research, but that is one area, yes.

25 Q. And in some individuals that can be true,

1 correct?

2 A. That can be in some individuals, correct.
3 It really depends upon where they live, what the
4 source of their exposure might be, et cetera, so it
5 is really dependent upon many different things, but
6 it can be that high.

7 Q. In those people with no known exposure to
8 asbestos, where their lungs have been sampled and
9 millions of fibers have been found, they probably and
10 indeed did have much more exposure to asbestos than
11 are found in the lungs, correct?

12 A. That is probably true.

13 Q. And that is because of the ability of the
14 lung to remove fibers?

15 A. Correct. Well not just the lung but the
16 defense mechanisms to keep it from getting into the
17 lung in the first place.

18 Q. Both?

19 A. Yes.

20 Q. And as I understand it, it is your view
21 that you cannot rule out this background level of
22 exposure to asbestos that everybody has as the cause
23 or a cause of the mesothelioma, correct?

24 A. That is correct, given the proviso or the
25 fact that any exposure adds to the total body burden

1 so if you are starting at a base exposure of the one
2 million, any additional exposure you have would add
3 on to that base exposure.

4 So, I don't know of a way to separate that
5 base exposure away from the rest of the exposure and
6 say one had an effect while the other had no effect.

7 Q. And in fact, the way you put it in Detroit
8 when you testified last year about the subject was
9 that you didn't know of any study methodology that
10 could prove it or disprove it, that is, that
11 background exposure caused the mesothelioma, correct?

12 A. That is correct, and that is still correct
13 as I sit here today.

14 Q. Okay. And you also agreed back then, and
15 I assume you still agree, that there are no
16 epidemiological studies showing that exposure below
17 the current permissible occupational level of
18 exposure causes mesothelioma?

19 A. Well, they have been -- the only thing
20 that I am aware of -- well, I am not aware of any
21 studies, that is correct, they have all been
22 estimations based upon a reasonable degree of risk
23 analysis.

24 Q. But your view is that the available
25 methodology does not allow you to say whether an

1 exposure lower than the current standard permissible
2 level is, in fact, causing mesotheliomas, right?

3 A. I am not sure I followed your question. I
4 think it was the same as what you just asked me
5 before and I don't really have a different answer,
6 but if I don't understand you, please repeat it.

7 Q. Okay. But let me say it slightly
8 differently. You would agree with me that there are
9 no epidemiological studies showing an exposure below
10 the current permissible exposure level to asbestos
11 causes mesothelioma?

12 MR. DELUCA: Object to the form.

13 THE WITNESS: Well, I don't know how you
14 could classify the issue -- I can't ever
15 pronounce it right -- Iwatsubo study, but that
16 study does show extremely low exposures to
17 asbestos, not one particular type, but that is
18 the only one that I know and I am not sure that
19 that would be considered an epidemiological
20 study.

21 Q. (By Mr. Burmeister) Just so that I make
22 sure your views on this haven't changed, let me just
23 read you a question and answer from your testimony in
24 Detroit and see whether we are on the same wavelength
25 and you are of the same view or if that has changed.

1 A. Sure.

2 Q. This appeared, when consecutively numbered
3 in the Chapen transcript, at Page 169, Line 11.

4 Question: "And you would agree with me that
5 there are no epidemiological studies showing that
6 exposure below the current permissible exposure level
7 caused mesothelioma?"

8 Answer: "There are no epidemiological
9 studies, period, that show below the current exposure
10 level. There have been in excess of mesotheliomas.
11 The available methodology has not allowed us to do
12 that."

13 Do you recall being asked that question
14 and giving that answer in Detroit last year, Doctor?

15 A. I do, and I would still go by that answer
16 given the one provision that I just mentioned to you.
17 But, yes, I would.

18 Q. So you still stand by that answer to that
19 question?

20 A. I do.

21 Q. Okay. Now, Doctor, has medical science
22 come to a generally accepted view on how
23 mesotheliomas are caused?

24 A. Well, when you say caused, that is a broad
25 category.

1 Q. That was a bad question. What I am
2 driving at, Doctor, is the actual biological process
3 that takes place.

4 A. I am not aware of anyone coming up with
5 that solution. I think if they did it would be very
6 unique. I think there are a lot of people looking
7 for that, but I am unaware that that has ever been
8 discovered.

9 Q. Are you aware that in all cancers there is
10 one cell that starts the process?

11 A. Yes. I am aware of that and aware of the
12 relationship to the P-53 issues dealing with that.

13 Q. And once the process has begun with one
14 cell, then at some point in all cancers the cells
15 just start multiplying, correct?

16 A. Yes.

17 Q. Now if, as we have discussed, it starts in
18 one cell, it's certainly biologically plausible,
19 isn't it, that one fiber of asbestos could cause
20 mesothelioma?

21 A. I think the biological plausibility is
22 there. Whether or not the evidence is there is a
23 different question.

24 Q. And you don't know the answer whether one
25 or ten or more fibers cause mesothelioma, correct?

1 A. I do not know the answer to that.

2 Q. Or a thousand or 10,000 or a million,
3 right?

4 A. I don't know if there is an identifiable
5 threshold that I could put any number to.

6 Q. You don't think the scientific community
7 or yourself know the answer to those questions about
8 the number, correct?

9 A. Well, if they do, I have not seen any
10 convincing evidence, at least to me, that would be
11 scientifically convincing that such a number exists.
12 I think a number probably does exist, but none that
13 has been identified.

14 Q. Now, you indicated that one of the areas
15 that you are going to be giving opinions or an
16 opinion about is household exposures. Can you flesh
17 that out for me, tell me what it is that you are
18 going to talk about as far as household exposures?

19 A. Yes. I think it can be flushed out pretty
20 simply, that information in the industrial hygiene
21 literature over the years has indicated that toxic
22 materials taken from the workplace and taken home
23 have been responsible for causing disease among
24 members of the household at home. This is not
25 pertaining to asbestos, per se, at this time, but

1 just in general, and that is outlined in my timeline
2 that I fax that section to you.

3 So, I will be talking about the general
4 industrial hygiene nature, the general industrial
5 hygiene practices of recommending that clothing from
6 work should not be taken home, nor should it be
7 laundered at home, and that there should be adequate
8 changing facilities as well as facilities to shower,
9 and that this has been a part of standard industrial
10 hygiene recommendations since at least back into the
11 1930s and '40s.

12 I will secondly talk more specifically
13 about take-home exposure, and as outlined in what I
14 said to you just recently, I will be talking about
15 the general studies on take-home exposure to
16 community members which indicate low level exposure.

17 I will be talking about what studies exist
18 on household exposures. I will be talking about the
19 Selikoff group and their x-ray findings that
20 Dr. Anderson and others reported in the '79, I think
21 around that time. And I will be relying upon the
22 data that came out in the 1995 Report to Congress on
23 take-home exposure as it pertains to asbestos, and I
24 will talk about some of the feasibility of how
25 take-home exposure can affect individuals in the

1 home, how they might be exposed to the take-home
2 exposure, not just from laundering clothes, but how
3 it can possibly contaminate the home, how children
4 can be exposed by just playing with a parent or a
5 family member that is wearing contaminated clothing.

6 That will pretty much be the essence of my
7 testimony as I understand it today.

8 Q. And a lot of that or really all of it is
9 fleshed out in the book chapter that you mentioned in
10 the Dr. Dodson's and Dr. Hammar's book that was
11 published earlier this year?

12 A. It is.

13 Q. In going back to the general
14 state-of-the-art opinion category, because I
15 understand there is three categories, there is
16 general state of the art, one; Number 2, household
17 exposures, which you have just described and which we
18 can get some more details from your chapter; and then
19 three is the General Motors specific testimony that
20 you plan to offer. Those are the three categories,
21 right?

22 A. That is correct.

23 Q. Okay. Now on the general state-of-the-art
24 question, we are going to be getting momentarily, I
25 hope, your abbreviated timeline that just deals with

1 household exposure issues, but can you generally
2 describe to us what the nature and scope of your
3 testimony will be on that area?

4 A. All right. The first part, as I told you,
5 would be the earlier industrial hygiene
6 recommendations and studies that show persons taking
7 home toxic materials from the workplace can carry
8 that risk home to family members.

9 The second will be going into community
10 exposures and how environmental exposures can affect
11 people that live in and around areas and sources of
12 asbestos.

13 The third area that I will go into will be
14 dealing more specifically then with people that have
15 actually developed mesothelioma where their only
16 known exposures were to take-home exposures, and all
17 of the studies that I would rely upon for this
18 testimony are outlined in either my chapter in the
19 Dodson book, my timeline that I am just sending to
20 you, or I guess that would be it, those two areas.

21 And I mean, I am kind of confused as to
22 whether or not you want me to go into each study
23 individually or how do you want to --

24 Q. No, no, that is not necessary at this
25 time, Doctor, at least for my purpose. And that is

1 the basic overall view of what you are going to talk
2 about in this case, correct?

3 A. In the take-home area, yes, sir.

4 Q. Okay. Incidentally, I know we talked at
5 the beginning of the deposition about not being able
6 to find any information on actual exposure levels
7 that occur in the home, but to follow up on that a
8 little bit, I take it that because data really does
9 not exist in the literature and you haven't created
10 any of your own data on this issue, are we able to
11 say whether household exposures exceed let's say the
12 ACGIH TLV for asbestos dust that was in place for
13 many, many years?

14 A. Let me answer you with first giving you a
15 little bit of a clarification. What I said earlier
16 in the deposition, I think, you can always go back
17 and read it, but what I think I said was that there
18 were no exposure studies done dealing with take-home
19 exposure and its relationship to the total household
20 exposure, but there have been studies by Selikoff's
21 group of amount of asbestos in homes, but how much of
22 that is related to take-home I can't answer, and --

23 Q. I guess what I am asking is --

24 A. -- and I don't think they can answer that
25 because I don't think they have done that.

1 Q. Okay.

2 A. So I don't think any data on that exist.

3 Q. Okay. So as a result, if I understand
4 what you have just told me correctly, it would be
5 that if we were to find somebody, let's say like
6 Dr. Herbert Stockinger, who was the head of the ACGIH
7 meeting setting TLVs for things like asbestos for
8 many, many years, and we told him to go into the home
9 of someone whose parent worked in a factory where
10 there was some asbestos exposure, would you be able
11 to say whether Dr. Stockinger would have concluded
12 that the TLV for asbestos that was set by the ACGIH
13 before OSHA was ever violated?

14 MR. DELUCA: Object to the form.

15 THE WITNESS: In the form of take-home
16 exposure?

17 Q. (By Mr. Burmeister) Yes.

18 A. I don't think he could say that because I
19 don't think anybody has ever measured that.

20 Q. Do you have an opinion on whether you
21 would expect the dust on a time-weighted average in a
22 household setting under those circumstances to exceed
23 the TLV?

24 MR. DELUCA: Objection, form.

25 THE WITNESS: From clothing only or from

1 all sources?

2 Q. (By Mr. Burmeister) Yeah, from all
3 sources?

4 A. Depends upon how much asbestos was there
5 and what they were doing with it. I mean, if they
6 had take-home exposure on clothing and the worker
7 then at the same time brought home bags that were
8 once used that contained asbestos, such as they did
9 in a study I did in Tyler, Texas, those things added
10 together, yes, can exceed the TLV of what was set by
11 ACGIH.

12 We did some simulation studies of shaking
13 those bags and found they did exceed both the old TLV
14 as well as the current TLV.

15 Q. So you are saying that even though, let's
16 say the factory in which the parent was working,
17 never, ever exceeded the TLV for asbestos, that that
18 person could go home with their clothes and on a
19 time-weighted average, as the TLVs were constructed,
20 which were designed to, you know, eliminate peaks and
21 valleys in exposures, that the TLV would be exceeded
22 in the household?

23 MR. DELUCA: Objection to the form.

24 THE WITNESS: No, that is not at all what
25 I said.

1 Q. (By Mr. Burmeister) Okay. I
2 misunderstood.

3 A. What I said was, one, it would depend upon
4 what the worker took home, whether he or she took
5 home just their clothing, or as in the case of Tyler,
6 Texas, where they took home old burlap bags that
7 carried asbestos and then used those around the home,
8 that the combination of materials they brought home
9 from the workplace could exceed the threshold limit
10 values depending upon how they used it.

11 But since we have no measurements, I have
12 no way of telling you that just taking work clothing
13 home would ever exceed that concentration. I have no
14 way of knowing one way or the other.

15 Q. And is that also the case for later
16 guidelines and standards and regulations which have
17 gone into place for asbestos?

18 A. Well, it would be true of later guidelines
19 and standards that went in place, even though those
20 guidelines and standards have reduced their
21 concentrations considerably --

22 Q. Thank you.

23 A. What?

24 Q. Doctor, let me ask you, I want to do -- I
25 want to bring myself up to date a little bit on how

1 much you charge and so forth.

2 MR. DELUCA: Before you do that, we are
3 going to allow Dr. Lemen to finish his answer,
4 okay?

5 MR. BURMEISTER: Okay. Was it yes or no?

6 MR. DELUCA: You cut him off.

7 THE WITNESS: I hadn't finished when you
8 started talking.

9 What I was saying was, and now I forgot,
10 but what I was saying, basically, if I can go
11 back to the beginning, is that there are no
12 measurements for which to say, but as the
13 concentrations have gone down considerably, it
14 is possible but we don't know because we don't
15 have any data to show one way or the other if
16 they did or did not exceed any of the current
17 standards that are in effect.

18 Q. (By Mr. Burmeister) Okay. Are you
19 finished?

20 A. Yes.

21 Q. Okay, thank you. Now, as I understand it,
22 you charge or at least last year you were charging
23 \$350 per hour; is that correct?

24 A. No, last year I was charging \$400.

25 Q. Okay. And are you charging the same

1 amount this year?

2 A. Yes.

3 Q. And do you still have a minimum charge for
4 a deposition?

5 A. I do. \$2400.

6 Q. And what about for trials, do you have a
7 minimum charge for that?

8 A. The same as a deposition, \$2400.

9 Q. I understand that you are taking home
10 about a quarter of a million dollars or more from
11 asbestos litigation a year; is that right?

12 A. I would say that is correct, yes, sir.

13 Q. And it accounts for a majority of your
14 income each year?

15 A. Yes, sir.

16 Q. And since you retired from the government
17 in 1996, would it be fair to say that you have made
18 several million dollars from asbestos litigation?

19 A. I don't know the exact amount, but
20 certainly over a million dollars is well taken.

21 Q. And would you say that most of your work
22 is for Plaintiff's attorneys in asbestos litigation?

23 A. Yes, I would.

24 Q. Have you done any for Defendants?

25 A. I have consulted with Defendants. I

1 haven't ever gone to trial with Defendants, but I do
2 have consultations with various Defendant law firms
3 from time to time.

4 Q. Have you ever given a deposition for a law
5 firm that represented a Defendant?

6 A. Other than when I first started, and I
7 think you have heard this before, for a law firm that
8 was a Defendant and represented insurance companies
9 that were being -- I guess they would have been
10 Plaintiffs. So the answer is no.

11 Q. The nature of the work that you have done
12 for Defendant law firms, can you describe that for
13 me, please?

14 A. Well, first of all, I have consulted for
15 them by answering questions about cases they have. I
16 have been asked to testify in certain cases if they
17 do go to trial. None have at the present time. And
18 that is about the best I can describe it.

19 Q. Have you ever issued a report, or written
20 a report, for a law firm representing a Defendant in
21 an asbestos case?

22 A. I don't think so.

23 Q. Have you ever been consulted by a law firm
24 representing a Defendant in a mesothelioma case?

25 A. That is a good question. I don't think

1 so.

2 Q. Have you ever been asked by a law firm
3 representing a Defendant to consult on a household
4 exposure case?

5 A. No.

6 MR. BURMEISTER: Doctor, I don't believe I
7 have any further questions at this time. Thank
8 you very much.

9 THE WITNESS: Thank you.

10 MS. ISELY: This is Chuck Isely, I don't
11 have any questions for the Doctor. Thank you.

12 THE WITNESS: Thank you.

13 MR. DELUCA: Okay. Well, everybody have a
14 good weekend then.

15 EXAMINATION

16 BY MR. WISNIEWSKI:

17 Q. Dr. Lemen, my name is Mark Wisniewski, I
18 just have some Michigan-specific questions for you,
19 so you may or may not know the answer to.

20 Do you know if Michigan ever adopted the
21 ACGIH TLV?

22 A. I don't remember.

23 Q. Do you know if any states adopted the
24 ACGIH TLV?

25 A. I know of some states, yes. For example,

1 Texas adopted it. There were other states also, but
2 as I sit here I can't remember them.

3 Q. You have no specific knowledge whether
4 Michigan adopted the TLV?

5 A. No. I could probably find that out, but I
6 really haven't made that a part of what I have
7 studied.

8 Q. If Michigan adopted the TLV and applied to
9 an occupational setting -- actually, strike that.

10 The exposure that you talk about in a
11 household setting, is there any literature regarding
12 an employee who actually never worked with an
13 asbestos-containing product but was just around an
14 asbestos-containing product and took that exposure
15 home?

16 MR. DELUCA: Object to the form.

17 THE WITNESS: I am unaware of any such
18 studies.

19 Q. (By Mr. Wisniewski) You would agree with
20 me that most of the studies regarding household
21 exposure were involving workers who actually either
22 installed or removed asbestos-containing materials
23 and then took that exposure home?

24 MR. DELUCA: Objection, foundation.

25 THE WITNESS: I don't think that the

1 studies that I have seen, for example, the ones
2 I have read, specifically identify whether or
3 not all of the individuals worked directly with
4 the asbestos or not.

5 Q. (By Mr. Wisniewski) Do you know if
6 Ms. Thomas' father worked with asbestos-containing
7 materials?

8 A. As I said at the beginning, I have no
9 information on the Plaintiff or any of her family
10 members.

11 Q. And with that in mind, you really have no
12 information as to what Ms. Thomas' exposure was?

13 A. No, I don't. I was not asked to testify
14 in that area.

15 Q. Well, I guess my question is if you are
16 being asked to testify about household exposures, or
17 I can't remember how you broke it down, or take-home
18 exposures, wouldn't it be important to know what the
19 take-home exposure was in this case?

20 A. I have not been asked to opine any
21 relationship of the state-of-the-art knowledge to
22 this particular case.

23 Q. I guess I am a little bit confused. You
24 said answer questions regarding household exposures,
25 what did you mean by that?

1 A. I meant that I would be talking about the
2 state-of-the-art knowledge concerning household
3 exposures. I will not be talking about anything
4 specific to the Plaintiff in this case because I have
5 no information on the Plaintiff in which to make any
6 comment about how these studies would relate to the
7 Plaintiff in this case's exposure because I don't
8 know what the Plaintiff's exact exposure was.

9 I only know, as I said earlier, that the
10 Plaintiff developed mesothelioma, was exposed
11 supposed, from what I was told, only to take-home
12 exposure from her father who worked at a General
13 Motors facility.

14 I have no idea how long he worked at the
15 facility or what he did at the facility or whether he
16 was even exposed to asbestos, other than what I just
17 gave you.

18 Q. Doctor, you would agree with me then that
19 if you don't know what the exposure of a household
20 exposure is in this case, you would have difficulty
21 determining whether some of the studies that you are
22 going to discuss are actually relevant to this
23 lawsuit?

24 A. I have no idea whether they are relevant
25 to the lawsuit. What I have been asked to do is to

1 bring to this case and bring to this deposition and
2 this trial the knowledge that is in the literature
3 concerning take-home exposure.

4 I presume that a treating physician or
5 someone else will be talking about the exact risk of
6 the Plaintiff and the connection to take-home
7 exposure in this case. I have not been asked to do
8 that nor will I attempt to do that.

9 Q. You would agree with me that -- or
10 actually do you know what the last year she was
11 exposed to asbestos was?

12 A. Sir, as I said earlier, I don't have any
13 information on case particulars in this case, and for
14 me to say anything beyond what I have said would be
15 pure speculation and I don't intend to do that at
16 trial.

17 Q. Well, you will agree with me that any
18 knowledge that came out after her last year of
19 exposure would not be part of the state of the art as
20 to this Plaintiff?

21 MR. DELUCA: Object to the form.

22 THE WITNESS: I don't know the answer to
23 that. I mean, it wouldn't be state of the art
24 at the time of exposure, but it certainly would
25 be state of the art in the general overall

1 picture of our knowledge that has developed
2 about take-home exposure.

3 As to your question, I think that is
4 really a legal determination that I have not
5 been asked to address.

6 Q. (By Mr. Wisniewski) If you could, what
7 was the state of the art as it relates to workers
8 taking -- or household exposure in 1957?

9 A. The state-of-the-art knowledge in 1957
10 dealt with the industrial hygiene literature
11 discussing the potential for take-home exposure and
12 disease dating back to the late 1800s, as I have
13 outlined in my material I have sent down to you.

14 Nothing specific up to 1957 to asbestos,
15 but there was a multitude, I don't know multitude,
16 that is the wrong term, there was a lot of
17 information in the industrial hygiene literature
18 warning against allowing workers to wear clothing
19 that was contaminated with toxic material home from
20 the workplace.

21 The actual knowledge dealing with
22 asbestos, as I said, started around 1965.

23 Q. So from 1957 to 1965, there was no
24 specific state-of-the-art knowledge as it related to
25 asbestos and household exposure?

1 MR. DELUCA: Object to the form.

2 THE WITNESS: There were recommendations
3 in industrial hygiene literature that take-home
4 exposure could occur when workers wore clothing
5 home from the workplace.

6 There had been no studies at that time for
7 asbestos, but there was plenty of knowledge
8 warning of the potential for take-home exposure
9 and actual knowledge of examples of take-home
10 exposure for a few other chemicals, but nothing
11 that was specific other than the potential for
12 disease at that point in time.

13 Q. (By Mr. Wisniewski) Do you know of a
14 single example of a single employer in the
15 United States that had a practice of not allowing
16 their workers to take their work clothes home where
17 there was asbestos fibers on the work clothes?

18 MR. DELUCA: Objection.

19 THE WITNESS: First of all, I have never
20 been asked to look in that area; and secondly,
21 that is not an area that I would do in my
22 general research in the first place.

23 Q. (By Mr. Wisniewski) So I guess your
24 answer is you don't have any knowledge of any such
25 corporate policy of any single corporation in the

1 United States?

2 MR. DELUCA: Objection.

3 THE WITNESS: My knowledge is that I have
4 never looked.

5 Q. (By Mr. Wisniewski) Do you know if the
6 government, government employees, require their
7 employees not to take clothing home that had asbestos
8 dust on them from '57 to '65?

9 MR. DELUCA: Objection.

10 THE WITNESS: Again, I have never looked,
11 but I do know that the Public Health Service,
12 starting in '43, certainly made a strong
13 recommendation that they not do that, and that
14 is cited in the Manual Of Industrial Hygiene And
15 Medical Service In The War Industries as
16 reported in 1943.

17 Q. (By Mr. Wisniewski) That specifically
18 addresses asbestos dust on clothing?

19 A. No, it addresses take-home. I didn't know
20 you were asking just asbestos dust.

21 Q. Since this is an asbestos case, I am going
22 to ask my questions about asbestos.

23 A. I don't know of anything about asbestos,
24 sir.

25 Q. Do you know a single instance when a union

1 required its members not to take clothing home that
2 had asbestos on it?

3 MR. DELUCA: Objection.

4 THE WITNESS: I have never looked and I
5 don't know.

6 Q. (By Mr. Wisniewski) So you never looked
7 and you don't know about the unions, any employer in
8 the United States or the government as it relates to
9 asbestos?

10 A. No, I don't, that is not something in my
11 expertise that I would have looked at.

12 Q. Do you know anything about the
13 neighborhood that Ms. Thomas lived in?

14 A. Sir, I have no information on anything
15 about Ms. Thomas.

16 Q. As it relates to the neighborhood, I guess
17 what is going to be your testimony about neighborhood
18 exposure?

19 A. Well, that is outlined in what I have sent
20 down to you. I will be talking about neighborhood
21 exposure as relates to asbestos starting in 1965 with
22 the Newhouse and Thompson report, and going forward
23 from there.

24 Q. And what is your opinion as to someone who
25 lives in an urban area around industrial settings?

1 A. Well, that is exactly what Newhouse and
2 Thompson looked at and found that there wasn't a
3 potential risk from those type of exposures.

4 Q. So if Ms. Thomas lived in a house in an
5 industrial area, she was at risk of getting asbestos
6 exposure from that industrial setting?

7 A. It depends upon whether or not the
8 industrial setting had asbestos in it. If they had
9 asbestos, then there is that potential, yes.

10 Q. How about asbestos exposure at her
11 schools?

12 MR. DELUCA: Objection, foundation.

13 THE WITNESS: That is another potential
14 source if asbestos was in the schools.

15 Q. (By Mr. Wisniewski) Are you going to give
16 any testimony about giving a quantitative analysis
17 between a potential school exposure, a potential
18 neighborhood exposure, versus a potential household
19 exposure from her father?

20 A. No, I have no data on which to do that and
21 I don't intend to do that.

22 Q. But it is your belief or your
23 understanding that the exposures could have come from
24 any one of those three places?

25 A. I don't know the answer to that in this

1 particular case, but in answer to your question, if
2 there were sources of asbestos in any of those three
3 places, yes, exposure could have come from any of
4 those three places.

5 Q. And I guess I will add a fourth one, even
6 if she worked somewhere that contained asbestos?

7 A. That is true, too.

8 Q. You don't know what she did?

9 A. I have no idea.

10 MR. WISNIEWSKI: Okay. Thank you, Doctor.

11 THE WITNESS: You are welcome.

12 EXAMINATION

13 BY MR. OSANTOWSKI:

14 Q. Doctor, my name is Bill Osantowski, and I
15 represent Durametallic Corporation. I have a few
16 questions, and based on your previous testimony, I
17 think we are all going to know the answer but I just
18 want to pin it down, okay?

19 A. Yes, sir.

20 Q. Have you been provided with any
21 information or documents indicating that Ms. Thomas
22 was exposed to any products attributable to
23 Durametallic Corporation?

24 A. No, I haven't.

25 Q. Accordingly, you are not prepared to offer

1 any opinions that any of the products associated with
2 Durametallic Corporation played any role in the
3 development of Ms. Thomas' disease, is that accurate?

4 A. No, I am not.

5 Q. The statement is accurate?

6 A. Yes.

7 Q. Do you have any documents or other
8 information at all concerning the corporate knowledge
9 Durametallic Corporation may have had at any given
10 point in time regarding potential health hazards
11 associated with asbestos exposure?

12 A. No, I don't.

13 Q. It is fair to say then that you have no
14 intention to offer any opinions in this case
15 specifically regarding Durametallic or its products,
16 is that accurate?

17 A. Not unless I am given information between
18 now and trial, but I don't intend to get that
19 information.

20 Q. So the statement is accurate?

21 A. Yes.

22 Q. You have no intention to quantify the
23 exposures in this case whatsoever, is that accurate?

24 A. Correct.

25 MR. OSANTOWSKI: That is all I have.

1 Thank you, Doctor.

2 THE WITNESS: Thank you.

3 EXAMINATION

4 BY MS. PHIFER:

5 Q. Doctor, this is Elizabeth Phifer.

6 A. Hello Elizabeth, how are you?

7 Q. I am doing fine; how are you doing?

8 A. Fine.

9 Q. I have a very short question for you and
10 that would be: With regard the automotive friction
11 products, have your opinions changed any since you
12 testified in Houston in the Havner hearing?

13 A. I don't believe so.

14 Q. Then I don't have any more questions for
15 you, Doctor.

16 A. Thank you. Elizabeth?

17 Q. Yes, sir.

18 A. The latest testimony I did on brakes,
19 though, was in the hearing, it wasn't Havner, but
20 Daubert hearing in Delaware, which was about --

21 Q. When was that?

22 A. About two weeks ago.

23 Q. And I assume that your testimony in
24 Delaware would have been substantially similar to
25 that you gave in Houston?

1 A. Yes. But I just wanted, if you don't know
2 about it, to let you know that that was the last time
3 I made any comments.

4 MS. PHIFER: Great. I appreciate that,
5 thank you.

6 EXAMINATION

7 BY MR. HICKEY:

8 Q. Dr. Lemen, can you hear me?

9 A. Yes.

10 Q. My name is Steve Hickey, I am here today
11 on behalf of General Motors.

12 A. Yes, sir.

13 Q. You said that the third, I guess, task
14 that you were asked to fulfill in this case was to
15 talk about or to address the GM documents or some
16 type of GM information; is that correct?

17 A. Yes, sir.

18 Q. Can you tell me what you have been asked
19 to do and what your anticipated testimony is in this
20 respect?

21 A. Yes, I have been asked to basically
22 testify as to the state of knowledge that General
23 Motors had in relation to asbestos and to industrial
24 hygiene and also to disease potential from exposure
25 to asbestos.

1 The documents that I received relate to
2 documents that General Motors had or produced in this
3 case that talk back in time to the 1930s when their
4 medical department started and the participation of
5 their medical department and multiple conferences
6 dealing with asbestos, and the participation of
7 members of the General Motors medical family and
8 their involvement with asbestos and asbestos-related
9 diseases.

10 I think that these documents summarize
11 that quite succinctly. I am not going to make any
12 speculations beyond these documents.

13 Q. These documents are contained in the
14 exhibits that have been marked as --

15 A. Exhibit 2.

16 MR. HICKEY: Can we have a commitment that
17 a copy of this exhibit is going to be made and
18 made at my expense and sent up here, Aaron?

19 MR. DELUCA: It is attached as Exhibit 2
20 to this deposition and will be a permanent
21 record of the State of Michigan.

22 MR. HICKEY: So all of the exhibits are
23 being attached then?

24 MR. DELUCA: Absolutely, and we will file
25 them with the court.

1 MR. HICKEY: Great.

2 Q. (By Mr. Hickey) It is difficult for me to
3 go through those documents now. Are these things
4 that you obtained only in this case or were you
5 familiar with these before?

6 A. I think it is fair to say that I was
7 familiar with many of these before this case, that
8 some deal with publications in the medical literature
9 that I had copies of, such as articles out of Safety
10 Engineering, articles from the Industrial Hygiene
11 Foundation, abstracts of Industrial Hygiene
12 Foundation, rosters of people that attended the
13 Saranac Laboratory's meetings, copies out of Frank
14 Patty's original Patty's, and I really don't think
15 there is much in here that I would say that I haven't
16 seen in the past or been familiar with, except I
17 would say for the PowerPoint presentation that we
18 talked about earlier.

19 Q. Does the PowerPoint presentation make
20 specific reference to General Motors?

21 A. PowerPoint makes specific reference to
22 articles that I am familiar with, I just hadn't seen
23 the PowerPoint presentation in this format, but all
24 the articles in the PowerPoint I have seen and they
25 are not specific to General Motors, but they are

1 specific in the fact that General Motors had access
2 to these documents, either through membership of
3 trade organizations or other type of organizations,
4 and that information I have been able to deem from
5 what is attached in here as Dr. Castleman's chapter
6 on General Motors.

7 So, that is the way this information came
8 about and how I would relate it.

9 Q. Have you been asked to testify on behalf
10 of Plaintiffs in a case against General Motors
11 involving asbestos exposure previously?

12 A. On these Plaintiffs?

13 Q. No, just any Plaintiffs at all?

14 A. Yes, I think I have, but I mean, I have in
15 principally cases involving brake exposure.

16 Q. When is the last time that you did that?

17 A. The Delaware hearing I would say would be
18 the last time I testified on brake exposure. General
19 Motors was a participant in that hearing.

20 Q. When was that?

21 A. That was about two weeks ago. It was in
22 Wilmington, Delaware.

23 Q. Were the documents that are contained in
24 Exhibit 2 that pertain to General Motors, were those
25 the subject of that testimony?

1 A. No. Some of the documents were but not
2 all of them. As I say, the PowerPoint presentation
3 was not a part of that. Some of the documents in the
4 PowerPoint presentation were, but, no, this was
5 not -- I can't say that these documents weren't
6 addressed at some point in the presentation, but that
7 presentation was presently dealing with brakes and
8 brake exposure, whereas these documents go broader
9 than that.

10 Q. Outside of the friction products type of
11 case, have you testified against General Motors in an
12 asbestos-related case?

13 MR. DELUCA: Object to the form.

14 THE WITNESS: Not to my knowledge.

15 Q. (By Mr. Hickey) The PowerPoint
16 presentation that you are referring to, it sounds to
17 me like something that you did not rely on as you
18 formulated your opinions in this case, am I correct?

19 A. Well, I didn't really rely upon it other
20 than having reviewed it in preparation for coming,
21 but as I said, almost every article that is in the
22 PowerPoint presentation that is referred to I have
23 seen before.

24 Q. Was there any article that was provided to
25 you in Exhibit 2, other than the PowerPoint

1 presentation itself, an article that was new to you?

2 A. You know, I didn't recall any being new to
3 me, I think I had seen almost everything except maybe
4 this one document that deals with -- if I can get to
5 the first of it, just a minute, please -- a foundry
6 document that is in here.

7 I am trying to get to the front of it. It
8 takes up a lot of the book, actually. And it is
9 titled Health Protection And Foundry Practice from
10 the American Foundrymen's Society. I don't think I
11 had seen that before. And it is about -- I would say
12 it may be almost 500 pages.

13 Q. Did you read that before commencing this
14 deposition today?

15 A. I went through it. I won't tell you I
16 read every line, no, sir.

17 Q. Did it serve to edify you in any way about
18 things concerning GM that you did not know before?

19 A. No.

20 Q. What are your opinions with respect to
21 General Motors as they relate to the tasks that you
22 were assigned in this case?

23 A. I think my opinions for General Motors can
24 be summarized by saying that it was a company that
25 had a very sophisticated medical department and very

1 well-known members of its medical department in the
2 field of occupational health and safety, and that
3 many of those members contributed vast amounts of
4 information, to our knowledge, about health and
5 safety of the workplace, and were actually leaders in
6 that field, and that GM certainly knew, through their
7 knowledge, of health aspects of exposure to asbestos
8 and many of the potential types of exposures,
9 including take-home.

10 I think Patty's Toxicology Textbook is a
11 good example of that, that outlines good industrial
12 hygiene practice.

13 So, I think my testimony about General
14 Motors, based upon these documents, would be that it
15 was a very well staffed and very accomplished program
16 in industrial hygiene and health and safety --

17 Q. In terms of the temporal sequence of
18 things, what is it that you are opining General
19 Motors knew in the things they outlined?

20 A. I think they started knowing this back in
21 the '30s, when Dr. Selby, I think it was, was the
22 first medical director, and then during the '40s
23 Frank Patty and others were members of their staff,
24 and so I think they were some of the leaders in
25 learning about information on asbestos and disease.

1 Q. Do any of the documents that are in
2 Exhibit 2, or any other documents concerning GM of
3 which you are aware, specifically address take-home
4 exposures to asbestos?

5 A. Well, I think that you will find in some
6 of the articles that are in here references to some
7 of the take-home literature, but not in the '40s,
8 '30s and '40s because it really didn't exist on
9 asbestos. So, later on, yes, but not during that
10 early time frame.

11 Q. What articles that are in Exhibit 2 or
12 that you are otherwise familiar with that are GM
13 documents specifically address take-home risks of
14 asbestos exposure?

15 A. I don't think in Exhibit 2 there are any
16 of those articles that are attached that are specific
17 to asbestos.

18 I think there are articles in here that
19 talk about asbestos, but not necessarily the
20 take-home potential from asbestos and certainly no
21 studies done that I am aware of.

22 But, there are certainly references, such
23 as in the very least an employer should know about
24 dust and fume diseases, and they imply and talk about
25 the hazards from exposure to asbestos.

1 The book by Lanza, Silicosis And Asbestos,
2 talks specifically about garages and about asbestos
3 exposure. National Safety Council documents do, too,
4 but I don't think you will find anything specific to
5 asbestos, other than what I have just told you. And
6 I think there is a wealth of information about how
7 toxic asbestos is and how exposures can lead to
8 disease.

9 Q. Your putting together then the industrial
10 hygiene information about take-home exposures
11 generally with information about health risks from
12 asbestos, saying that General Motors knew or should
13 have known as of when that take-home exposures to
14 asbestos would pose a risk to members of the
15 household?

16 A. In my opinion, General Motors should have
17 known, dating back at least to the '40s and the '30s,
18 that asbestos, one, caused disease. And they should
19 have been aware of how those exposures might occur
20 from the industrial hygiene literature dating back to
21 that same time that I have outlined showing how
22 take-home of other toxic materials can result in
23 disease of household members, that as sophisticated
24 as the General Motors staff was, that that would be
25 something that they should have been well aware and

1 able to put together.

2 Q. I want to distinguish for a minute,
3 Doctor, between asbestos exposures to people who are
4 working with raw fiber, either mining, milling or
5 manufacturing of asbestos-containing products, and
6 exposures to people who are looking around products
7 fractionally comprised of asbestos, such as pipe
8 covering and insulation materials. If you can follow
9 me with that, okay?

10 A. Yes.

11 Q. What is the earliest study that addressed
12 the issue of take-home exposures to persons in the
13 households of workers exposed to products
14 fractionally comprised of asbestos, such as
15 insulation products, but who are not involved in the
16 actual manufacture of asbestos-containing products
17 themselves, mining or milling, dealing with raw
18 fiber?

19 A. I would have to go back and look at the
20 literature, but I believe that the Newhouse and
21 Thompson talked about a friction exposed worker. I
22 can't remember, though, if that was in a factory
23 manufacturing friction products or if it was in a
24 person exposed to friction products, I just don't
25 have an answer to that.

1 Q. Is there any other study that you can
2 think of that addresses my question besides Newhouse
3 and Thompson?

4 A. From encapsulated products such as brakes
5 and so forth, I don't know of any.

6 Q. I will also, though, include insulation
7 materials, like pipe covering?

8 A. Oh, well in that case, yes, they go back.
9 Selikoff's articles talk about that in the '60s.
10 There are multiple articles outlined in my paper that
11 I sent to you that talk about that.

12 Q. About take-home exposures?

13 A. About the potential for take-home, yes.

14 Q. Your article, the four pages I should say
15 that you sent me, make reference to a number of
16 studies, for instance the 1897 Netolitzky,
17 N-e-t-o-l-i-t-z-k-y, from 1897?

18 A. Right. Those were the earlier studies
19 that talked about take-home exposure of toxic
20 materials, nothing about asbestos, but just the
21 general issue of potential for take-home exposures.
22 Nothing specific to asbestos, as I have stated
23 before, occurred until about 1965.

24 Q. Okay. And I take it, because I don't have
25 it here in front of me and I can't recall, there are

1 citations to the journals from which all these
2 publications came from in the back of your book,
3 perhaps?

4 A. Yes, there are, and also in my timeline,
5 which is marked Exhibit Number 3. And I think you
6 will find many of them in the Household Exposure
7 Notebooks, Volumes I, II and III, that are attached
8 as Exhibit 1.

9 Q. Okay. Other than the timeline that you
10 have referred to here and that you have sent us four
11 pages of, have you yourself authored anything that
12 deals with take-home exposures of asbestos?

13 A. Well, yes, my papers that I have written
14 in the past have discussed take-home exposure. As I
15 said to an earlier questioner, I have never done a
16 study, personally, of take-home exposure, but I have
17 referred to it in my publications.

18 Q. What is the earliest publication that you
19 ever wrote that dealt specifically with take-home
20 exposures to asbestos?

21 A. I am not sure I can answer that without
22 going back and looking at my publications, I just
23 don't know the answer.

24 Q. You would have to actually look at the
25 publications and not just your CV, is that what you

1 are telling me?

2 A. Yes. I mean, I have talked about it in
3 presentations dating back into the '70s. I really
4 can't recall the first time I wrote it down in a
5 published paper.

6 MR. HICKEY: Okay. I don't think I have
7 any other questions right now.

8 THE WITNESS: Thank you.

9 MR. HICKEY: Aaron, that is everybody in
10 Detroit.

11 EXAMINATION

12 BY MR. BARNABY:

13 Q. Doctor, when is the last time you have
14 testified in a case that involved household exposure?

15 MR. HICKEY: I can't hear the questioner.
16 Maybe he needs to move closer because otherwise,
17 Doctor, you are going to end up repeating
18 everything like it is a press conference or
19 something.

20 THE WITNESS: All right.

21 Q. (By Mr. Barnaby) Dr. Lemen, when is the
22 last time you testified in a case involving household
23 exposure?

24 A. Probably about four or five months ago. I
25 can't remember the case name.

1 Q. Do you remember the state?

2 A. Actually, I think I did a deposition in
3 Georgia not too long ago about take-home exposure.

4 Q. In a Georgia case?

5 A. I think it was a Georgia case, yes. I can
6 try and find out and give it to you, I just, as I sit
7 here, my mind is blank on that.

8 Q. Do you remember who the Plaintiff's firm
9 was who is representing the Plaintiff --

10 A. Actually, it wasn't a Georgia case, I will
11 take that back, it was a deposition in Georgia in a
12 Louisiana case, and it was a case two weeks ago
13 called Cortiere or Cortiere and it settled so it
14 won't go to trial. Cortiere is how you pronounce it.
15 I am not good at French.

16 Q. What is your estimate about the number of
17 times you have testified in household exposure cases?

18 A. I would say maybe six to ten times.

19 Q. Do you recall the names of any of those
20 cases other than the most recent one?

21 A. No, I don't. I am sorry.

22 Q. Do you maintain a list of the cases in
23 which you have testified?

24 A. I do, but I don't identify them as to what
25 they -- other than whether it was an asbestos case or

1 a benzene case or -- but I don't give any more
2 specific in my list.

3 Q. What do you call that list or -- is it a
4 computer file?

5 A. It is a computer file just titled the list
6 of depositions and trial testimony that I maintain in
7 accordance with federal regulations when I do a
8 federal trial.

9 Q. Do you keep track of testimony you give in
10 cases that are pending in state courts?

11 A. Yes, I do.

12 Q. Is that just completed within that same
13 list?

14 A. Yes.

15 MR. BARNABY: Thank you, sir.

16 THE WITNESS: You are welcome.

17 MR. DELUCA: Anyone else?

18 Dr. Lemen, you are to send me an invoice
19 for your time spent for today's deposition and I
20 will forward that to Mr. Burmeister, who has
21 pledged to pay.

22 MR. BURMEISTER: I am sorry, Mr. DeLuca,
23 could you repeat that? I heard my name and that
24 piqued my interest.

25 MR. DELUCA: I told Dr. Lemen to send me

1 an invoice for his time and that I would forward
2 that to you.

3 MR. BURMEISTER: Okay, thank you.

4 MR. DELUCA: And that you have agreed to
5 pay.

6 MR. BURMEISTER: That is right.

7 MR. WISNIEWSKI: Aaron, it's Mark
8 Wisniewski, I just have one more question for
9 Dr. Lemen in response to one of Steve's
10 questions.

11 THE WITNESS: Yes, sir.

12 FURTHER EXAMINATION

13 BY MR. WISNIEWSKI:

14 Q. Doctor, you talked about that you received
15 documents, General Motors documents, and also a part
16 of Dr. Castleman's book as it relates to General
17 Motors. Have you ever been retained to talk about
18 any specific corporate knowledge of any other
19 Defendant in this case?

20 A. Not at this time, no, sir.

21 Q. They didn't provide other chapters of
22 Dr. Castleman's book as it relates to other
23 Defendants?

24 A. Well, as I said, the chapter that I
25 received or the portion that I received -- and I do

1 have the whole book, several -- I have got all of the
2 editions of the book, but I got it on the friction
3 products or Friction Products Manufacturing
4 Association and General Motors were the two parts of
5 what I was sent.

6 Q. But no one has asked you to date to give
7 opinions regarding corporate knowledge or state of
8 the art as to any other product manufacturer besides
9 General Motors?

10 MR. DELUCA: Are you talking about
11 Defendant-specific opinions as opposed to
12 general state of the art?

13 MR. BURMEISTER: Yes.

14 MR. DELUCA: Go ahead.

15 THE WITNESS: So far as I know, no.

16 Q. (By Mr. Wisniewski) I guess the question
17 will be actual knowledge versus constructive
18 knowledge?

19 A. I don't know the difference between active
20 and constructive, but I am not going to be talking
21 about any other Defendants at this time. I was told
22 that only General Motors was the only one I would be
23 talking about. Mr. DeLuca can correct that if I'm
24 wrong.

25 MR. WISNIEWSKI: Thank you, Doctor.

1 THE WITNESS: Am I wrong? Thank you.
2 Have a nice weekend.

3 (Pursuant to Rule 30(e) of the Federal
4 Rules of Civil Procedure and/or O.C.G.A.
5 9-11-30(e), the deponent and/or a party having
6 requested the right to review the deposition,
7 making corrections and/or changes and signing,
8 for that purpose the errata pages have been
9 annexed hereto.)

10 (Deposition concluded at 2:50 p.m.)
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(Original Exhibits 3 through 5 and photocopies of Exhibits 1 and 2 have been attached to the original transcript. Original Exhibits 1 and 2 have been retained by Dr. Lemen.)

C E R T I F I C A T E

STATE OF GEORGIA:

COUNTY OF FULTON:

I hereby certify that the foregoing transcript was taken down, as stated in the caption, and the questions and answers thereto were reduced to typewriting under my direction; that the foregoing pages 1 through 73 represent a true, complete, and correct transcript of the evidence given upon said hearing, and I further certify that I am not of kin or counsel to the parties in the case; am not in the regular employ of counsel for any of said parties; nor am I in anywise interested in the result of said case.

This, the 12th day of November, 2005.

Frances Buono, CCR-B-791

My commission expires on the
25th day of April, 2007.

COURT REPORTER DISCLOSURE

DEPOSITION OF: RICHARD A. LEMEN, Ph.D.

Pursuant to Article 8.B. of the Rules and Regulations of the Board of Court Reporting of the Judicial Council of Georgia which states: "Each court reporter shall tender a disclosure form at the time of the taking of the deposition stating the arrangements made for the reporting services of the certified court reporter, by the certified court reporter, the court reporter's employer, or the referral source for the deposition, with any party to the litigation, counsel to the parties or other entity. Such form shall be attached to the deposition transcript," I make the following disclosure:

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/s/ Frances Buono, CCR-B-791 11/11/05

Signature of attorneys present: Date:

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Return this form after review and/or signatures to the court reporter for inclusion in the record.
Please use reverse side for additional signatures.

DEPOSITION OF RICHARD A. LEMEN, Ph.D./FCB

I do hereby certify that I have read all questions propounded to me and all answers given by me on the 11th day of November, 2005, taken before Frances Buono, and that:

1) There are no changes noted.

2) The following changes are noted:

Pursuant to Rule 30(e) of the Federal Rules of Civil Procedure and/or the Official Code of Georgia Annotated 9-11-30(e), both of which read in part: Any changes in form or substance which you desire to make shall be entered upon the deposition...with a statement of the reasons given...for making them. Accordingly, to assist you in effecting corrections, please use the form below:

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DEPOSITION OF RICHARD A. LEMEN, Ph.D./FCB

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If supplemental or additional pages are necessary,
please furnish same in typewriting annexed to this
deposition.

RICHARD A. LEMEN, Ph.D.

Sworn to and subscribed before me,

This the day of , 20 .

Notary Public

My commission expires: