STATE OF INDIANA)
) SS:
COUNTY OF MARION)

IN THE MARION COUNTY SUPERIOR COURT
CIVIL DIVISION, ROOM NO. 12

MELODY LEWIS and)
ROBERT LEWIS,)
)
Plaintiffs,)
)
-v-) CAUSE NO.
) 49D12-1811-MI-045368
BMW CONSTRUCTORS, INC.,)
et al.,)
)
Defendants.)

TRANSCRIPT OF TRIAL PROCEEDINGS
DAY 4
OCTOBER 18, 2019
BEFORE THE HONORABLE THERESE A. HANNAH

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THE BAILIFF: All rise.

(Whereupon, the jury entered the courtroom.)

THE COURT: Well, good morning and welcome back. Please be seated.

Well, I hope everybody had a restful night, and we are ready for another day of trial.

Your oath that I gave you as jurors, continues from day to day until we conclude this case. So there's no need for the Court to swear you in again every day.

And with that, we'll begin.

MR. BICKS: Thank you. Good morning, everyone.

JURORS: Good morning.

BARRY CASTLEMAN, Ph.D.,

a witness resumed the stand on behalf of the Plaintiffs, having been previously duly sworn by the Court, took the stand and testified as follows:

CROSS-EXAMINATION (CONTINUING)

BY MR. BICKS:

Q Good morning, Dr. Castleman.

A Good morning.

Q My name is Peter Bicks. How are you, sir?

A Fine, thank you. Excellent.

Q And thank you for being with us. I'd like to start

with just a little bit on your qualifications.

Fair to say that you are not an expert on what I would call mineralogy?

A That's correct.

Q And is it fair to say that you are not a geologist?

A That's correct.

Q Is it fair to say that you don't have particular expertise in the source mines from which Johnson & Johnson got any of its talc?

A That's correct.

Q And are you familiar with the phrase material scientist?

A Yes.

Q I assume you do not consider yourself a material scientist.

A No.

Q Have you yourself actually tested any talc to determine its purity?

A No.

Q Do you hold yourself out in front of our jury as an expert in transmission electron microscopy?

A No.

Q What about x-ray diffraction?

A No.

Q Have you personally ever used an electron

microscope yourself?

A No, sir.

Q It's also the case, you're not a certified industrial hygienist; right?

A I have training in industrial hygiene, but I'm not a certified industrial hygienist.

Q Right. And you're not a medical doctor; right?

A No.

Q I think I've looked at a lot of your testimony, and I've heard you say that you're not an expert in mesothelioma in general; is that accurate?

A Well, it's -- I don't recall what you're referring to, but I'm not a medical doctor. Mesothelioma is clearly something that we use as a marker for indicating the dangers of asbestos in public health. So it's just a matter of context, I suppose, what question that would be.

Q Well, I'm happy to pull it up, but you were asked, are you an expert in mesothelioma in general, and you said you were not. I'm happy to bring the testimony up if you --

A It's such a vague question, if I said that in the context of some deposition.

Q Do you know, by the way, where Johnson & Johnson sourced its talc from?

A I read, I think, Vermont and Val Chisone in Italy.
Q I'm glad you mentioned Val Chisone in Italy because, did you mention to the jury yesterday that you had actually visited the deposit in Val Chisone Italy?
A Well, it's a museum now, but the mine still exists as a place that tourists can come and see a talc mine. But, yes, I've been there.
Q And you a visited that mine in about 2015?
A It was a few years ago, yes.
Q Did you tour the mine?
A Yes.
Q And you were able to walk around and see where the talc came from.
A Yes.
Q Who took you around the mine?
A Oh, I don't recall the people that were there. I was just coming as a tourist. I didn't have any special, you know, hosting arrangement by the mine management or anything like that.
Q Well, it would be -- the year was 2015. Had you been hired by any plaintiffs' law firm as of that time to testify in any case involving talc?
A Well, I had done talc cases, not Johnson & Johnson, but other companies' talc cases, before 2015.

Q Right. So at the time that you were at that Italian mine, you were retained by plaintiffs in cases involving talc; right?
A Well, plaintiffs weren't paying me to take a tour of the mine. I just happened to be in northern Italy and decided to see the mine. I didn't get paid for that.
Q Yes, I didn't ask you whether or not you got paid, sir, please. My question to you was, at the time you visited that mine, you were retained by plaintiffs in lawsuits against companies that sold talc products; right?
A Well, there had been a few lawsuits that I had testified in by that time, yes.
Q And is it the case that you've told this jury that you have been involved with asbestos issues since the early 1970s; fair?
A Right.
Q So we're talking, what, almost 50 years? 50 years; right?
A Well, not quite, but almost.
Q And you've held yourself out to this jury and you've talked about all the knowledge about asbestos hazards; right?
A Well, briefly we highlighted it, yes.

Q So my question to you is: With all of your knowledge and expertise, when you were at that Italian talc mine touring in the mine, seeing where all the talc was, were you wearing a protective breathing apparatus of any sort?
A No. It wasn't an active mine.
Q But you were right next to all the talc; right?
A Well, I was walking through the abandoned mine site to look at the way it was set up, yes. It's a museum now, not an active mine.
Q But the talc is right there? You were right up next to the talc itself; right?
A I suppose in some places, yes.
Q Right. And I've looked at your prior testimony. You said that you didn't consider yourself in any danger when you were on the site at that mine walking around that talc. Is that still true today?
A Right.
Q Now, you've also testified before that -- do you have some familiarity with the published literature and the epidemiology of the Italian talc miners?
A Well, I've seen one article, I think, published about that, about the -- some of the workers at the Italian mine by Rubino.

Q Have you -- I don't want to get into areas that you're not familiar with, but have you looked at all the epidemiology about the talc miners and millers in Italy?
A Not all of them, no.
Q Are you saying the only article you're familiar with is the Rubino article?
A Well, that's the only one that comes to mind.
Q Right. And you've testified before, and I want to make sure it's true, that you're not aware of any articles showing that that talc mine in Val Chisone contains asbestos. Is that still your testimony today?
A Yes.
Q Now, you talked a little bit about your book that was called "Asbestos: The Medical and Legal Aspects"; right?
A Right.
Q And I'm a good customer of yours, I've got five, all five editions. I hope you're pleased with that.
A Well, lots of defense lawyers buy the book, yes.
Q I wanted to just do something basic, which is the title of the book is Asbestos Medical and Legal Aspects; right?

A Right.
Q And did you come up with the title?
A I think so.
Q And to be clear, medical, you are not a medical doctor; true?
A True.
Q And legal, you are not a lawyer; right?
A Right. Medicine and law are the foundations of public health.
Q Sir, please, the question, are you a lawyer?
A No, sir.
Q I looked through all five of these books, and I cannot say that I read all of them, but I was looking very carefully to see if there was a chapter on Johnson & Johnson, and I didn't see one. Is there a chapter in any of these books about Johnson & Johnson?
A No.
Q Is there any discussion in any of these books about Johnson & Johnson and its talc?
A No.
Q Some of the companies that are discussed in here, is it fair to say that the companies that you're focusing on here are companies that made asbestos-containing products, like insulation and

thermal blocks and tape joint compound and companies of that nature?
A Well, it also includes large users of asbestos products like the big oil companies, big automobile companies.
Q And companies that put asbestos into their products, is that one category that you focused on?
A Yes.
Q And companies that actually had asbestos mines; right?
A Right.
Q And you know Johnson & Johnson doesn't fit into any of those categories, right, at least from what you know?
A Right.
Q Now, I want to ask you about the cover of this book. I know you've been asked about it before. Maybe we can put it up, but I think you've seen this.
MR. BICKS: May I approach, Your Honor?
THE COURT: Yes.
Q This was the foreword to your book; right?
A Well, this is the dust cover on the first edition of the book.
MR. BICKS: Right. So I'd like to offer this

into evidence, Your Honor.
MR. FINCH: No objection.
THE COURT: All right. The Court shows it admitted. Is this Exhibit Defendants' 11001-08?
MR. BICKS: And maybe we can go to the ELMO. Can folks see that on our jury?
JURORS: (Affirmative nod.)
BY MR. BICKS:
Q Great. So this was the foreword to the first edition of your book; right, Dr. Castleman?
A No, this was the dust cover that the publisher put on the book and the language that the publisher chose to use.
Q Right. I'm sorry, the dust cover, so that's kind of the thing on the outside of the book?
A Right.
Q And this was your first edition; is that right?
A That's right.
Q It says in it, "To attorneys in asbestos litigation, this book offers a complete documentation on the development of knowledge about asbestos hazards. There's an abundance of valuable material for the plaintiff and the attorney preparing his case as well as information on how to deal with defense arguments."

Did I get that right?
A You read that correctly.
Q So this was on the dust cover of the first edition of your book; right?
A It was.
Q And you've told us that, I think you said that you objected to this?
A Well, when asked about this in court, I've said that I told the publisher that this was a doctoral thesis accepted by one of the most respected schools of public health in the world, and their characterization of the book was, I thought, unfair and that I'd probably be hearing this for the rest of my life, and that was 35 years ago. And so far, my prediction has proven correct. But in any case, they stopped using that particular language on the dust cover after the first edition.
Q Right. But just so our jury's -- it was on the cover of the -- the dust cover of the first edition; right?
A Right.
Q And then you came into court and you were asked questions about it, and then in the second edition, it wasn't there; right?
A Well, they made it more balanced in a way that they

described the book, yes.
Q Right. But you first got involved in litigation about when, sir?
A Well, it started as a research job in 1976, about five years after I had written my master's thesis on asbestos.
Q And I have a timeline here, if we can bring up C-4, maybe it'll help us walk through this. Can you see that, Mr. Castleman?
A Yes.
Q So to orient us, 1973, you've got "Asbestos and You," which is a publication you wrote; right?
A Right.
Q Then in 1976, you start consulting for plaintiffs' lawyers; right?
A Right. I was an independent consultant by then, and they hired me to do research on the published literature, and I went to libraries to look up different articles.
Q And you first started testifying in, what, 1979?
A That's right.
Q So 2019, you've been testifying for essentially 40 years; is that fair?
A That's right.
Q Fair to say that you've testified in, what, over

400 trials?
A Yes. It averages to probably a little less than once a month.
Q And you've given, what, about a thousand depositions?
A Yeah.
Q I've read in your prior testimony that 99.9 percent of the time that you testify, you do so on behalf of plaintiffs; is that accurate?
A Plaintiffs list me as a witness. Defendants occasionally have asked me to and I've allowed that in some cases. But generally I appear as a witness for the plaintiffs. I testified as a defense in one case.
Q One case out of 400; is that right?
A In trial, yes.
Q And that case was actually a case where you were retained by the government and an asbestos company was on the other side; is that fair?
A Right. The asbestos company had sued the government and the Justice Department hired me as a witness to represent them.
Q Just so we're clear, is it true that 99 percent of the time that you come into the courtroom to testify, it's been at the request of plaintiffs'

lawyers?
A Yes.
Q And is it also true that when we look at your income, that over 90 percent of your income comes from testifying for plaintiffs in cases involving asbestos?
A Well, it certainly does now. Most of the international work I do pays little or nothing.
Q Well, can you give us a sense of how much money you think you've been paid over the last 40 years for testifying for plaintiffs?
A I really don't know what that total would be.
Q Well, let me -- I put up here C2, which is an exhibit that I've put together based on some of your prior testimony.
Do you see that?
A Yes.
Q I went through your testimony. You started testifying in 1979, but I started in 1980. And you've testified that you made about $40,000 a year; fair?
A That sounds high for 1980, but I really don't remember.
Q Well, I'm reading what you said in the Fusco case in 2013. I'm happy to show you that you said about

40,000 a year. Is that in the ballpark?
A I really don't know. I'm surprised if I could have remembered that in 2013, what I had made back in 1980.
Q All right. I have up here from your prior testimony that starting in 1985 you got paid about a hundred thousand dollars a year. Does that sound right?
A I think so.
Q And then what I couldn't figure out, because I really wanted to come to a total and I don't want to take too much time here, but I added this up and figured it out, it was about a little over $6 million. But the area that I had trouble with is the period between '85 and 2007, because that's a 22-year period of time. And in my calculation, I assumed you made a hundred thousand all the way up to 2007, but chances are, are you probably were getting paid more than that over that time period, kind of gradually getting higher?
A Certainly it would have been more than a hundred thousand many of those years, yes.
Q So if we added this up, and I'm not going to do it here, but it wouldn't -- you wouldn't quibble if it exceeds $6 million, would you?

A I really never added it up.
Q Now, one of the other things that happens is that plaintiffs' lawyers list you in cases that are around the country. They put you on what lawyers know as a witness list for experts; right?
A Right.
Q Do you charge just for having your name put down on a witness list?
A Only the first time I encounter a law firm. After that, they can list cases for years and years and there's no charge for it.
Q So how much do you charge just to have your name listed on a case?
A Well, the first time I encounter a firm, I used to charge $500, and now it's a thousand dollars.
Q The firm that has retained you in this case, what firm is that?
A This is the Motley Rice firm I think it's called today.
Q How long have you worked with the Motley Rice firm over your career?
A Well, I met Ron Motley in 1977, I think.
Q So give us a ballpark. How many cases do you think you've worked with for the Motley Rice firm?
A Well, Mr. Motley, I don't recall him ever using me

as an expert witness. He hired me to do research. I don't have any idea how many cases. At some point, I think, in the 1980s, other lawyers in the firm -- maybe it was 1990s or the late '80s -- started to use me as an expert witness on some of their cases.
Q Fair to say that you've been paid a fair amount of money by that firm?
A Well, I don't know what you mean by a fair amount of money. We're making a legal record here.
Q I can't hear what you said, sir.
A I don't know what you mean by the term fair amount of money. We're making a legal record here.
Q Right.
A I have no idea what the total would be.
Q Well, we totaled up the amount you've been paid, say, over 6 million. I'm just trying to get a sense of how much of that is from the firm that you're appearing here for today. Can you tell us that?
A Probably less than 1 percent, but I really don't know.
Q Now, you talked about -- and can we go back to that timeline, please -- that your first book comes out in 1984; right?

A Right.
Q And then your Ph.D. was in what year, sir?
A A few months later in 1985.
Q So I went back and looked at some of your testimony, and you were asked kind of what prompted you to get that Ph.D. and whether you were encouraged by plaintiffs' lawyers to get that Ph.D. so it enhanced your ability to come testify in court.
Do you remember being asked about that topic?
A Well, lawyers ask me about that topic when I'm cross-examined with some regularity, yes.
Q And is it true that you were encouraged by lawyers who hired you to testify to go get a Ph.D. because it would enhance your ability to come talk to a jury because you could say, I've got a Ph.D.?
A Well, when I told lawyers I was going back to school, they certainly said, good for you.
Q You said before that you thought courts and juries are more impressed with credentials, and so the lawyers obviously understood that it would be easier for me to present opinion testimony if I had a Ph.D.
Have you said that before?
A Probably. It was an observation that courts, in

allowing me to render opinions, were mindful of what my qualifications were in allowing what types of opinions I would be able to give in trial. It was simply an observation that I had made from being in the courtroom.
Q That people would hear you and have you -- hear about your Ph.D. and it would kind of enhance your testimony; right?
A Well, I was thinking of it more in the context of what the judges would let me say in terms of the way I could answer questions and that judges would allow greater latitude if I came in and said I wrote my doctoral thesis at the Johns Hopkins School of Public Health about the subject of the testimony.
Q And your doctoral thesis didn't contain anything about Johnson & Johnson; right?
A No.
Q So let me ask you about your communications with Johnson & Johnson. You were asked about that, remember, on direct yesterday?
A Yes.
Q You were shown your handwritten letter where you had asked for certain information.
Do you remember that?

A Right.
MR. BICKS: Can we bring up -- it's Plaintiffs' Exhibit 306.
Q And this is your handwritten note; right? Do you see that?
A Yes.
Q You asked the question of Johnson & Johnson, "Do all talcum powders contain asbestos?"
And this was something that you were focused on; right?
A Yes, it was.
Q I'm just curious, when you wrote this, it's in July of 1971. How old were you?
A Twenty-four.
Q You addressed it -- if we could just pull back from the document, it's not addressed to anybody in particular at Johnson & Johnson; right?
A Right.
Q Did Johnson & Johnson promptly respond to you?
A Yes.
Q This is Exhibit 293. You received a response -- you wrote on July 25th, and you received a response on what day?
A August 2, same year.
Q So is it fair to say that Johnson & Johnson got

back to you promptly?
A Yes.
Q And the letter was signed by who -- a Ph.D. who was the director of Central Research Laboratories, Thomas H. Shelley; right?
A Right.
Q In this letter, he tells you about specific mineralogists and others who had worked with Johnson & Johnson in paragraph 2.
You see that?
A Yes.
Q He tells you about work carried out by mineralogists at the Colorado School of Mines?
A Yes.
Q In your research, did you become familiar with the reputation of the Colorado School of Mines?
A No. I mean, I couldn't really say what the reputation of the school -- Colorado School of Mines is.
Q But let me ask you, I guess, the question, as a general rule based on your expertise, do you think it's a good thing for a company to do to hire top outside experts if they want to get answers to important questions?
A That's a good thing, yes.

Q So you didn't do any research, I gather, on the Colorado School of Mines?
A No.
Q What about McCrone Laboratories in Chicago, have you ever heard of Walter and Lucy McCrone in any?
A I have heard of McCrone Laboratories in my work, yes.
Q Do you know who Walter McCrone is?
A Well, I gather he's the head of that lab.
Q Do you know anything about Lucy McCrone?
A No.
Q She's one of the first female microscopists in the world. Did you know that?
A No.
Q Did you know of the reputation of Walter McCrone and his company when it comes to microscopy?
A No. I mean, they're just a lab I had heard of.
Q You didn't do any research into their reputation?
A No.
Q Were you aware that Walter McCrone himself, in any of your research, did you see his involvement in determining whether or not the Shroud of Turin that Jesus was buried in was real; do you know anything about that?
A No, I don't.

Q What about work that he had done when it came to whether or not someone wanted to identify whether hair of Beethoven's was his; do you know anything about that?
A No.
Q What about Fred Pooley and the University of Wales in Cardiff, do you know anything about them?
A I had heard of Pooley in other work I had done.
Q How had you come across Professor Pooley?
A I really don't recall. Some kind of -- in the microscopic analysis he had done.
Q You mentioned somebody named -- people say -- pronounce it Wagner, right, in your direct yesterday?
A Yes.
Q He was one of the original researchers on finding mesothelioma; right?
A Right. He was the author of the report in 1960 of 33 case of mesothelioma, 32 of which had a history of asbestos exposure.
Q Right. That was crocidolite over in Africa?
A Not all of it, but most of it was from that particular type of asbestos.
Q So my question is, did you read or familiarize yourself with the article that Mr. Wagner and

Professor Pooley wrote on Italian talc? Are you familiar at all with that?
A I don't recall that.
Q Would you say in your research that somebody like Mr. Wagner is one of the most well-respected scientists when it comes to asbestos issues?
A Well, he was up until the time he died. And it came out that he had been retained by a company in asbestos litigation in a way that he never disclosed. And that tended to explain some of the things that he wrote in his later years.
Q I see. Did you mention that yesterday on your direct? I didn't know that I heard that.
A Well, I wasn't asked about it.
Q Understood. So I want to ask you about -- remember yesterday you were asked about this meeting, you were shown a document, and we'll pull it up. It's Plaintiffs' Exhibit 578. This was a March 31, 1976 document. Remember you were asked about this?
A Yes.
Q Now, I think it's obvious, but let's make sure we clear it up. You were not at this meeting; right?
A I was not.
Q You've told our jury that Mount Sinai Hospital is one of the most respected hospitals when it comes

to asbestos issues; right?
A Yes.
Q When it comes to Dr. Selikoff, I've looked at some of your testimony and writings, and you've described him as a luminary; right?
A He was a renowned figure in the field of occupational and environmental health.
Q And I think you would agree, because I think you've said it before, that if a company had questions about testing of talc, that Dr. Selikoff and people at Mount Sinai would be good people to go talk to; right?
A Right.
Q Because they were some of the leading experts in the field; right?
A Right.
Q And you were asked about this memo.
MR. BICKS: And if we can scroll down a little bit on it, Jim.
Q And the statement there says that -- it starts that paragraph, "The Mount Sinai group indicated that over the weekend, the Selikoff group had been studying six new samples of talc and had reported that all of them contained minimal amounts of asbestos."

Do you see that?
A Yes.
Q Do you know what six samples are being discussed in this memo?
A No.
Q Do you know if they have anything to do with Johnson & Johnson?
A No.
Q If you go on and read other parts of this memo, and you go down to the next paragraph, it says that, "It was pointed out to the Mount Sinai management that the Selikoff group had published in the papers about the presence of talc in 1971 and had been forced to retract their statement, as it was erroneous."
Do you see that?
A I see that -- I see the statement you're talking about.
Q Are you an expert in the factual back and forth of what happened in 1971 and 1972 in terms of testing for asbestos and talc?
A All I can say is I've never heard of people at Mount Sinai retracting anything they've published about asbestos and talc in 1971, so I don't know if the statement in this Johnson & Johnson memo is

correct.
Q So you haven't studied to see what Mount Sinai actually said in public about the testing that was done?
A All I can say is I've never seen any such retraction from Mount Sinai.
Q Well, let me ask you this as a general proposition for someone with your experience: Do you think it's a good idea to make scientific statements that are inaccurate?
A No.
Q Do you think it's a good idea if an inaccurate scientific statement has been made to correct it?
A Sure.
Q Are you familiar with the statement that Mount Sinai made after this meeting to the public?
A You mean the one in 1971 or the one in 1976?
Q Well, you testified about this document. Let's go back and help you. This is in 1976.
A All right.
Q Are you familiar with the statement that Mount Sinai made shortly after this March 22, 1976, meeting?
A I think there was some statement issued, not by Selikoff, but by the upper management of the Mount

Sinai institution, but I don't recall the details.
Q Would that public statement be something that is known and knowable to Johnson & Johnson?
A Well, I suppose so if they made some public statement.
Q But I take it, though, that you have not seen that public statement, or you have?
A I don't recall if I have. Like I said, I have a vague recollection of there being some pressure on Mount Sinai to issue some sort of public statement.
Q Yeah.
A And just exactly what they said, I don't recall the details.
Q But, I mean, one thing that you do is you go out and research what is out there, what's known and knowable; right? Isn't that one of the things that you do as a researcher?
A Yeah.
Q But I take it, though, you haven't gone out and researched what Mount Sinai was saying publicly about the safety of Johnson & Johnson's talc.
A Well, there are a number of things that Johnson -- that Mount Sinai said about Johnson & Johnson talc, not all of which are consistent to each other.
Q Well, let's look at Defendants' Exhibit 7119 and

see actually what Mount Sinai said.
And so our jury is clear, there's no question in your mind --
THE COURT: Has this been stipulated to?
MR. BICKS: I think this is stipulated.
MR. FINCH: It's stipulated.
THE COURT: Thank you.
MR. BICKS: And here's a copy. And if we could publish this. Thank you, Jim.
BY MR. BICKS:
Q Have you seen this before, Dr. Castleman?
A I think so.
Q If we can just -- this is a statement. Do you know, by the way, who Dr. Thomas C. Chalmers is and what his background was?
A No, I just see he's listed as president of the Mount Sinai Medical Center.
Q This starts out, it says, "Recent media reports concerning research on talcum powder carried out by the Mount Sinai Medical Center created considerable confusion on the part of the public." Right?
A That's what it says.
Q Would you agree that confusion on the part of the public is not a good thing and that clarifying that confusion is a good thing?

A Yes.
MR. BICKS: If we go to page 2, please, Jim.
Q This is what I was asking you about, which was the opinion of Mount Sinai about the safety of baby powder. Are you with me on that? You see --
MR. BICKS: Jim, can we please highlight the medical center has issued a following statement, the most commonly used baby powder. Do you see this? And can we go down to No. 2, please.
Q Are you with me on this, Dr. Castleman?
A Yes.
Q "The most commonly used baby talc has been consistently free of asbestos."
Do you see that statement?
A Yes, I do.
Q Did you mention that to this jury when you gave your direct testimony?
A No.
Q You would agree with me that Mount Sinai Hospital is -- can you think of any hospital more respected when it comes to asbestos issues than Mount Sinai, particularly at this time?
A No.
Q Mount Sinai also says here -- and to be clear, the most commonly used baby talc is -- who makes the

most commonly used baby talc?
A I would assume that was Johnson & Johnson.
Q The opinion of Mount Sinai's department of pediatrics is that the baby talc is a useful and safe product; you see that?
A Yeah.
Q You've told us before about Dr. Selikoff, and you talked a lot about him on your direct; right?
A Yes.
Q Is it fair to say that he had his differences with certain kind of companies and sometimes could be at odds with them; right?
A Well, he published things that companies were sometimes critical of, yeah.
Q Right. And, I mean, you dealt with him yourself personally; right?
A Yeah.
Q Is it fair to say that he's not the kind of guy who gets pushed around easily, right, he held his ground if he believed in something?
A Yes.
Q Do you know and were you shown his -- do you know whether or not he agreed with this statement, I guess is one question I had for you?
A I haven't seen anything that was committed to

writing to the effect that he disagreed with this, I suppose. There were certainly things that people on his staff disagreed with, I think this particular -- this particular sentence.
Q Right. Do you know that Dr. Selikoff actually put in writing that he agreed with Dr. Chalmers' statement; have you ever seen that?
A I don't recall.
Q Would that be something that, given your knowledge about Dr. Selikoff, that you would want to know about?
A Sure. Let's look at it.
MR. BICKS: This is 8846. We'd move it into evidence.
MR. FINCH: No objection.
THE COURT: The Court shows 8846 admitted without objection.
BY MR. BICKS:
Q Have you seen this before?
A I think I may have seen some of the news articles attached to it, but I don't recall seeing this letter.
Q So this is an article -- a letter from Mount Sinai School of Medicine, you see it at the top, and it's addressed to somebody at the Washington Post.

Do you see that?
A Right.
Q Let me ask you again, have you seen this letter before?
A I may have. I don't recall if I have or not. I may not have. I just don't know.
Q The reason I'm putting it before you is I was -- the question that I had on the table was, do you know whether or not Dr. Selikoff agreed with Dr. Chalmers' statements that he made in that article about the safety of baby powder and talc? Are you with me? That's why I brought this out.
A I understand your reason in asking about it now, yes.
MR. BICKS: So can we blow up, Jim, the second paragraph.
Q Do you see here where Dr. Selikoff is stating that "I specifically stated that I was in agreement with Dr. Chalmers."
Are you with me?
A Yes.
Q To you, as someone who listens to this, when you hear Dr. Selikoff agreeing with a comment about the safety of Johnson's baby powder and the absence of asbestos, as somebody in your field, do you put

weight in what somebody like Dr. Selikoff says?
A Yes.
Q Because he was somebody who was pretty tough on companies, and if he had a point of view that was different, he didn't hesitate to speak out; right?
A Right.
Q And are you also familiar with -- and again, this goes back to what you do in your work, is you look at what's known and knowable; right? What's out there for people to see, you go to libraries, you find articles and things like that; right?
A Right.
Q So did you tell the jury yesterday about the published study that came out in 1976 by -- do you remember Dr. Rohl? Do you know who he is?
A Yes.
Q Tell the jury who he is.
A He was one of the microscopists who worked at Mount Sinai School of Medicine.
Q Are you -- do you have a position to tell our jury anything about -- was he a good scientist?
A Well, as far as I know, yes.
Q Are you familiar that in 1976, Mount Sinai released a study in the peer-reviewed literature by Professor Rohl, Dr. Langer, and Dr. Selikoff that

examined a bunch of different talc samples? Are you familiar with that?
A I think so.
Q Do you know what that article concluded about Johnson & Johnson's talc?
A I don't recall the names of the individual companies appearing in the article, at least the ones I'm thinking of.
Q Have you ever made any effort, as part of coming here to speak with this jury, to determine what actual samples were being referred to in that article?
A No, not beyond what the article itself says.
Q Do you know what samples were being referred to in the article?
A Not off the top of my head.
Q Let me show you Exhibit 8096.
MR. BICKS: I think this is stipulated in.
MR. FINCH: No objection.
THE COURT: All right. The Court shows it admitted.
BY MR. BICKS:
Q So have you seen this article before? And we can just go to the top and leave this for a minute. Have you seen this before?

A Yes.
Q If you look at the folks who wrote this, can you think of scientists who were any better in the world at this time at looking at the question of whether or not there was asbestos in cosmetic talc?
A Well, the only ones I recognize are the ones from the Mount Sinai lab, Rohl, Langer, and Selikoff. I don't know the other three. Three or four.
Q It's a little bit tricky here, but I'd like to go to 8096 in the table. It's Table 4, I'll pull it up on the screen. It's a little bit hard to see. Can you see that?
A I think it would be easier for me to read it here. I do.
MR. BICKS: Can you just highlight, Jim.
Q I've highlighted some columns here for you, and I've highlighted certain samples. Do you see that?
A Yes.
Q 4, 9, 18, and 20.
A Yes.
Q And then I've highlighted tremolite, anthophyllite, and chrysotile.
Do you see that?
A Yes.
Q So this is looking at a bunch of different

companies' samples and determining whether or not the folks at Mount Sinai saw any asbestos in them; right?
A That's right.
Q For those samples, they saw nothing; right?
A They did not detect it, that's right.
Q And you would expect this group of scientists to be using the best methodology; right? No?
A Yes.
Q Do you know whose samples those are that I've highlighted?
A What products or what companies? No, that's not in the article, I don't think.
Q Well, what you can do -- and let me just ask you by the way, did plaintiffs' counsel show to you the key that goes with these different samples?
MR. FINCH: Object, form. The key is not publicly available.
THE COURT: I'll sustain the objection.
MR. BICKS: May I approach, Your Honor?
THE COURT: Yes.
MR. BICKS: So I have before you 8240. This is stipulated in through Dr. Hopkins. So I would tender the exhibit.
THE COURT: Any objection?

MR. FINCH: No.
THE COURT: Oh, you said it was stipulated. The Court shows it admitted.
BY MR. BICKS:
Q So you see this is a list --
MR. BICKS: If we can kind of blow it up there, Jim.
Q This is a list that -- of different samples of talc and it's got numbers, 4, 9, 18, 20.
Do you see that?
A Yes.
Q And those are the ones that are Johnson & Johnson; right?
A According to this document, yes.
Q Right, 4, 9, 18, and 20, and these are the same ones that are referred to in the Selikoff article; right?
A I don't know if that's the case or not.
Q Well, you do know, because I think you had some sense of -- and you don't dispute that; right?
A No.
Q You don't dispute that Selikoff, Rohl, Langer looked at Johnson & Johnson's talc and tested it and didn't find asbestos; right?
A That appears to be the case from what you've just

shown me.
Q Right. And to the point that counsel made, I mean, you are aware that this was reported in the media; right? Have you seen articles in the New York Times that reported these results and concluding that Johnson & Johnson's powder did not have asbestos in it?
A I recall there were reports in the media earlier, well, earlier in the month of -- I think of March of 1976, yes.
Q So let me show you 8402. Do you remember the New York Times coming out with an article that indicated that following up on this scientific study, that Johnson & Johnson's baby powder did not have asbestos in it?
MR. BICKS: And 8402, it's again used with Dr. Hopkins. I would move for its admission.
MR. FINCH: No objection.
THE COURT: The Court shows it admitted without objection.
BY MR. BICKS:
Q So if you -- have you seen this before, by the way, Dr. Castleman?
A What's the date? I can't tell what the date of it is, of the article itself is. It just says 1976.

Q Yeah, if you go up --
A 3-10, it looks like March 10.
Q March 10, 1976.
A Yeah, I think I have seen this.
Q And can we just highlight -- do you see that it says that the products that the research found uncontaminated with asbestos fibers, and it lists Johnson's -- two Johnson & Johnson's baby powders, do you see that?
A Yes, I do.
Q Is that consistent with what you remember, that Mount Sinai and these researchers had tested Johnson & Johnson's baby powder and found that it did not contain asbestos?
A Or that they did not detect asbestos in it, yes.
Q Right. And I'm just saying for you, if you were back in that time, and we can't go back in time, but if you were in the position at a company at this time and you were receiving information from Mount Sinai to this effect, how much stock would you put in that information?
A Well, I would find that reassuring.
Q I think you were asked before, in the 1970s, a company like Johnson & Johnson, who should they have looked to to determine what the gold standard

in testing was? Do you remember who you said?
A I would have thought Mount Sinai.
Q You also have talked about before something called the National Institute of Occupational Safety and Health. Are you familiar with that government agency?
A I am.
Q Is NIOSH a recognized authority on public health matters relating to asbestos?
A Yes.
Q Were they such an authority going back to the 1970s?
A They were.
Q In your own work, do you rely on NIOSH and its publications?
A Yep.
Q Do you think it would be reasonable for a company evaluating science issues on talc in particular to pay attention to what NIOSH says?
A Yeah.
Q What about the Harvard School of Public Health, do you think that's a reputable institution?
A Generally, yes.
Q Same questions as to NIOSH, would it be responsible for a company to listen to research results from

the Harvard School of Public Health?
A Yeah.
Q Are you familiar that the Harvard School of Public Health and NIOSH published a study on Johnson & Johnson's talc deposit in Vermont and actually took samples from that deposit; are you familiar with that?
A I'm not sure if I'm familiar with the particular study you're talking about.
Q Well, let me see if I can help you out. 8079 is before you.
MR. BICKS: Your Honor, this is an exhibit that I think is stipulated with Dr. Hopkins. I would move to admit.
MR. FINCH: No objection.
THE COURT: The Court shows it admitted without objection.
BY MR. BICKS:
Q Have you seen this before, Dr. Castleman?
A I may have. I'm not sure.
Q Well, if you look at the folks up at the top and their names, Maryann Boundy, Karen Gold, Kenneth Martin, William Burgess, and John Dement, in your field, have you come across these individuals before?

A Some of them. Certainly Burgess and Dement.
Q And tell us our jury who Burgess and Dement are.
A Burgess wrote a book on industrial hygiene, and John Dement has published extensively on asbestos and disease.
Q And would you consider these people as some of the top in the field?
A Yeah.
Q Maryann Boundy, do you know who she is?
A No, I don't.
Q A recognized person, expert in minerals and so forth from North Carolina. Any of that ring a bell?
A No, I don't -- I don't know the first three authors.
Q And again, I want to just come back to this, because you talked a lot about -- on your direct about the hazards of asbestos. I guess my question to you, have you done a deep dive in terms of the published literature on the safety of the talc that Johnson & Johnson used?
A I wouldn't call it a deep dive. I'm familiar with a couple of mines that I've heard that they used, but I haven't tried to read everything that's ever been published about those mines and the material

from them.
Q So I guess my question is, in your research, did you come up with this article?
A Like I think I said, I don't really recall the article, but I may have seen it at some time.
Q Well, did you know -- and maybe we can just highlight the introduction here. Did you know that these scientists had gone back and looked at geological studies dating from the early 1900s that have shown that the Vermont talc deposits contained no asbestos? Had you ever seen this before until I showed it to you today?
A You're talking about this article?
Q Yes, and this particular statement.
A Well, I certainly don't recall the statement, and I really don't recall the article, although as I say, I may have come across this article at some time in my life and I don't recall.
MR. BICKS: And can we go, please, Jim, to the bulk samples.
Q And I don't want to -- if you're not that familiar with this, but are you aware that these scientists actually at NIOSH did sampling from this deposit that included petrographic microscope analysis, transmission electron microscopy, and x-ray

diffraction with step-scanning, do you know anything about that?
A Well, as I said, I don't recall this article in any detail. If I've seen it before, I don't recall whether I've seen it before. So these are details that I can't recall either.
Q Are you familiar, then, with the findings that they made based on their testing?
A No. You can see whatever it is that's in the article. It says what it says.
Q I take it you didn't do any research to look into how they did this, what they did, and you didn't make any effort to reach out to them; right?
A That's right.
Q Because there have been certain circumstances where they're scientists and you do reach out to them; right?
A I have on occasion, sure.
Q Right. You wrote letters to Johnson & Johnson, they got back to you promptly and, I think it's fair to say, treated you with respect; is that fair?
A Well, they seemed to, yes.
Q I don't remember -- I remember when I was in college, if I wrote letters to senior people, there

may have been times when I never heard back from them. That didn't happen to you with Johnson & Johnson; right?
A Right.
Q What about Lancet? You mentioned Lancet on your direct. And tell our jury of the reputation of Lancet.
A It's a general medical journal, like the Journal of the American Medical Association and the British Medical Journal.
Q And do you consider that a respected journal? I think you said it may have been the oldest journal, British Medical Journal, is that what you had said?
A Yes.
Q Are you familiar with publications by Lancet that deal with cosmetic talc?
A I think I've seen publications in The Lancet about cosmetic talc or about talc.
Q And The Lancet, can you think of any journal that has a better reputation than Lancet?
A Well, it has a good reputation, like a lot of journals do. I mean, there are always going to be things that get published that can be published in any journal that turn out to be flawed. But generally speaking, they're as respected as any

journal.
Q I think on direct, I'm only asking -- you mentioned Lancet, so that's why I'm raising it.
A Well, I just mentioned it from the standpoint of its availability of something that was -- The Lancet being widely available.
Q Right. And it's something that certainly in your work you rely on and have written about Lancet; right?
A Sure.
Q So this is Exhibit 9100. It's a Lancet June 25, 1977, article. Have you seen this before?
A Yes.
MR. BICKS: I would move to admit this.
MR. FINCH: No objection.
THE COURT: The Court shows Exhibit 9100 admitted without objection.
MR. BICKS: Can we go, Jim, to the last page of this, and the last paragraph and blow it up, please.
BY MR. BICKS:
Q And this -- so we're clear, this is an article that appears in Lancet, June 25, 1977. And we're at the conclusion. The topic of this is cosmetic talc powder; right?

A Yes.
Q And you see what I have up here, the summary is that -- and just to orient us, this is 1977. And the summary here is that "There's no reason to believe that normal consumer exposure to cosmetic talc has in the past led either to cancer at any site or to measurable loss of lung function. It seems unlikely that future exposure to cosmetic talc of the specifications now agreed to by major manufacturers will present a health hazard."
Did I read that right?
A Yes, you did.
Q In somebody in your field, back in 1977, when you read something like this in Lancet, is this something that you place stock in?
A Yes.
Q Now, one thing that you do have in your book is you've written about products like Kaylo. Can you tell our jury what Kaylo is.
A That was an insulation containing asbestos that was made by a company called Owens Corning.
Q And a good product or bad product?
A As far as I understand, it worked fine as an insulation material. The only danger was that the dust could lead to asbestos diseases.

Q You've written about Kaylo in your book; right?
A Yes.
MR. BICKS: Can we just go to the ELMO, please.
Q And for the record, I've got your fifth edition book, "Asbestos medical and legal aspects." I have your chapter here on Owens Corning. You mentioned Owens Corning; right?
A Right.
Q You see there the reference to -- that they made a series of products. They made insulation materials. Are you with me? And something called Kaylo; right?
A Right.
Q Do you remember whether or not Kaylo had asbestos in it?
A It did.
Q Do you remember how much?
A Well, I think about 10 to 15 percent.
Q Yeah, close, very close. It's actually 12 to 18 percent.
There we go. It's a little slanted, but you see here the 12 to 18 percent. Does that sound about right?
A Well, that's an internal document of the company.

I would imagine that that's correct.
Q Yeah, yeah. And do you remember whether or not -- no question that this is a real health hazard, right, having 12 to 18 percent in insulation material like this; right?
A Right.
Q And do you know -- I think you had reported in some of your studies about the amount of dust that would be released when somebody's manipulating that Kaylo; right? Do you remember writing about that?
A Yeah.
Q And I'm happy to show it to you, but can you just tell our jury -- and just so our jury is oriented, do you know actually about the specific allegations in this case about exposure?
A Well, I haven't read any of the legal documents, so I guess the answer is no.
Q You don't know that the plaintiff in this case, a very nice lady, Ms. Lewis, worked at a facility in Kokomo, Indiana. Do you know anything about that?
A I understand that she worked with some dental appliances. That's all I know about that.
Q So you don't -- you haven't been informed that she's claiming that she was exposed to asbestos at a Delco facility because of work that was being

done there. Do you know anything about that?
A Just in general. I haven't read any of the specific testimony or documents.
Q So when you come here, and I appreciate you talk about certain things, but you haven't informed yourself about what the specific claim in the case is, then, about exposure?
A No, I don't read the medical records and the testimony of all the individuals in the case, no.
Q But have you testified before in cases where a plaintiff law firm hires you and the question in the case is, did somebody get sick from Kaylo exposure?
A I've never been asked to testify about that in particular. I don't testify about medical causation. My testimony is about what was known and knowable about the hazards of the product by the manufacturer. In the case of Owens Corning, there are internal corporate documents showing that they knew about the hazards of asbestos in their product from practically the time the product was introduced.
Q Fair point. In other words, when you come to testify, you've got -- and I don't mean it negatively, but I think it's fair, you've got

blinders on, you're focusing on kind of what you know, and you're not looking at kind of the whole picture of the case.
A Well, I wouldn't put it that way, but my part of the case is just part of it. It's about the history, the knowledge of asbestos. It's not about the medical pathology related to the diagnosis and medical care and treatment of the individuals. I mean, I have a limited role in all of these cases.
Q Right. But fair enough. My only question is, you have testified in cases about knowledge about Kaylo; right?
A Yeah.
Q But you haven't been asked by plaintiffs to share that knowledge here, I take it.
A About Kaylo, no.
Q So you have done work -- and Kaylo also had what's called commercial amphibole asbestos in it; right?
A Yes.
Q Tell our jury what commercial amphibole asbestos is.
A Well, in the case of Kaylo, it was a product called amosite asbestos that came from South Africa.
Q How dangerous is exposure to amosite asbestos?
A Well, like all forms of asbestos, it causes

mesothelioma.
Q Can it cause mesothelioma if it's a short exposure?
A Yes.
Q Were you provided with the testimony in this case of the plaintiffs' expert, Dr. Ellenbecker. Do you know who he is?
A I've heard of Dr. Ellenbecker, but I haven't read any testimony that Dr. Ellenbecker may have recorded in connection with this case.
Q You weren't provided with his testimony about amosite and things of that nature?
A No.
Q So I want to just show you, back to this Kaylo and your work on exposure, you have indicated -- and this is from your book. Are you with me?
A Yes.
Q And here you're talking about -- what I'm trying to orient our jury on is an understanding of what can be released in terms of exposure from Kaylo. And this is something you've written about; right?
A Right.
Q And, in fact, here you have an entry that talks about dust counts of Kaylo release; right?
A Right.
Q And it says there, "3.1 to 100.4 mppcf for

Thermobestos and 3.1 to 17.1 mppcf for Kaylo."
That's a lot of letters and a mouthful, but I bet you can translate it for us. What's that saying?
A Well, mppcf means millions of particles per cubic foot. And at least the higher range of those numbers would probably be visibly dusty, not the lower range.
Q So let me see if I can then translate it. A cubic foot, like let's imagine that we took a clear box, right, cubic foot would be like this, right. I pulled it up like this and it would be a box 12 by 12 by 12, right?
A Right, inches.
Q And so I would hold it up, and this says Kaylo dust counts ranged from 13.1 to 101.4. Is that million particles per cubic foot?
A Right.
Q And then for Thermobestos, 3.1 to 17.1 million particles per cubic foot for Kaylo; right?
A Well, the first figures are for a Johns Manville product called Thermobestos, and the second range is for an Owens Corning product called Kaylo. They're both thermal insulation products.
Q Right. And just again, we're talking like millions

of particles in just one cubic foot; right?
A Right.
Q So if somebody's there, say, several years, would you be in a position to give us a sense of how much exposure there might be, or is that outside of your wheelhouse?
A It is. I mean, we're talking about exposure a worker would get from sawing up these materials, as I understand this document.
Q Right. And you don't know enough about what was actually going on in this case to really comment upon that; right?
A Well, I don't do these kinds of projections and estimates about what the individual exposures might be for, say, a bystander to some Kaylo handling that may have taken place.
Q But you have written about -- and let me just back up for a minute. I want to put this down. I want to ask you about this. This is in your book, and I guess it's a chapter by somebody named Stephen Berger.
A This is the one chapter contributed by someone else, yes.
Q Good chapter, good work, you think?
A Well, I wouldn't have published it in my book if I

didn't think it was good.
Q I got that. It says here in the introduction, "Of all the uses of asbestos that have achieved widespread application, none can rival the toll of death and disease resulting from the use of thermal insulation used in the presence of millions of workers in shipyards, sites, refineries, chemical, power plants. The dust from insulation wafted into surrounding communities in an ever-widening radius of destruction."
That's what was written in your book by Mr. Berger; right?
A Right.
Q And you spoke about on direct the work of Dr. Selikoff with insulators; right?
A Right.
Q Our jury -- this was new to me till I learned it. But these are people who are putting, like, pipe covering on, you know, really hot stuff; right? And insulating it with pipe covering; right?
A Right. That was the purpose of thermal insulation.
Q It can be really dangerous is what this is saying; right?
A Yes.
Q In fact, Dr. Selikoff, who you mentioned, he did

studies on people who were doing this thermal insulation; right?
A That was their regular job, right.
Q I know there are a bunch of studies that he did, but can you give us a ballpark of those folks who were around thermal insulation, how many of those folks got mesothelioma; do you remember the results of those studies?
A No. The largest number of excess deaths was from lung cancer followed by mesothelioma among the insulation workers. By excess deaths, I mean deaths above and beyond the number you would have expected from that cause in a population of men of that size.
Q And I appreciate the lung cancer issue, but I guess my question was just on mesothelioma. I don't think there's any dispute that a lot of those insulators got mesothelioma, and that was a real concern to Dr. Selikoff; right?
A Yes.
Q I mean, that was one of the most landmark studies, that the folks who were working around this pipe covering got a lot of mesothelioma?
A Yes.
Q You've also written about fireproofing and things

like that; right?
A Well, sprayed fireproofing was another material containing asbestos that was the subject of a lot of controversy starting in 1968 with an article in the New Yorker magazine about that.
Q How much asbestos was in that kind of material?
A I think around 30 percent in some of those products.
Q A lot of asbestos in those things; right?
A Right.
Q So a couple more topics, and then we're done.
Now, I want to come back to your work with the Motley firm. You've worked with them a long time; right?
A Well, yes.
Q And you mentioned Ron Motley, that you worked with him back in the '70s; right?
A Right.
Q And you had communications with Dr. Selikoff also during the 1970s; right?
A Right.
Q In fact, you had written communications with Dr. Selikoff during that time period; correct? Right?
A Yes, I did.

Q So before you is Exhibit 12231.
MR. BICKS: I'd move to admit it.
THE COURT: Any objection?
MR. FINCH: No objection, Your Honor.
THE COURT: The Court shows it admitted without objection.
BY MR. BICKS:
Q So you've seen this before, Mr. Castleman, have you not?
A I have.
MR. BICKS: Can we go, Jim, just to the top and orient ourselves.
Q This is a memorandum from Barry Castleman to Irving Selikoff, and it's dated November 5, 1979; right?
A That's what it says.
Q At that point, you had been involved testifying -- that's when you had first started testifying for plaintiffs, right, around that year?
A I had testified in one trial as of that date.
Q And you had started consulting three years before that; right?
A Yes.
Q This letter, you're actually asking in writing that information not be turned over that could impact the case; right?

A Well, this is a document I was shown in cross-examination in 2010 by a lawyer who wouldn't say where he found it. I don't remember it. I didn't remember it then. And it's not a form of my typical letters to Dr. Selikoff. It's not on my letterhead. My letters normally were, Dear Irving, signed Barry, was the normal form of all of my communications with Dr. Selikoff. And this is not signed.
Q Right. But I've read your sworn testimony, and I'll bring it out if you want. You have testified under oath that you probably wrote this.
A I may have written it.
Q If we just back off for a minute and you look at this, there's a lot of detail in this memo. You're not suggesting that somebody fabricated this, are you?
A Well, it could have been something that Motley wanted me to send. Clearly the first two paragraphs are describing Motley's concerns.
Q Right.
MR. BICKS: And let's just back off -- back out for a minute, Jim, so we make sure that we see this. You know, just go down to the bottom, for example. You see the detail, if you can blow that

up.
Q This was an area that you were really involved with, right, this fellow Vorwald's files and something called the Braun-Truan study, Johns Manville. I mean, this is really kind of part of the research that you were doing; right?
A Yes.
Q And it's got things in there right above, "I'll try to call you in a week with more information," things like that.
You were in touch with Dr. Selikoff during this time period; right?
A Yes.
Q So let's just go back up to the top. I mean, it's got your memorandum from Barry Castleman to Irving Selikoff right at the top; right?
A That's what it says, yes.
Q I want to go through this so our jury sees it. You say here that Ron Motley informs you that the industry lawyers are hoping to get cases thrown out of court by showing that the insulators themselves knew about their job risks; right?
A That's what it says.
Q So you're now writing -- this Ron Motley -- just to be clear, this is the Motley Rice firm that you're

working with; right?
A Yes.
Q And they represent plaintiffs in personal injury asbestos cases; right?
A Yes.
Q And this was during a time period when you're starting to get up and running as an expert testifying for plaintiffs, right, to orient us?
A It's the beginning of my involvement as a testifying expert witness, yes.
Q Right. And you're working with Ron Motley on these kind of cases; right?
A Correct.
Q So he's informing you about industry lawyers. And it says that the defendants hope to obtain questionnaire materials used by you and Dr. Hammond in the expectation of finding reference to when the men said they first became aware of the dangers of their trade; right? Ron and the other Plaintiffs' lawyers are afraid that some of men would have answered with 20/20 hindsight, recalling vaguely that, I heard something back in the early 1940s; right?
A That's what it says.
Q So our jury understands, one of the things you've

talked about, and if we look at the second paragraph, "Discovery of such statements in writing, even though made without much care and without any knowledge that rights to compensation might be jeopardized without any consultation with their attorneys could throw out individual claims. Further, a significant number of such statements pre-1964 would hurt the state of the art case for all the plaintiffs."
That's what's written here; right?
A Right.
Q And the state of the art case, that's what you testified about, that's what you do; right?
A Right.
Q What was known when, that's what you come to court and that's what you tell juries about; right?
A Right.
Q So what's being stated here is that if evidence was turned over which showed that somebody knew about something, say, in the '50s, that might hurt the state of the art case when a witness like you wants to come to court and say, nobody told them, they didn't know? That's what people were worried about; right?
A Well, that's apparently what Motley was worried

about, but Selikoff would have even asked the lawyers -- would have even asked his patients a legal question in his medical questionnaires.
Q And to cut to the chase, that's not right, is it, from a perspective of someone in your position in public health, to be writing a letter to somebody and say, don't turn over information because it may hurt my case?
A Well --
Q You cannot be in court today in front of this jury and this judge and say that this is all right.
A Well, as I'm saying, this would -- I was conveying Motley's concerns in the first two paragraphs.
Q Well, you know, there are people who can say, you know what, I know you've asked me to write this, but I'm a public health person at Johns Hopkins, and I'm not going to do it. Did you say that?
A No, I don't recall anything about this document.
Q So last question. The first thing you started out with on your direct was your CV.
Do you remember that?
A Yeah.
MR. BICKS: ELMO, please, Jim.
Q And this is your CV that -- right, you spoke to the jury about; right?

A Right.
Q Because I was looking at it, and we all probably see a lot of CVs. I was looking on your CV for your employment history. Where on the CV is that?
A I only described the history since I became an independent consultant on the CV. I don't mention that I worked in the chemical industry for about a year; I worked as a public health official for about a year and a half; and I worked for nongovernmental organizations, the Center for Science in the Public Interest and the Environmental Defense Fund, for less than a year each before 1975.
Q Got it. So I just -- because most people on their résumé, they have their employment history, education and then their professional work. You don't have anything here about your employment history is what you're saying?
A I don't include the employment history before 1975, but it's well known to the people in this litigation.
Q Oh, but it may not be well known to our jury because they don't know you until they met you; right?
A Oh, right. If you want to talk about it, go ahead,

let's talk about it.
Q Well, I think it's fair, do you not agree with me, that when you present a résumé to somebody, it's not unfair to say, I'd like to see the employment history on the résumé; right? That's not unreasonable?
A No.
Q So you have on here your degree at Johns Hopkins in 1968; right?
A My education, yes, is complete as to my college degrees.
Q But you don't have on here that you began working for Hercules, and you worked there for about a year and a half; right?
A Right.
Q It's a little bit complicated, and I guess you weren't exactly fired, but you were asked to leave and you came back. But things didn't work out there; right?
A Well, it worked out fine until I started complaining about the way they were dumping hazardous wastes and met with the senior vice president, and that upset all the people along the way who I didn't bother consulting with on my way to meeting with the vice president.

Q Right. But you were basically asked to leave Hercules; right?
A I was asked to leave a couple of days before my scheduled departure, yes.
Q And then what was your next job after that?
A Baltimore County Health Department.
Q That was about 1972?
A '72 and '73.
Q I take it that's not on your résumé either; right?
A No.
Q You worked there for, what, about a year and a half?
A Right.
Q You were fired from that job, then you were rehired, and then you quit; did I read that right?
A Right. They fired me for testifying at a Senate hearing and talking about community exposure to asbestos.
Q And I know you're going to want to say why you got fired, but just listen to what I'm asking you. I'm asking you, were you fired, rehired, and then did you quit?
A I was rehired with full backpay and then I quit.
Q And then after the Baltimore County job, you were -- what was your next job?

A Center for Science in the Public Interest.
Q That was '73, '74, a little less than a year?
A Right.
Q That job, that's not on your CV either; right?
A No.
Q You were there for, what, about nine months, and fair to say you were fired from that job?
A No. I'm still on good terms with those people, and I just moved on to the next job.
Q Right. So your testimony when you were asked and you said, they fired me a month after we got asbestos-contaminated salt off the market, that wasn't accurate?
A That was the next job.
Q Oh, so you got fired from the next job. I mixed one up.
A Right. That's when I decided to become an independent consultant. I haven't had a boss since 1975.
Q Well, your independent consulting, all of your money is made because you testify for plaintiffs in lawsuits; right?
A Most of my money comes from my involvement in litigation. No independent -- no individual lawyer can tell me what to do.

Q Right. But when you say most, let's be fair. We're talking, like, over 90 percent; right?
A Yes.
MR. BICKS: Thank you, sir.
THE COURT: And that concludes cross?
MS. WEGLARZ: I just have a few questions.
THE COURT: Well, yes, but for Johnson & Johnson.
MR. BICKS: Yes.
MS. WEGLARZ: Your Honor, I'd like to mark for the record a piece of -- or the roll of tape that I showed in opening statement as Exhibit 3.
MR. FINCH: As a demonstrative?
MS. WEGLARZ: Demonstrative only.
MR. FINCH: No objection for demonstrative purposes.
THE COURT: All right. And could counsel approach, please.
(A bench conference was held outside the hearing of the jury.)
THE COURT: I just want to be clear that we want to do direct, cross, second cross, and then redirect.
MR. FINCH: Redirect, and that'll be it for this witness.

THE COURT: For all the witnesses?
MR. FINCH: That's my understanding, yes.
THE COURT: Thank you.
(Resumption of live trial proceedings.)
MS. WEGLARZ: May I approach the witness?
THE COURT: Yes.
CROSS-EXAMINATION
BY MS. WEGLARZ:
Q Hello, good morning. I just gave you what's been marked as demonstrative Exhibit 3. It's a roll of pipe tape. You've seen this kind of a product before; right?
A Yeah.
Q This is not -- when we're talking about insulation, this is not insulation; right?
A It is not.
Q You can put that aside.
I represent a company called BMW Constructors. I haven't read all of the editions of your book. I've read the last one. Is it true that BMW Constructors does not appear anywhere in your books?
A That's correct.
Q You talked a little bit -- or we talked a little bit about Kaylo. Kaylo was an insulation

manufacturer -- or was a type of -- sorry. I'm rolling over my words.
Kaylo was a brand of insulation; right?
A Right.
Q And OCF, as of 1958, manufactured Kaylo?
A Yes.
Q When did OCF start -- or decide to start putting a label on that insulation; do you remember?
A I think around -- it was around 1970, I think. At least the company doctor was writing about how maybe we better start doing it in that year.
Q I think you wrote in your book it was maybe -- there's an internal memo, September 1970, that they're saying, hey, maybe it's time we should maybe start putting a label on asbestos insulation, does that sound right?
A That's my recollection, yeah.
Q Do you agree that the employer of an individual is responsible for providing a safe workplace?
A Generally, that's the way it's regarded, especially since we had OSHA created in 1971.
Q Would that be the case even before OSHA was created?
A Sure. That's at least people's expectation, if not the reality.

Q You agree that it's the employer who has the most control over the conditions in the workplace; is that right?
A Sure.
Q That includes dust conditions?
A Yes. To the extent that there's dust in the workplace, the employer is in a position to provide measures to reduce the dust exposure of the workers.
Q Just one last area. You agree that the knowledge of hazards of asbestos has evolved over time?
A Yes.
Q We know a lot more today than we knew back in the 1930s?
A Yes.
Q And in the 1930s, the first studies were really about people working in factories actually making asbestos products?
A Well, the 1930s also included case reports of asbestosis in office workers in asbestos factories as well as production workers.
Q But in general, the epidemiology studies, what people were concerned with were the people actually making the asbestos products?
A In the '30s, yes.

Q And when you're making these asbestos products, we're talking about huge exposures to asbestos?
A Well, in some cases, more than others. Again, these are imprecise words.
Q Well, if we talk about the Meriwether study, I think you mentioned Meriwether on direct, that was over in England; right?
A Right. He was initially writing about asbestos textile plants, and they were particularly dusty.
Q And we're talking -- what are the dust counts we're talking about, hundreds of millions of particles per cubic feet?
A In some cases over a hundred million particles per cubic foot, yes.
Q And then later, the epidemiology started looking at miners and millers, people actually extracting the asbestos from the earth?
A Well, it was studies of asbestos miners as well as asbestos manufacturing plant workers, yes, in the 1930s, epidemiology studies.
Q And you'll agree that it wasn't until Selikoff did his studies in the mid 1960s that people actually started linking use of an end product like asbestos insulation to disease?
A No, that's incorrect. I mean, prior to Selikoff,

there were over 50 separate reports of death and disease in insulators and, as I said, other asbestos product users, published starting in the early 1930s. They were case reports for the most part. And then there were a few epidemiological studies where they examined people who were actively employed working as insulators and reported on some fractional number of them that were diagnosed as having asbestosis.
Q You mentioned there were case reports. Can you explain to the jury what a case report is.
A A report of one or more individual cases of a disease in a population.
Q A case report is drafted when someone finds something, a doctor finds something peculiar, and so they'll write it up to share it with other doctors; right?
A Well, a case report could be published for lots of reasons, but basically because the author thinks it adds something to what's previously known about the matter covered in the case report.
Q And you're familiar -- well, you worked with Dr. Selikoff; right?
A Yes.
Q You're familiar with his "Partnership for

Prevention" program?
A I'm familiar with an article he published by that title in 1970.
MS. WEGLARZ: Your Honor, may I approach the witness?
THE COURT: Yes.
BY MS. WEGLARZ:
Q I'll hand you that article, just so you have it in front of you.
A Thanks.
MS. WEGLARZ: And I'll mark it for the record. I think the next exhibit would be 4.
MR. FINCH: For what purpose? I don't think it goes back to the jury.
MS. WEGLARZ: It's not going back to the jury. Just to talk about right now. Demonstrative purposes only.
THE COURT: The Court shows admitted for demonstrative purposes only.
MS. WEGLARZ: Well, illustrative, yeah, just to be marked.
BY MS. WEGLARZ:
Q Can you turn to page 164, please.
A I'm sorry, what page?
Q I'm sorry, I don't know why I said that. Or 23.

A Yes.
Q And Selikoff writes in this article that -- and he's talking about his work with insulation, the insulation workers and his study that he was doing in this; correct?
A Yes. He talks about that.
Q And he says, "Here we had, then, the first solid evidence of these insulation workers were experiencing exposures to dust inhalation in the basic asbestos industry."
A I'm sorry, where does it say that, the first solid evidence?
Q First paragraph of the page.
A Oh, yes.
Q So that's at least what Selikoff thought, right, this is the first time they have solid evidence that insulation workers are actually experiencing these dust levels?
A Yes.
Q And he goes on to say that, "Our continuing study of the work and health records of this group, union members, confirms the higher risk of respiratory disease and cancer for the insulating workers than exists among the general population."
A Yes, that's what it says.

Q So at least in Selikoff's mind, this is the first time they're actually seeing solid evidence that a product like insulation, which releases hundreds, I don't know, fibers per cubic feet sometimes, is a problem? And this is in -- this article is 1970, but they're talking about the studies in the mid '60s; right?
MR. FINCH: Objection to form, multiple compound questions there.
THE COURT: I'll sustain the objection. Please rephrase the question.
BY MS. WEGLARZ:
Q Okay. At least in Selikoff's mind at this time, he's saying that, my studies in the 1960s, this is the first time we're actually confirming that there's a problem with products that contain insulation -- or contain asbestos, like insulation; is that fair?
A Well, I mean, the sentence says what it says. It's inconsistent with other things he published citing a lot of the earlier work of reports of death and disease. Maybe it's the term "solid evidence" that makes a difference. I don't know.
Q But that's what Selikoff said; right?
A It says what it says, yes.

MS. WEGLARZ: Thank you. I have no further questions.
THE COURT: Thank you, Ms. Weglarz. Redirect?
MR. FINCH: Yes.
REDIRECT EXAMINATION
BY MR. FINCH:
Q Dr. Castleman --
MR. FINCH: May I have the ELMO, Jon.
Q -- you were asked just a minute ago about case reports.
A Yes.
Q Is the incidence of lung disease among people who are vaping, is that a series of case reports that the public health community is taking action based on today?
A Right.
Q You were asked about this book jacket.
A Yes.
Q "I recommend it. It's unique."
Irving Selikoff, M.D., recommended your book?
A Yes.
Q It talks about information about asbestosis and cancer, "company knowledge of asbestos hazards gleaned from countless depositions, company

records, industry consultants, and trade associations."
For internal company documents, are those generally publicly available?
A No.
Q To see the full picture of the story of the companies that you write about in this book, do you have to see all of the company -- internal company documents?
A Well, you have to make an effort to, and very often when I'm deposed by the companies in discovery depositions, I invite them to show me anything I haven't seen in terms of their internal documents that would give me a fuller understanding and appreciation of the whole story.
Q When did you first start seeing Johnson & Johnson internal documents?
A Quite recently.
Q Let's go through some of the exhibits that Mr. Bicks showed you. I'm going to put them in two piles, a publicly available pile and a not publicly available pile. Can we do that?
A Sure.
Q So one of the things he showed you was an article in The Lancet from 1977, "Cosmetic Talc Powder."

And that's publicly available; right?
A Right.
Q And in that article, I noted a part that Mr. Bicks didn't ask you about. "If the inhalation of particles of amphibole and silica contaminated talc dust were found to be harmless, one might reasonably assume that talc free from these materials is safe. Kleinfeld and his colleagues have studied the incidence of cancer and respiratory disease in talc miners and millers in New York State. The talc concerned, which is heavily contaminated with both amphiboles and free silica, was initially reported to be associated with an increased mortality from mesothelioma and cor pulmonale. Later the same workers reported that men employed in the mine after dust levels had been reduced had death-rates from malignancies that were similar to those for White males in the U.S."
What is mesothelioma related to again?
A Asbestos.
Q And this is publicly available?
A Yes.
Q All right. This article in the New York Times, "Asbestos found in ten powders," that's a publicly available document; right?

A Yes.
Q Rohl, Langer, Selikoff, et cetera, this was a publicly available document in 1976; right?
A I think the conference was in 1977 and it was published in 1979, yes.
Q Okay. Just -- and just so --
MR. FINCH: Can I have a piece of blank paper.
Q It was published in 1976.
A Oh, I'm sorry. I'm confusing it with another article by the same authors. Yes, that's correct.
Q And just so we're clear who's who at Mount Sinai, I'm going to draw this first. Mount Sinai had a president that was Dr. Chalmers. I think you were shown a press release by him.
A Yeah.
Q And then Dr. Selikoff was senior in age and responsibility to Rohl and Langer; is that right?
A Right.
Q And Langer and Rohl were the microscopists?
A Right.
Q I can't say that word. People who used microscopes to look for asbestos or other things; right?
A That's right.
Q Now, Mr. Bicks showed you a letter from Dr. Selikoff. The letter is publicly available,

and also, so is the New York Times article, where they were quoting some of his statements; right?
A Well, the New York Times article was publicly available. I wouldn't say the letter was publicly available, although it would have been freely available, if anybody asked Dr. Selikoff for a copy of it, he would probably have been happy to provide it.
Q He would -- he could -- if you went to Mount Sinai, you could ask for it from Mount Sinai and they would provide it.
A I believe so.
Q The health records and the interviews of the insulators that he was doing, would that be something that would be protected by HIPAA today?
A Well, it would be regarded as medical confidentiality between a patient and a doctor.
Q Okay. I want to ask you about something Mr. Bicks didn't show you in this Defense Exhibit 8846. And this is a quote from Dr. Selikoff. Can you read that, where it says, "Selikoff acknowledges"?
A "Selikoff acknowledged."
Q "Selikoff acknowledged that the cosmetic industry has 'gone ahead quietly improved the talc" -- it's got direct quotes around gone ahead quietly and

improved the talc -- "but there's a huge chink in their armor. They were dusting people with asbestos all these years before, so what was put in the lungs before is still there. 'I certainly wouldn't want to be dusted with any asbestos. There is no safe level of asbestos known.'"
That's what Selikoff was quoted in the New York -- in this article about?
A Yeah.
Q And when he writes to the author of the article, he doesn't -- he doesn't say that she misquoted him about people being dusted with asbestos or that there was a safe level of asbestos exposure, did he?
A No, I don't think so.
Q This press release, Exhibit 7119, this is a publicly available press release put out by Mount Sinai; right?
A Yes.
Q All right. This press release came out March 23, 1976; right?
A Yes.
Q From the president of Mount Sinai?
A That's right.
Q The document that I showed you yesterday,

Exhibit 578, that is not publicly available, was not publicly available till very recently; is that correct?
A Yes, that's correct.
Q Let's just -- what's going on here is there's a meeting with the president of Mount Sinai, the director of the medical school, and the director of personal relations from Mount Sinai, and then Johnson & Johnson was represented by D.D. Johnson, J.E. Burke, D. Petterson, L. Foster, and G. Hildick-Smith. So five Johnson & Johnson executives came to meet with Mount Sinai; right?
A Yes.
Q "Initially Dr. Chalmers, who had clearly given a lot of thought to the issue, suggested it might be wisest if all parties forgot the incident ... nothing would be gained by obtaining a retraction from Mount Sinai Medical School. Johnson & Johnson representatives, however, clearly expressed their desire to have a retraction statement to not only allay the fears of many anxious parents, but to correct the record concerning the safety of baby talc and the fact that Mount Sinai scientists had failed to report the talc samples studied were at least three years old.

"The Mount Sinai group indicated that over the weekend, the Selikoff group," and that's -- Selikoff group is referring to these people here; right?
A Right.
Q "The Selikoff group had been studying six new samples of talc and reported that all of them contained minimal amounts of asbestos. Mount Sinai management thought that this information should be in the retraction statement, but the Johnson & Johnson group assured the Mount Sinai management that such a statement should be avoided in case the analysis by the Selikoff group was in error.
"A discussion took place concerning the content of a retraction statement, and agreement was reached on the content of such a statement. Dr. Chalmers indicated that he would write a covering note for the statement and it would be released to the news media. The Mount Sinai management reluctantly agreed to release a statement to correct the record on talc published in the news media. The meeting was an amicable one."
This meeting happened on March 31 -- actually, the memo was March 31, '76. The meeting was

Monday, March 22, 1976?
A That's what it says.
Q And the press release came out the next day?
A I think so.
Q March 23, 1976?
A Yeah.
Q Let me show you one more document from the files of Johnson & Johnson.
MR. FINCH: This is Plaintiffs' Exhibit 52, Your Honor. I believe it's stipulated to be admissible. I'd offer 52.
THE COURT: And it's been stipulated to, you said?
MR. FINCH: Yes.
THE COURT: It says 47 here.
MR. FINCH: No, that was a deposition exhibit number. The top is P-52, Your Honor.
THE COURT: All right, thank you.
MR. BICKS: Well, I don't have any objection to the admissibility of it, but I have objection as being relevant and this witness competent to talk about it.
THE COURT: All right. The Court shows 52 admitted without objection, and now we'll deal with the objection. But there's no -- you mean as to

the entire document?
MR. BICKS: Right. Well, let's see what ... maybe there's foundation that he has -- knows anything about this.
BY MR. FINCH:
Q Dr. Castleman, have you seen this document before? It was in your talc file. Have you seen this before?
A I think so, yeah.
Q And this is an internal document of Johnson & Johnson, this wasn't publicly -- in the publicly available pile, is it?
A That's correct.
Q This is June 17, 1972. "I asked Dr. Langer if he can state that our baby powder," referring to Johnson's baby powder, "is free of asbestos as a result of the conference and review of August 3, 1971, with the FDA. He said he still thinks that Johnson & Johnson's product contains minute traces of asbestos, and he believes that he can find asbestos fibers after breaking down the platelets by ultrasonic energy."
Did I read that right?
A You did.
Q Was this document sent to you when you were writing

to Johnson & Johnson in the early 1970s?
A No.
Q Was it publicly available until very recently?
A No.
Q Dr. Castleman, have you in your book been able to identify every entity that's ever exposed anybody to asbestos ever in the history of world?
A No.
Q As someone who has spent his career as a public health advocate, advocating for -- or testifying in cases or in dealing with the public health community, is it important to warn people about the hazards of asbestos?
A Very important.
Q Do you wish you had had all of Johnson & Johnson's internal files back in the 1970s?
A Yes.
Q You believe you might have done things differently if you had?
MR. BICKS: Objection, speculation.
THE COURT: I'll overrule that objection.
A Yes is the answer.
MR. FINCH: No more questions, Your Honor.
THE COURT: Thank you.
MR. FINCH: May this witness be excused?

MR. BICKS: Can I ask a few follow-up, Your Honor?
MR. FINCH: I didn't know that there was re-recross.
MR. BICKS: He went outside the scope of what I did. I have a few questions.
THE COURT: You can question as to the new matters, briefly.
MR. BICKS: Can I do it from here?
THE COURT: Yes.
RECROSS-EXAMINATION
BY MR. BICKS:
Q Doctor, you were shown in Lancet a reference to the New York Gouverneur deposit. Do you remember that? Kleinfeld?
A I remember being shown the Lancet editorial.
Q Right, and the New York Gouverneur deposit; right?
A Well, the New York deposit is mentioned in The Lancet.
Q Right. And counsel pointed you to that reference to the Gouverneur deposit. Do you remember that?
A Yes.
Q You know that Johnson & Johnson didn't use that deposit; right?
A As far as I know, that's correct.

Q When Johnson & Johnson wrote to you and told you about Colorado School of Mines, Fred Pooley, and all their reports, did you ever write back and say, can I please see those reports?
A No. I took them at their word that the reports were negative.
Q Sir, please answer my question. Did you ever say, can I please see the reports?
A No.
Q Did you ever pick up the phone and send a letter to Fred Pooley, hey, Dr. Pooley, I'd like to see your testing, did you ever do that?
A No.
Q How about Colorado School of Mines, did you ever reach out and say, hey, I'm a public health person, I'm worried about that, can I see the reports?
A No.
Q In fact, when you were talking to this jury on direct and talking about all your trips around the world, talking to people, have you ever said to one of those people, world health organizations, the meetings, the World Bank, everybody, have you ever come out in public and said to them, you should take cosmetic talc off the market?
A No.

MR. BICKS: Thank you.
THE COURT: And Mr. Finch?
MR. FINCH: Nothing more, Your Honor. Unless the jury has any questions.
THE COURT: And does the -- do the jurors have any questions for this witness before he is excused? And if so, you should write it down on a piece of paper. Does anybody have one before I call Bridget in? No?
All right, then. Thank you. Sir, you are excused.
We're going to take a break now. We'll come back at 20 till the hour, so that'll be 20 till 11.
THE BAILIFF: All rise.
(Whereupon, the jury exited the courtroom.)
THE COURT: Are there any matters that we need to discuss? No?
MR. FINCH: Not yet.
(A brief recess was taken.)
THE BAILIFF: All rise.
(Whereupon, the jury entered the courtroom.)
THE COURT: Please be seated. Welcome back. Thanks for your patience while Counsel and the Court discussed scheduling going forward.
And now we are ready to begin on a new

witness.
MR. FINCH: May we proceed, Your Honor?
THE COURT: Yes.
MR. FINCH: May it please the Court. Good morning, ladies and gentlemen, Counsel. We call Dr. Mark Rigler.
THE COURT: Welcome, Dr. Rigler.
THE WITNESS: Thank you, Your Honor.
THE COURT: Could you please raise your right hand.

MARK RIGLER, PH.D.,

a witness called on behalf of the Plaintiffs, having been first duly sworn by the Court, took the stand and testified as follows:

THE COURT: Thank you. You may be seated.

DIRECT EXAMINATION

BY MR. FINCH:

Q Dr. Rigler, could you introduce yourself to the jury and tell them where you're from.

A I'm Dr. Mark Rigler, and I am from Atlanta, Georgia.

Q What is your profession, sir?

A I'm a consultant, and I work for my own company called ASPEX, LLC. Previously I worked for a testing laboratory called Materials Analytical

Services, MAS, located also in the suburbs of Atlanta, Georgia.

MR. FINCH: Your Honor, we have previously marked and it's going to be marked as Plaintiffs' Exhibit No. 3, a copy of Dr. Rigler's curriculum vitae. May I approach? We haven't put the exhibit number on it yet, but can I approach, Your Honor?

THE COURT: Yes, you may.

MR. FINCH: Counsel has been provided a copy as well. This is going to be Plaintiffs' 3.

BY MR. FINCH:

Q Dr. Rigler, this is your CV?

A Yes.

Q Do you have it on the monitor in front of you? Can you see it there?

A Yes, I do.

Q Could you briefly go through your educational background.

A I have a Bachelor of Science degree in biology from Villanova University. I also have a Ph.D. in microbiology from the University of Georgia. And I've also done post-doctoral work on the same kinds of subject matter at the University of Georgia for my post-doctoral work.

Q Could you describe for the jury what formal

training you have had in using electron microscopes to analyze substances to determine if there is asbestos or other materials in them?

A Sure. The training that I have was at the University of Georgia. There were two semesters of electron microscopy. They specifically have a unit for training for electron microscopy at the university. I believe it's called the Center for Ultrastructural Research now, and at that center they have the -- a number of different kinds of electron microscopes. They have transmission electron microscopes. They have scanning electron microscopes. And you learn to use those tools to analyze all kinds of materials, from biological materials to solid hard materials, particles, that type of thing.

Q Could you give us a rundown of your employment history, starting with your first job after graduate school and then running up through the present.

A Well, I was a research technician at the University of Georgia and specifically doing ultrastructural research using transmission electron microscopy. It was in the plant pathology department, and we were embedding and cutting different types of grass

tissues, seed grasses. The investigators were trying to understand some processes with those cells at the ultrastructural level.

Then I was director for a company called SCRS. That was also a consulting company that I started, and I did some consulting work for a couple of very large firms. One was Genentech in south San Francisco, California, a company that develops drugs of all different kinds. They have very interesting technologies.

Then I was a senior application specialist at a company called RMC. They were a manufacturer of tools for electron microscopy. So I was a field specialist doing different kinds of work in relationship to that company marketing their products. I was a specialist for them.

Then --

Q I'm going to stop you right there, Doctor. That'll bring us up to about 1989.

A Okay.

Q Where did you go next?

A I was hired at Materials Analytical Services, that's MAS. That is the laboratory that I worked at for a little more than 30 years. So I was the director of biological services when I first

started at that company. I became branch manager and director of still biological services. Then I was the VP and director of biological services, continued there, then VP and materials group manager at the time. Then -- let's see, what else do we have here? Oh, senior consulting scientist, yes, at the same company for microbiologicals, an area that I specialize in. And then I managed the laboratory for a number of years. That was about four years. And then I became chief science officer at the laboratory at the end of my career there.

Q Was one of the main business activities of MAS to test materials and human tissue to determine whether there was asbestos in it?

A Yes, yes, that was one of the areas of specialization for that company, and I headed those efforts.

Q How many tests of materials, building materials or other kinds of products, were you personally involved in to determine it they had asbestos in them while you were at MAS?

A Well, there were hundreds of different types of products that the company tested for containing asbestos.

Q Were you involved in many of those tests personally?

A Yes.

Q Did you actually use the electron microscopes personally in some of the testing for asbestos materials and products?

A Yes, I did. The transmission electron microscope, also the scanning electron microscopes.

Q Did the lab MAS have trained microscopists that reported to you and the lab's owner that were trained to use the microscopes to analyze materials for the presence of asbestos?

A Yes, they did. That was part of my job responsibilities were to oversee the microscopists. As the laboratory manager, that's one of your jobs, yes.

Q And you were at MAS up through July of this year?

A Yes, sir, I was.

Q Why did you decide to leave?

A I wanted to spend more time with my family. I have a new granddaughter, and my time was becoming very valuable at that point. So I -- that was one of the reasons that I retired from MAS.

Q How old are you, sir?

A I will be 65 in January.

Q You look young for your age. How long was your commute to and from the lab at MAS?

A On any given day, I don't know if any of you all know Atlanta traffic, it is a challenge. So just a one-way ride could be an hour 20 minutes, something like that. So my round trip times were easily two and a half hours, sometimes three hours if there were accidents. I went through at least four school zones, so that slows you down quite a bit.

Q Now, the jury has heard a little bit about the peer review process as it relates to other experts. Do you have any peer-reviewed publications in the scientific literature, Dr. Rigler?

A Yes.

Q How many peer-reviewed publications do you have in total?

A I apologize, but I haven't counted them. They're on the CV.

Q Does it continue on for, like, a page and a half, maybe 15 or 20 peer-reviewed publications?

A Yes, and there are also presentations that are on there, scientific presentations that I've given.

Q Have you published in the peer-reviewed scientific literature any articles addressing how to test for asbestos in some kind of product or material and

what the asbestos concentration would be?

A Yes, yes. I published a paper in 1995 on the asbestos content of Kent original micronite filtered cigarettes. I don't know if any of you ever heard about them, but they were a blue filter very specific color, and the company touted them as the safest cigarettes which you could smoke.

So we looked at those cigarette filters at MAS, analyzed them, and came to find out that they contained approximately 10 percent crocidolite asbestos by weight. So that was a -- we did a study where we -- we took cigarettes and we squeezed them and we rolled them and then we didn't do anything to them and we loaded them up into a container that we would draw air through, as if, you know, you were breathing through that, to see what would be in the first couple of puffs, would there be any crocidolite asbestos in the first couple of puffs. And we found there were millions, hundreds of millions of fibers in that first couple of puffs.

And so we took that finding to a journal called Cancer, it's a published peer-review journal, and they did a rapid publication of that work.

Q Is this a copy -- I'm not going to put it into evidence, but is this a copy of the article that describes the work and the methodology for detecting asbestos in this product?
A Yes.
Q Just so the record is clear, Kent made this asbestos-containing cigarette filter between 1952 and 1954?
A Yes.
Q And Melody Lewis would have been, like, five or six years old at that time? She was born in --
A I believe so, yes.
Q -- '48. There's no evidence at all in the case that she ever smoked a Kent cigarette with an asbestos filter?
A Not that I know of, no.
Q So back to -- back to your qualifications, at MAS, was it a regular practice for you and other scientists to rely on --
MR. FINCH: Can I have the PowerPoint, Jon. Sorry.
Q -- trained microscopists to review products or substances or materials to determine if they contained asbestos?
A Yes.

Q And is that an accepted practice for scientists and researchers in the field, to rely on lab technicians and other people to help them identify asbestos in products or materials?
A Yes. In the scientific world, technologists are routinely relied upon for results from testing.
Q While you were at MAS, how many different asbestos products were tested over the years?
A Oh, I don't know. It had to be hundreds, hundreds of products that were tested for asbestos. There were many, many, many products asbestos were in. This slide is showing a number of companies that MAS consulted for, and not necessarily all of them were for testing asbestos. BMW that you see on there was BMW Motors.
Q That wasn't the BMW Constructors that's at issue in this case, is it?
A Right.
Q What kind of quality control programs did MAS have to analyze, stay up to date with the procedures it was using, that you and the scientists were using to test materials or products?
A The quality programs for all laboratories, all certified laboratories have quality programs whereby they have specific steps and routines and

procedures that they have to follow in order to get reproducible data.
For instance, when you go to the doctor and you get a lab test done by LabCorp or some of them, they have programs that are very stringent. In the asbestos testing realm, for most laboratories, they have what's called an ISO 17025 designation that you see on the screen there. I know there are a lot of certifications on there. We'll just talk about them briefly.
Q ISO standards for what, sir?
A International Standards Organization.
Q Okay.
A And they are a -- they're a group of scientists that come up with standard methods and methodologies that everyone follows so that everyone is doing the same kinds of things so the results are comparable across laboratories.
So you see some other designations on here. AIHA, that's American Industrial Hygiene Association. The A2LA you see on there, that's American Association for Laboratory Accreditation. There's also ASTM, American Standards for Testing Materials, NVLAP and on. And each one of these has a basis in 17025.

MAS was also an FDA registered laboratory. But the point here is that MAS followed a very stringent quality control program.
Q There's a reference there to something called the AIHA. What is the American Industrial Hygiene Association?
A Again, it's a group of scientists who have developed standards for the analysis and testing of environmental samples and materials, and they also provide a certification service for laboratories. MAS, that laboratory had -- the laboratory number was 100655. Each one of the laboratories has a designation. That means they've gone through a program whereby auditors from the AIHA, independent third-party auditors come out and they go through all of the laboratory's systems and they check them for compliance to their program. And if they comply, and they do this every two years, then the AIHA will give them a certification.
Q Could you describe for the jury what training you have had in industrial hygiene principles as it relates to asbestos.
A At MAS, there were industrial hygienists, in fact, I believe there still are, who are on staff. Now, these are people who essentially do -- they do

safety training for the laboratory there. One of their major jobs is workplace safety and health.

And so what they do is they follow standards for checking to be sure that workplaces are safe and healthy for all different kinds of things, whether it be hazards for slip and fall, whether it be air standards for the amount of particles in the air, dust, that type of thing. And what they do is they go around and they'll test for things. You've heard of standards for audiology, too much noise, too much sound. An industrial hygienist will go out with an audiometer, a meter that would measure that. So they would go to a rock concert, they could tell you, you're way off the scale here for acceptable workplace noise.

But in our case, I have been -- worked alongside of and trained and also overseen industrial hygienists at MAS who did testing on air samples and other kinds of samples that contained asbestos.

MR. FINCH: Can I have the ELMO again, Jon.

Q And Dr. Rigler, in your CV, it has a list of memberships. Have you personally been a member of the American Industrial Hygiene Association and the American Conference of Government Industrial

Hygienists, ACGIH?

A Yes.

Q Now, it says it's updating here. What does that mean?

A When I left MAS, I was a member of each one of these different organizations, and so with my new company, ASPEX, I have to get my address changed, I have to get updated information to them, I have to reapply for my memberships, that kind of thing. So that's why it says updating. I'm about halfway through the list right now. So that's what's going on with all of that.

Q And you're in the process of doing the paperwork to get recertified by things like the Microscopy Society of America, the American Society for Microbiology, the American College of Occupational and Environmental Medicine?

A Yes, sir.

Q This paper that you worked on about asbestos in cigarette smoke from the Kent filters published in the Journal of Cancer, is that right, cancer research?

A Yes.

Q And that was, what, 25 years ago?

A 1995.

Q There's a gentleman also, a co-author of yours, William Longo. Was he the owner of MAS?

A Yes, sir.

Q And the two of you are friends?

A Yes, yes.

Q Now, in addition to the --

MR. FINCH: Can I go back to the PowerPoint, Jon. Eventually I'll catch on.

Q In addition to the AIHA, there's something called the NIST on this slide.

A Yes.

Q Could you explain to the jury, what is the NIST and how does it relate to testing materials for the presence of asbestos?

A The NIST is the National Institute of Standards and Technology in Washington, D.C., and they oversee the program called the NVLAP, you'll see it there on the slide, National Voluntary Laboratory Accreditation Program. And that's for TEM laboratories. They specifically have a program for asbestos testing laboratories that do electron microscopy, TEM, and also optical microscopy, which we'll probably talk about later.

So what they do is they oversee these programs. They have auditors that go out to the

laboratories, and they assess the laboratories for conformance to the standards.

Q What is an official referee lab for an asbestos remediation project?

A The referee laboratory is one that can oversee sampling for projects like you see that are listed here. MAS, that laboratory was involved in all of the projects that you see here, all these different states and authorities that were testing for asbestos in their products and many of the buildings in their states.

So MAS was a laboratory that did testing for these programs that you see here, from City of New York, Port Authority of New Jersey, State of Hawaii, Archdiocese of St. Louis, City of Boston, Baltimore, on and on. So MAS was very much involved in all of those programs for many, many years.

Q And am I correct that there are basically two different kinds of -- two big categories of tests you're going to talk about here? One is something called a bulk materials test?

A Yes.

Q Explain to the jury what that is.

A A bulk material test is one whereby you're looking

at a material that contains asbestos. Say that it is some kind of an insulation product and it has asbestos in it. You want to know what the percentage of asbestos is. So that insulation is considered a bulk sample. It could be drywall, it could be mastic tape, it could be baby powder, it could be, you know -- it could be anything that's considered a bulk sample.

Q Was the crocidolite asbestos filter -- well, the jury can see it from here. The filter test, is that an example of a bulk analysis?

A Yes, yes.

Q When -- were you personally involved in many of these assignments involving being the referee lab for asbestos remediation projects while you were at MAS?

A Yes, yes.

Q Would that typically involve a bulk sample analysis to determine, you know, how much asbestos was in some building or how much asbestos was in some place or some school?

A Yes, sir.

Q Now, is there a second type of test that you're going to talk about today called an asbestos fiber release test?

A Yes.

Q Can you explain to the jury what that is.

A That is a test whereby an asbestos-bearing material is assessed for how much asbestos can be released from it. For instance, if you have a cement pipe that contains asbestos, a lot of cement pipe did in the past, and you cut into it and you're working around it and you cut into it and create all of that dust, then you can have a release and exposure. So that can be one type of thing.

MR. FINCH: Your Honor, we would ask the Court to recognize Dr. Rigler as an expert in material science for the purpose of doing bulk testing to determine if there is asbestos in a product or material and for fiber release related to asbestos fiber release from a fiber -- from a product or material.

THE COURT: Well --

MR. FINCH: Any objection?

MR. BICKS: You've heard our -- we've argued this so our position is preserved, I assume.

MR. FINCH: We agree that the prior arguments --

THE COURT: But you're objecting now?

MR. BICKS: Yes, Your Honor.

THE COURT: And the Court rules consistent with its prior order.

MR. FINCH: Thank you, Your Honor.

BY MR. FINCH:

Q Dr. Rigler, did we basically ask you to do three things in this case?

A Yes.

Q And first, did we ask you to test Johnson's baby powder containers from different periods of time to determine whether they had asbestos in them?

A Yes.

Q Did, in fact, a majority of the containers have asbestos in them?

A Yes.

Q Did we also ask you to come and explain the various testing methodologies that both you used and other companies might use that were available over time and to explain what a nondetect means and why there might be nondetects in historical tests?

A Yes.

Q And finally, did we ask you to explain to this jury what were Melody Lewis' exposures to asbestos from Johnson's baby powder and how those exposures compared to background ambient air?

A Yes.

Q Just bottom line, what is your opinion about how her asbestos exposures from baby powder compared to ambient air?

A Her exposure compared to ambient air was magnitudes higher than ambient air.

Q First, her exposure to asbestos from baby powder was orders of magnitude higher than ambient air?

A Yes.

Q And what does an order of magnitude mean in science?

A An order of magnitude is a thousand times, so multiple orders of magnitude can be 2,000, 3,000, 10,000.

Q Now, we have on this slide a picture of some of the different scientific instruments that the jury has already heard a little bit about and will probably hear a lot about in this case. Can you explain to the jury what each of these things are.

A Sure.

Q And why don't we do that first, then we'll go through some of how they're used.

A Okay. XRD, or x-ray diffraction, is a tool whereby you take a bulk, a solid sample, or you can take a powdered sample and then you compress it. And then what you do is you put x-ray energy through it, and

then it's tilted through the x-ray energy beam, and then there's a detector that tells you how much for a type-specific mineral that could be in there. So that's an x-ray diffractometer. The level of detection can be, you know, about .11 percent, something like that. It sounds pretty low, but as far as trace detection with an x-ray diffraction detector, not so great.

The PLM that you see there, as you can see, it's a microscope. It's called a polarizing light microscope, and that is used also for asbestos analysis and identifying asbestos.

There are also the TEM, the transmission electron microscope, as you see there. It looks small here on the screen, but it would take easily the space that I'm sitting here or where the judge is sitting. That's how large they are. So that's your transmission electron microscope. And it's used -- it is the tool actually for analyzing small particles, such as asbestos fibers.

Q You used a term in your answer just now called sensitivity, the level of detection.

A Yes.

Q Could you explain what that means.

A Sensitivity is the instrument's level or the

preparation's level of being able to detect how much is in something. The smaller the amount or the trace level amount, the more either that you need to analyze or the more area you need to look at.

So just to give you an idea of sensitivity -- well, it's always difficult to give the examples, but let it be known that the transmission electron microscope would be the most sensitive for trying to find very, very low levels of asbestos in materials such as powders.

Q You got a degree in microbiology and you got your undergraduate degree in biology?

A Yes.

Q I haven't had biology since I was in high school. I'm not going to say how long ago that was. But I remember looking through microscopes to look for microbes.

A Yes.

Q If I wanted to find a microscopic virus or bacteria on my hand, could I see them with a magnifying glass?

A No, not unless they were in big colonies.

Q Could -- if I wanted to look for something that is as small as an asbestos fiber, could I see it with

a magnifying glass?

A No.

Q Am I correct, then, that the greater the level of sensitivity, the more likely it is that you can detect something that's there?

A Yes, yes.

Q If I were using a hand magnifying glass looking for a single microbe on my hand, would I be able to see it?

A No, sir.

Q If I did that test 10,000 times in a row, would I ever be able to see any microbes on my hand?

A No, sir.

Q Now, the jury has already heard from a scientist about the various types of asbestos, from a pathologist. Could you explain from the material science perspective, what is asbestos?

A Asbestos is a hydrated magnesium silicate, which is -- kind of in terms of what you may know, it's very much like the clay that's in the soil out there. One form -- one type of it is similar to what's -- clay minerals. It's in that category called serpentines. The asbestos that is the important type there is an asbestos called chrysotile. You see it up in the upper right-hand

corner there in the green. That's what's called a serpentine mineral. And the reason it's called that is because it has a sheet like or a flat structure. This -- chrysotile is actually rolled up in a tube, so it's very much like a soda straw.

The other types of asbestos that you see there are called amphiboles, and they have a structure very much like railroad tracks that lay up on top of each other. So they're very -- they're also layered and they come in layered fibrils. So they're classed anthophyllite, actinolite/tremolite, crocidolite, and amosite. They're all in those -- what was called the amphibole mineral class.

Q And can some of the asbestos varieties be contaminant with other materials?

A Absolutely.

Q Which types of asbestos are often found as contaminants of talc?

A It depends upon the mineralogical formations, but it can be tremolite and actinolite, it also can be anthophyllite, and it can also be chrysotile.

Q Can asbestos -- I assume that when you're working with asbestos in your lab, there are industrial hygiene precautions that people take?

A Yes, we work within a safety hood.
Q But can you smell asbestos or see asbestos under the naked eye?
A No.
Q How long does asbestos persist in the environment if it's there?
A Well, it essentially can exist forever. It's sort of an unbelievably durable material that does not degrade very easily. It takes very, very high heat to degrade it and not very much else.
Q How big or how small is an asbestos fiber?
A This is a good demonstration. It shows a penny. There are rice grains there on the left-hand side. That's rice. There are human hairs around the 1996 stamp that you can see there. And then at Abe Lincoln's beard, you can see what appear to be asbestos fibers. These are little, tiny white dots that you see there. And that's actually a pile of asbestos fibers. The estimate there is 20,000 fibers, but you can see how small it is.
Q Can asbestos fibers be seen with the naked eye even if you're exposed to a huge quantity?
A If they are that small, no.
Q Now, we talked -- we showed the jury pictures of TEM and PLM.

A Yes.
Q How do you use a transmission electron microscope to test for asbestos in a material?
A Well, the beautiful thing about the electron microscope is it's three tools in one. You can do -- you can look at the structure of the asbestos to see that it's a fiber. You can see that it's a bundle or a group of them clustered together. So that's one way you can tell what it is. You can also measure its size and get what's called an aspect ratio, its length and width, because that's specific for asbestiform asbestos.

And No. 2, you can do the chemistry of those fibers. The electron microscope has attached to it an electron spectrometer which allows you to get a chemical fingerprint of that asbestos.

And No. 3, it also allows you to do what's called electron diffraction. As the electrons go through the asbestos fiber, they break up very much like light goes through a prism. You've seen light break up in a prism and you get different colors. The same thing with electrons when they go through material. They'll break up and they'll make a pattern that is a fingerprint for that material. So it's a beautiful tool for that, three in one.

Q Is this a picture of one of the transmission electron microscopes at the MAS lab that's used to analyze materials to see if there's asbestos present?
A Yes, yes, it is.
Q Now, back to another tool for analysis is something called a scanning electron microscope. What is a scanning electron microscope, and how, if at all, is it used in analyzing materials for asbestos?
A The difference between the two, the transmission electron microscope, the electrons go through the specimen and then you see the image of it on a plate inside a microscope.

The scanning electron microscope, the principles are very much like you and I see here in the courtroom. We see each other because light is bouncing off of us and we can visualize each other. With a scanning electron microscope, when the electrons hit the specimen, they scatter off and there are detectors, and then what you get is what looks like a three-dimensional image. So with the scanning electron microscope, you can see some really super fine details, and we'll see some images of those.
Q And finally, there's something called a polarized

light microscope. Is that something that's used in the laboratory to identify asbestos fibers in some circumstances?
A Yes. That one is more of a bench size microscope, very much like you guys probably used in high school work. And what this does is, the mineralogical material, whether it's powder or fibers or whatever, are put in refractive liquids which allows you to look at the different light properties as light bends through the fibers or whatever you're looking at because you can look at it for other kinds of materials.

So when you put a polarizer on that, it changes the light angles, that kind of thing. And as you rotate it, asbestos, different types of asbestos will have different kinds of color characteristics, and you can identify them based on those characteristics.
Q Of these three types of tools for analysis, which is the most sensitive and specific when it's -- for purposes of identifying asbestos in either some kind of material or if you're going into a building or a school for asbestos remediation?
A That would be the transmission electron microscope, yes.

Q Why is that?
A Well, for the three reasons that I talked about before. You can do the chemistry, you can do the form and the shape, and you can do the crystallinity, the electron diffraction. The scanning electron microscope is very good, but you can't do the diffraction work. You can do the chemistry and you can do the morphology. So it would be the transmission electron microscope.
Q How long has transmission electron microscope technology been around?
A Oh, gosh. Probably since the 1930s, 1940s. Scientists, physicists in different laboratories around the world were working on electron physics, if you will, and they came up with the idea that very much like what happens in a light microscope, you use light rays to bend around or to go through something. What if we could use electrons to do that, because the wavelength of an electron is much, much smaller than light, so that would mean you could see many, many -- you could actually see atoms. So with these electron microscopes, especially the newer ones, you can actually see atomic arrangements.
Q So what are we looking at here?

A So this one is -- actually the only company in America that made electron microscopes is RCA. I don't know if any of you are old enough to remember RCA Victor and televisions and all this. Well, they made an electron microscope. This one was vintage 1940s. It's called -- I think this is an EMU2. There was an EMU1. But they -- a lot of early research was done with this kind of microscope. MAS actually has one, and I was involved in a refurbishing project for this. We cobbled a couple of microscopes together to make this one. And it would work if you wired it up. It would actually work.
So this is a very basic one, and chemical companies actually in the '60s started using this to check purity of their powder chemicals. So you could look at the form of it. You could see the image of it. You could also do electron diffraction with these. There weren't electron spectrometers at the time to do chemistry, but you could definitely do diffraction.
Q Did you receive certain internal documents of Johnson & Johnson that were obtained in discovery that related to its -- the tools it used to test its talc for asbestos and what kind of materials

and analyses it did?
A Yes.
MR. FINCH: This is a document, Plaintiffs' Exhibit 181, from the files of Johnson & Johnson. We would offer 181. I believe it's stipulated.
MR. BICKS: It's fine.
THE COURT: The Court shows Plaintiffs' Exhibit 181 admitted without objection.
BY MR. FINCH:
Q This is a document from January 3, 1974. Johnson & Johnson writes, "Over the past three years, there seems to have been general agreement that transmission electron microscopy" -- I'm not going to be able to say that word right. I'm just not going to do it -- "is the only absolute proof with electron diffraction for the identification of asbestos in talc."
First of all, do you see that, Dr. Rigler?
A Yes, sir.
Q And you're familiar with this document?
A Yes.
Q Do you agree that transmission electron microscopy is the best method with electron diffraction for the identification of asbestos in talc?
A Yes.

Q And it goes on to state, "We have elected to use outside laboratories since any results generated in-house were suspect. In view of the latest findings at Windsor Minerals, it appears wise that we maintain a closer surveillance on both the ore and finished product on an in-house basis."
And is using electron microscope a way to analyze talc for the detection of asbestos fibers?
A Yes, sir.
MR. FINCH: And could I have the ELMO, Jon.
Q It says the approximate cost of a TEM plus accessories is $175,000, and this would be in 1974 dollars. Am I correct that a TEM is an expensive piece of equipment to operate and maintain?
A Yes, sir, yes.
Q Is it something that was available to Johnson & Johnson to purchase in 1974 or earlier, had it wanted to?
A Yes, it was.
Q What are we looking at here? Can you explain to the jury what we're seeing?
A What we're seeing are asbestos structures. These are very small particles of asbestos. They are bundles and you can see some single fibers there. The one all the way over on the right is called a

cluster. As we do asbestos analysis, we have to characterize whether it's a fiber, a bundle, a cluster, a matrix, or a combination. That's all part of the identification rules that have to be documented.

Q In the bottom -- well, this isn't going to work either. But this is a bar here? Can you all see that?

A Yes.

Q 0.5, and what does that little symbol mean there?

A That's micrometers. And that -- just to give you an idea of perspective, that's about half the size of a bacterium. Bacteriums are in the realm of about 1 to 2 microns, micrometers. So you can fit about half of a bacterium on that right there. So that shows you how small they are.

Q Now, is there a preparation methodology that you followed in order to analyze talc for the presence of asbestos?

A Yes.

Q Could you describe what that preparation method is generally first, and then I'll have you explain why you did that.

A All right. The preparation methodology is called heavy liquid separation, and what that is is a --

it's based on separating talc and asbestos. The density of talc is in the range of about 2.85 grams per cc, I believe it is. So the density for the amphibole asbestos -- if you'll remember, we've got the group of amphiboles and we have the single serpentine type -- is in the range of around 3 grams per cc. That's important because you're going to put them in a liquid that has a density that is different from them, which means they are either going to float or they're going to go to the bottom.

And the issue with talc is there is a lot of it. If you're looking for trace levels of asbestos in that, you've got to separate them, get them separated. So this is why we do this.

Q Is there peer-reviewed scientific literature that discusses the heavy liquid separation method?

A Yes, there are a couple of them, yes.

Q Are you familiar with this paper published by a scientist named A.M. Blount in 1991 called "Amphibole content of cosmetic and pharmaceutical talcs"?

A Yes.

Q Does this paper lay out her methodology for preparing the talc samples in order to analyze them

for the detection of asbestos content?

A Yes, sir.

Q She reports publicly in the paper what she finds when she did that?

A Yes.

Q Does she -- in this publicly available paper, does the paper state what the sources -- which sources of talc were contaminated with asbestos?

A I'd have to look at the paper again, but I don't believe it identifies them specifically.

Q It doesn't name the products, for example?

A I don't think so.

Q Now, is the heavy liquid separation method also part of an International Standards Organization method for detecting asbestos in materials?

A Yes. This is a standard method which takes that procedure that we just talked about and outlines exactly how to do that, very much like Dr. Blount's protocol and procedure, and this is an international standard that was used.

Q And I showed you the cover page. Let's make it a little bigger and hopefully the jury and I can both see it. It says the International Standards Organization "is a worldwide federation of national standards bodies (ISO member bodies)."

So ISO is the organization that put out this standard to do this; is that right?

A Yes, sir, yes.

Q And the date, you all may not be able to see the date. But can you read the date this was published?

A 2014.

Q Is ISO 2226-2 the international standard that specifies the procedure for analyzing talc for -- to determine if asbestos is in it?

A Yes. It describes procedures for separating asbestos from a number of different kinds of materials that you see there. Talc is highlighted. So it's used specifically for that.

Q And another material is vermiculite. Do you see that?

A Yes.

Q Was vermiculite insulation contaminated with asbestos something that was used in the World Trade Center?

A Yes.

Q Is this methodology recommended for detecting trace or subtrace levels of asbestos in vermiculite as well as talc?

A Yes, sir.

Q When I say trace or subtrace, does that necessarily mean that there could not be a high exposure to asbestos from a product that has a trace or subtrace level of asbestos in it?
A Right. Even though it says trace, you have to remember that like the penny, where you saw the 20,000 fibers on that little tiny space, when you say trace in a material, let's say it's trace asbestos, .1 percent or something like that, when it's thrown up in the air, when it gets airborne, trace doesn't mean a whole lot when it comes to exposure. You can still be exposed to a significant amount of it simply because there are so many asbestos structures.
Q And does ISO International Standard 22262-2 talk specifically about using this methodology on cosmetic talc to detect asbestos in it?
A Yes. You see here that it does. That's specifically from the method, yes.
Q Let's go through the columns just so I can understand what we're looking at here. So it's talking about talc asbestos content depends on deposits, and then it gives examples of materials in which talc is found; is that right?
A Yes.

Q Including cosmetics?
A Yes.
Q And then what is the third column there?
A That talks about the kinds of asbestos that can be separated with the technique.
Q And then it says, under -- "For amphibole, either centrifugation in heavy liquid, followed by evaluation by microscopy, or preparation of TEM from the untreated material is the optimum procedure, followed by examination using the mass counting procedure."
What are we talking about there?
A It says that this -- that heavy liquid is the optimal procedure for doing this, and then you use the transmission electron microscope for also examining the amount of material that's there. So it says this is the best way to do it.
Q And why isn't this the optimal way to look for chrysotile in talc or vermiculite?
A I'm glad you asked me that. I started to talk about densities. Chrysotile has a density of around 2 -- 2.8, somewhere in that range, and the liquids that you use to do the separations, that chrysotile is in that same sort of density range as talc is. So it's very difficult to separate

chrysotile with this method. Don't get me wrong, the scientists will keep on digging until we can find how to get it done and get it separated.
But -- and it can be done with this methodology.
But chrysotile is a big challenge. It could be there. You've done the method. You've found the amphiboles types. Chrysotile is still there because it's harder. You haven't separated it yet. So that doesn't mean chrysotile is not there if you run the procedure.
Q Now, Dr. Blount published in this peer-review literature the heavy liquid concentration technique in 1991, and this International Standards Organization ISO 22262-2 was 2014. Have you seen documents from the files of Johnson & Johnson that showed that this type of methodology, this type of preparation technique was being used by some of its outside consultants in the '70s?
A Yes.
MR. FINCH: Your Honor, this is Exhibit P-358, which I believe is stipulated admissible.
MR. BICKS: No objection.
THE COURT: The Court shows Plaintiffs' Exhibit 358 admitted without objection.
BY MR. FINCH:

Q So this is a document --
MR. FINCH: May I have the ELMO just for a second, Jon.
Q This Plaintiffs' Exhibit 358 is a confidential document dated March 1974 to Windsor Minerals, Windsor, Vermont.
Do you understand that Windsor Minerals is the subsidiary that owned the talc mines owned by Johnson & Johnson?
A Yes, sir.
Q And it's from somebody named R.C. Reynolds at the Department of Earth Science in Dartmouth, New Hampshire?
A Dartmouth College, yes.
Q Right, Dartmouth College.
Analysis of talc products and ores for asbestiform amphiboles; right?
A Yes, sir.
Q Does this memorandum describe --
MR. FINCH: Maybe I'll go back to the PowerPoint, Jon.
Q -- this heavy liquid concentration technique as a way to optimize the ability to identify asbestos in talc?
A Yes. They knew about that. They were working on a

method for that and said, yes, that's a great way to do it.
Q What they -- what the Dartmouth people say is, "For the reasons described above, a concentration technique is mandatory because it brings the amphiboles into a reasonable concentration range for optical or other methods of analysis. Such a method has been developed, and it's described in this report."
And the report goes on for something like 25, 30 pages, right, Dr. Rigler?
A Yes, yes.
Q Do they actually show an example of the tool used to separate out the talc from the heavier materials?
A Yes.
Q What are we looking at here?
A What they have is a test tube that has -- it's been filled with the heavy liquid material and mixed -- they mix the talc in with it. So here they're actually putting it together and they mix it up, and then they put it into a centrifuge. And then when they apply the centrifugal force to it, the talc and the amphibole asbestos, because the densities are different, will separate. The talc's

going to go to the top. The heavy amphibole asbestos is going to go to the bottom. So that's what they're showing here.
Q And on page 7 of the document, do they describe -- well, let me back up.
What are we looking at on the right here versus what are we looking at on the left?
A On the right is a small centrifuge, a test tube that is used at the laboratory, our laboratory, MAS's laboratory, to do the same exact kind of separation, whereby you put the talc mixed with the heavy density fluid into the centrifuge. In this case it's a small centrifuge tube, and then you centrifuge it at high speed, and then you recover the heavy asbestos from the bottom of the tube and the talc goes to the top.
Q And the picture from the Dartmouth document is here.
A Yes.
Q And on the right, that's just a picture of a test tube used at the lab you were with?
A Yes.
Q And then you stick it into some kind of centrifuge machine?
A Yes, sir.

Q And then that spins really fast?
A Yes.
Q And it separates out the heavy stuff from the lighter stuff -- or the denser stuff from the less dense stuff?
A Correct.
Q And in this Exhibit 358, do they describe both what they used as the heavy liquid for the centrifugal separation of fiber form amphiboles from talc as well as what they found?
A Yes, yes, they did.
Q Could you just read that for us.
A Yes, sir. "Mixtures of bromoform, methyl iodide, and benzethonium chloride monohydrate provide a suitable heavy liquid for the centrifugal separation fiber form amphiboles from talc."
Q And they write, "The ore sample contains 2300 ppm actinolite, and the talc product contains approximately 170 ppm actinolite."
And what is 170 ppm in percentages?
A The 170 ppm is about .1 percent.
Q .017 percent?
A Yes, excuse me, .017 percent.
Q And do they go on to write that "Actinolite is the dominant fiber form amphibole in the ore and the

talc product provided by Windsor Minerals. Small amounts of anthophyllite may be present"?
A Yes.
Q What does it mean when some -- a document says, "fiber form amphibole" in the scientific literature?
A They're talking about the fact that it is fibrous and it meets the definition of an asbestiform asbestos type.
Q And in this same document, do -- unfortunately, we only have the -- do they have a picture of what -- the asbestos fibers that they identified?
A Yes. They're showing in that picture, the red circle, they're pointing to the long fiber there that's an anthophyllite fiber and the shorter, thicker, fatter fiber is called actinolite. And they're both in that preparation of talc that was from this mine.
Q This is in Plaintiffs' Exhibit 358, Plate 7, and the Bates label at the end is 29429? I don't know if that's -- it is on the bottom of the screen.
A Yes.
Q Is that correct?
Are you familiar with the Ontario Department of Mines' asbestos identification protocol relating

to mineralogy of asbestos?
A Yes.
Q Could you explain to the jury what that is.
A This is a definition of asbestos that has in its defining terms as being a substance that has flexibility, tensile strength is usually high, tensile strength is what they'll say, and the asbestiform growth habit.
Q Is there any way on a microscopic level to detect for flexibility or tensile strength?
A No. Unfortunately, this is part of the definition for the bulk or the larger form of it. If you have a big piece of asbestos in your hand and it has asbestos fibers sticking out of it, you could apply that to that kind of sample. But when you get down to the level of the electron microscope where you have these tiny fibers that float around and you breathe in, those, as far as doing tensile strength test, you can't do that. So yeah.
Q What about asbestiform growth habit, what's that?
A Well, that is describing that it is in a fibrous form and that it grows from what they call a crystalline fibrous kind of habit.
Q And can you tell at a microscopic level what habit a 5-micron long asbestos fiber came from?

A Yes. Usually it will have parallel sides, the structure will. You'll also be able to see individual fibers in these, what they call bundles. And so you can see the individual fibers, and that's called an asbestiform habit.
It'll also have a specific length-to-width ratio, what they call an aspect ratio, and that's important because the regulatory agencies say that it needs to be at least three-to-one aspect ratio, that is three times longer than it is wide or five times longer than it is wide. And that depends upon the agency. So that's important.
Q For purposes of a regulated asbestos fiber, and by that I mean if you find it in the environment, whether you call it asbestos or not, has the United States EPA put out rules for how you identify asbestos as compared to something else?
A Yes.
Q We're looking at something called the EPA/AHERA. What is the EPA/AHERA methodology and can you just describe how it plays into defining asbestos in the environment or asbestos in the building or something.
A Okay. The AHERA stands for Asbestos Hazardous Emergency Relief Act, and this was a regulation

that came about in the '80s simply because we discovered asbestos was very bad and that there was quite a bit of it in schools around the country. So the edict was to get it out of the schools; thus, the act itself.
And in that document are descriptions for the analysis of asbestos in bulk materials and also in air samples. So when you're clearing -- when you actually take it out, you have to check and see that there isn't any asbestos fibers in the air once you do that too.
So the act describes the procedures for the analysis, and it uses transmission electron microscopy and the steps that we talked about earlier on looking at the shape and form of the asbestos, the chemistry of the asbestos, and also the crystallinity of diffraction pattern. So that's --
Q Is that the three-step method you're talking about here?
A Yes.
MR. FINCH: Your Honor, we're getting ready to change topics and go into more detail on this. Would this be an appropriate time for the lunch break?

THE COURT: Yes, we can do that.
Before we leave, another admonishment. We're going to take a lunch break now. Please be back at -- let's see, it's ten after 12. Why don't we make it 1:15.
I have told you not to talk about the case and to keep an open mind concerning it. You're not to discuss the case or the evidence in the case with anyone else, and you are not to permit anyone else to talk to you or in your presence on any subject or matter connected with this trial.
It is your duty to keep an open mind about the case until it is submitted to you for deliberation. Furthermore, during a recess, you should not talk to any of the attorneys, their staff, any witnesses about anything, not even to pass the time of day. You must be and appear to be impartial at all times.
In addition, jurors are not allowed to read anything concerning any of the parties or products in this case. This includes simply reading the paper, listening to the radio, or internet articles. Also, you may not Google anything concerning the parties or products involved in this case on your phone. You must be and appear to be

impartial at all times.

Lastly, the Indiana Code of Judicial Conduct prohibits broadcasting, televising, recording, or taking photographs in a courtroom and areas immediately adjacent during sessions of court or during any recesses of the trial.

With these admonishments, you are released for lunch. Thank you.

THE BAILIFF: All rise.

(Whereupon, the jury exited the courtroom.)

THE COURT: All right. Thank you.

(A lunch recess was taken.)

THE COURT: We're on the record, so we can begin. This is argument concerning Plaintiffs' offer to enter into evidence a Johnson & Johnson Consumer, Inc., notice to voluntarily recall a single lot of Johnson's baby powder in the United States.

MR. BICKS: Your Honor, can I just -- before we do this, should the witness be in here when we're having the argument?

THE COURT: Oh, certainly -- I mean certainly not. So sir, if you could please -- and you're welcome to step into the court office, and they can show you to one of the hearing rooms if you'd like

a seat.

THE WITNESS: Thank you.

THE COURT: And just tell them that I said to let you in.

THE WITNESS: Thank you.

MR. FINCH: May it please the Court, Your Honor. Plaintiffs' Exhibit 4 is a document that just was created by Johnson & Johnson approximately 8 a.m. this morning. It is an admission of a party opponent. It is -- I believe there's no dispute about its authenticity. Mr. Bicks alerted me to its existence this morning.

From the outset of this case, the testing methodology and adequacy of the testing methodology to detect asbestos in talc is a central dispute between the parties.

Jon, do you have the opening? I was going to put it up on the screen, but in yesterday's opening statement, Mr. Bicks says, "The FDA also tested Johnson & Johnson's talc in China. This isn't Johnson & Johnson's testing. This is the FDA. From time to time they've tested Johnson & Johnson's talc. They went and hired an independent laboratory to do it. These are the test results. At the end of the day, there is no asbestos

detected in any Johnson & Johnson's product, no asbestos detected in the mines that Johnson & Johnson was using. They tested the source mine. They tested the finished product. This is what the FDA did."

Now we find out that sometime prior to this morning, the FDA told Johnson & Johnson that it indicated subtrace levels of chrysotile asbestos contamination in Johnson's baby powder. This is the China mine. And while I don't contend that Melody Lewis used this particular bottle of baby powder, I do -- there is evidence in the record she continued using Johnson's baby powder up through the year 2018. And while that may not have been the exposure that contributed to her cancer, the dispute between the experts as to the adequacy of the testing and whether there's ever been asbestos detected in Johnson & Johnson and whether the limitations of the test methodology followed by the FDA and Johnson & Johnson are sufficiently sensitive has been an issue throughout this case.

So -- and furthermore, we have not had the opportunity for discovery about this document. Obviously we couldn't have added it to our exhibit list until right now because it didn't exist until

right now.

I find it astonishing that a lawyer for Johnson & Johnson could stand up in open court and say the FDA has repeatedly tested our products, including our China mines, which is the mines they've been using since 2003, and they've never detected any asbestos.

I find it hard to believe that -- this is a press release issued by the company. I find it hard to believe that Johnson & Johnson was not aware of the results of this FDA test prior to yesterday. It's not like -- it's not like the FDA will notify Johnson & Johnson at 6 a.m. this morning and Johnson & Johnson will put out a press release at 8 a.m. That just can't possibly happen.

If you look at the end of the document, it's got all the boilerplates, note to investors concerning forward-looking statements. I've done a fair amount of securities litigation in my life, Your Honor, and nothing goes out in a press release without corporate lawyers looking at it six ways from Sunday. So clearly Johnson & Johnson's corporate lawyers had advance notice this was coming before Mr. Bicks stood up and made his representations to this jury in open court.

So either one of two things has happened. Either Mr. Bicks, knowing the FDA had told Johnson & Johnson of this positive test result, nonetheless said what he said, or perhaps much more likely, Johnson & Johnson did not notify Mr. Bicks about this positive test result.

Either way, it's an admission of the party opponent. It's relevant to the issues of the case. It's connected to an exhibit that Johnson & Johnson added to its exhibit list just last week. They had a letter from the FDA in September of 2019 that said, in effect, although the results of testing are preliminary, we're still looking at it, we don't think there's any asbestos in the baby powder we're testing.

Your Honor entered an order allowing them to add a September 2019 document from the FDA to their exhibit list. Apparently they had a document from the FDA that was a communication from the FDA. We've been on the website of the FDA all morning and couldn't find whatever it is the FDA gave to Johnson & Johnson.

But I think under any analysis, this meets all four tests for admissibility. It's an authentic document. It is a statement against interest and

an admission of a party opponent. It's clearly relevant to the issues in this case. And I think the fact that we didn't have it on our exhibit list last week is excused by the fact that it didn't exist until this morning. This is like, if a lawyer stands up in opening statement in a car wreck case and says, the brakes were totally fine, and then it turns out that a mechanic's report is in the files of his client and somehow it gets turned over to the plaintiff the very next morning, it would obviously be admissible in that context.

So for all those reasons, Your Honor, we would respectfully request, A, to be able to amend our exhibit list to add Plaintiffs' Exhibit 4 to it; and B, to offer this document into evidence so that the jury can see it as part of the evidence of this case, and there would be absolutely no possibility of any kind of a mistrial because somebody might have seen something about it in the press or anything like that.

THE COURT: And Mr. Bicks.

MR. EATON: Your Honor, Joe Eaton.

THE COURT: I'm sorry, Mr. Eaton.

MR. EATON: I'm going to help Mr. Bicks out with this one.

So Your Honor, first, we too just got notice of this press release this morning. And instead of rushing to judgment on this issue, we would ask that the Court allow the parties to brief this issue, file a motion in limine. In particular, there's a couple other legal issues.

They've argued it's an admission of a party opponent. But under 407, this is clearly a subsequent remedial measure. They're trying to use it to prove negligence. They talked about culpable conduct and our testing methods. They're trying to use it show that a warning or a different warning should have been given, all precluded by Rule 407. There's ample case law, Indiana State Court, Seventh Circuit, Southern District of Indiana, excluding a voluntary recall just like in this instance that's issued years and years after the initial -- certainly the initial alleged exposure. The issue about 2018, I don't think there's any testimony by Melody Lewis that she bought her Johnson's baby powder online. The issue on the recall is one limited lot that was purchased from an online retailer.

So several issues, I think, that we should have ample time, Your Honor, to brief the issue to

bring those to you, because they're inviting error here because --

THE COURT: Now, when you say "ample time," what are you thinking of?

MR. EATON: We'll file a brief tomorrow, and we can argue it at the break of Hopkins on Monday. We can file -- they can file their response Monday. Dr. Rigler's coming back Tuesday, so the rush here to get this in today, on Friday afternoon, with Rigler doesn't seem warranted in this instance.

This is a press release that came out at 8:38 this morning. And there was a discussion, Mr. Bicks disclosed to the Court about the existence of the recall, disclosed it to plaintiffs' counsel. There were some discussions that they wouldn't use it. And so now that they want to use it with Rigler, we'd just like the opportunity to brief this, because I think they're inviting the error here, Your Honor, because it's clearly inadmissible under 407. And we can brief the issues on whether it's an admission of a party opponent.

MR. FINCH: May I be heard on the 407 issue? Rule 407, subsequent remedial measures, when measures are taken that would have been made an

earlier injury or harm less likely to occur, evidence of the subsequent measures is not admissible to prove negligence, culpable conduct, design defect, or a need for a warning or instruction. We're not offering it for any of those reasons.

Rule 407 goes on to say, "The Court may admit this evidence for another purpose, such as impeachment."

It is impeaching, A, to their testing expert. It's impeaching to the company. The company has taken the position that there have never, ever been any asbestos fiber ever. No. 3, it is not the recall that we seek to admit. It's the fact that the FDA told Johnson & Johnson and Johnson & Johnson admitted that there was chrysotile asbestos in the baby powder.

And furthermore, Your Honor, if we wait until Monday, I -- there are few certainties in life, but I suspect the first thing we'll be hit with Monday morning is a motion for mistrial because the possibility the jurors may have seen something about this on the news or over the weekend just because it's going to pop up on, you know -- they're watching football and there's something

about Johnson & Johnson. They can't turn the channel fast enough. If this becomes evidence in this case, then it can't possibly create a mistrial situation.

So for all those reasons, Your Honor, I think it is proper to admit the document now, allow us to publish it to the jury now, and to then continue on with Dr. Rigler's testimony. And I won't ask Dr. Rigler any questions about this.

THE COURT: So you're saying you want to offer it for purposes of impeachment so that you can question the witness as to the FDA's knowledge and their reporting?

MR. FINCH: No, as to Johnson & Johnson's -- it impeaches Johnson & Johnson's credibility, it impeaches Johnson & Johnson's testing methods, and it impeaches the FDA's testing methods in the sense that the FDA has said that, up to now, it has not found asbestos in baby powder but now apparently it's using more sensitive techniques and it has. So I think --

THE COURT: So you want to use it when Johnson & Johnson begins putting their witnesses on?

MR. FINCH: I want to cross-examine their

witnesses, and I haven't thought through, how could Dr. Rigler have put this as part of his reliance materials if it didn't exist before today.

THE COURT: So you don't intend to use it today?

MR. FINCH: I don't intend to use it today, but I do intend to publish it to the jury today. We don't have to have any expert testimony about it, but I do intend to publish it to the jury right after lunch and then continue with Dr. Rigler.

MR. EATON: Your Honor, it's true that impeachment is an exception to Rule 407 and the admissibility of subsequent remedial measures. This isn't a witness for Johnson & Johnson. If they want to cross the J & J witness, the first one to testify now through the reordered schedule is Dr. Sanchez on Thursday. We still think that it's inadmissible even for those purposes, but if there is an exception under 407 --

THE COURT: Inadmissible for purpose of impeachment?

MR. EATON: Potentially, yes, because of the prejudicial impact. But if it is admissible or if it can be used, it can only be used for impeachment, and that is of a witness proffered by

J & J, not an expert for the plaintiff.

THE COURT: Which we're not there yet. But the other concern, it sounds like, from plaintiffs is the possibility of mistrial if this would -- how this might impact the jury over the weekend.

So can you address that, please.

MR. EATON: Your Honor, you've admonished the jury every day. There's information about lawsuits all over the place on the web. So you've admonished them, and we're assuming that they're following your admonishment not to -- you said don't watch TV, don't use social media, and we're expecting the jury to abide by your admonishment and your regulations. We've done that since the beginning of jury selection. And there's lots of things out there that the jury could Google. So we think that admonishment should carry over for the weekend.

MR. BICKS: And also, it's not an argument. The arguments against admission of this have already been made and are well-founded. It's not a rationale to ignore the rules of evidence because it could avoid a mistrial, because allowing something in, that shouldn't be allowed in, is going to create error. So that's -- I don't know

the rationale, let's do something that we shouldn't do because there's a possibility of media attention, I don't think is a persuasive rationale.

MR. FINCH: Your Honor, this is no different than if a company published an admission on its -- if it published -- if this happened a month and a half ago, it would clearly be on our exhibit list. It would clearly be admissible, just like the letter that Johnson & Johnson has from the FDA is admissible, because it -- it's like a piece of literature in the scientific regime if it comes out a few days before trial.

I mean, one of the debates is, today, based on what we know today, can asbestos cause mesothelioma. Based on what we know today, can asbestos from talc cause mesothelioma. Based on what we know today, can asbestos be detected in Johnson's baby powder. That's a central dispute between the parties.

And their position is the FDA has repeatedly tested our product and never, never, ever found any asbestos. When Mr. Bicks stood up in court and said that yesterday, either he was not telling the truth to this jury or Johnson & Johnson hadn't told him the results of this. I don't know which to

believe.

But I think this is highly relevant. I don't think Rule 407 has anything to do with the admissibility of the document. We're not talking -- if you want to redact the words "voluntary recall," instead the only portion of the document would say, "United States, a single lot of its Johnson's baby powder in response to a Food & Drug Administration test indicating the presence of subtrace levels of chrysotile asbestos contamination in samples from a single bottle purchased from an online retailer."

I mean, that's really what we want the jury to see, is the Johnson & Johnson logo and New Brunswick, New Jersey, and then "in response to a U.S. Food & Drug Administration test indicating the presence of subtrace levels of chrysotile asbestos contamination, no greater than point bunch of zeros 2 percent in samples from a single bottle purchased from an online retailer." Everything else, if there's any concern about Rule 407, we could redact out of the document.

MR. BICKS: Just -- the one point that he's -- we're making predictions about things that may have happened. Our responsibility is to bring things to

the Court's attention, which is why I did it this morning. The letter that got on our exhibit list we put on as soon as we got it. We haven't even used it yet. And I didn't use it in opening statement.

If it turns out that when Dr. Sanchez or in some event I come out and say, oh, we just got a letter from the FDA, you know, two weeks ago, which we did, that said they had done testing and they didn't see anything, then it's a different situation. But we haven't even done that yet. I didn't introduce any of that. We haven't even gotten to our case, and I didn't say anything about it.

So I think the prudent course here is to just have this laid out legally and then when it's in our case, if we raise something that implicates this, then we deal with it. But I can tell you, in looking at this, and knowing this area, Your Honor has seen a lot of information so far about test results which are later not validated because of contamination issues. And even their expert, nobody on their side has found chrysotile in Chinese talc. Their expert, over 90 samples tested, and nobody is saying this. They're not

even maintaining in this case that this type of asbestos is in Chinese talc, which makes this even more questionable reliability, which is one of the reasons people are examining this right now.

And I would also add that the comments were made in the opening by Mr. Finch in essence that what happened in China is irrelevant to the case. And I believe, because they offered expert testimony by Dr. Brody that said exposures going back 10 to 15 years from the date of the diagnosis are not relevant to the disease.

And so he's made at least two statements on the record now in essence saying to the jury that Chinese talc really doesn't have anything to do with the case. And I've seen that now back in our office before I came over here. So now pivoting and now saying a test that's done after diagnosis and after the plaintiff stopped using the product of one sample online, that people are now investigating the reliability of it, is going pretty far afield here.

MR. EATON: And Your Honor, the rush here, we'll -- I'm speaking for others back at the office. We will agree to file our brief by 6 p.m. We will e-mail it to plaintiffs. They'll have it.

They can respond. And we can address this first thing -- obviously it's not an issue for Hopkins Monday, so we can have argument Monday. The rush here is part of the concern about inviting error with a document like this.

MR. FINCH: May I be heard?

THE COURT: And concluding remarks from Mr. Finch.

MR. FINCH: Yes, Your Honor. As to -- a document or a thing can be admissible for more than one purpose. I'm not contending that this lot of Johnson's baby powder caused or contributed to Melody Lewis' mesothelioma. What I am contending is Johnson & Johnson has taken the position and has in opening and in documents already in this case, that its testing methods are good enough to detect any level of asbestos and asbestos would never, ever, ever get through. They're going to hear that from Hopkins in his testimony that we've tested this stuff. You heard it in some of the cross-examination of our witnesses, that there was testing done and that Johnson & Johnson's position is, our testing is so good, there could never be asbestos get through, ever.

And this impeaches that, Your Honor. So

that's why it's relevant, and it's relevant all the way back to the beginning of time for whenever Johnson & Johnson started testing.

As to his response that chrysotile is not detected in Chinese talc, as Dr. Rigler explained this morning, using the heavy liquid density separation techniques, you look for amphiboles. They haven't been able to develop that to look for chrysotile. So the fact that they found this in Chinese -- found some chrysotile without apparently using that technique is evidence that there is asbestos contamination in talc and that Johnson & Johnson's testing methods are not sufficiently adequate to prevent that.

So I think for all those reasons -- and finally, Your Honor, you can't close your eyes to the real world. People -- anybody who has a Twitter account, even it they're not looking, if they're not actively looking for anything about Johnson & Johnson -- I believe the jury will follow Your Honor's instructions. I am -- I am concerned that we will be hit with a mistrial motion first thing Monday morning because they will say, this was on Twitter, this was on CNN Alerts, this was on this, this was on that. And I have no doubt that

our jury will not go out and seek any information, and I have no doubt as soon as they see anything like that, they won't look at it. But this is an admission of a party opponent that is clearly relevant under all the bases for admission against a party opponent, doesn't violate Rule 407, and we would like to read the sentence out of it once the jury comes back.

THE COURT: You'd like to read the sentence?

MR. FINCH: The sentence that would have Johnson & Johnson's letterhead, the New Brunswick, New Jersey, October 2019, "In response to a U.S. Food & Drug Administration (FDA) test indicating the presence of subtrace levels of chrysotile asbestos contamination no greater than .00002 percent in samples from a single bottle purchased from an online retailer."

THE COURT: That's the part you want to read?

MR. FINCH: Can I highlight what I want to read so I -- for the avoidance of doubt, as corporate lawyers might say.

So it would read for the record, "Johnson & Johnson, our company, New Brunswick, New Jersey, October 18, 2019. In the United States of a single lot of its Johnson's baby powder in response to a

U.S. Food & Drug Administration test indicating the presence of subtrace levels of chrysotile asbestos contamination no greater than .00002 of a percent in samples from a single bottle purchased from an online retailer."

That's the portion I would like to read to the jury. And we would redact the document when we have the time to do so, and that would be the only portion of Plaintiffs' Exhibit 4 we would seek to offer.

THE COURT: Do you want to look at this?

MR. BICKS: And so you have our position on it.

THE COURT: I do.

MR. BICKS: And, I mean, we would object to this.

THE COURT: Yes. The Court knows that the parties are going -- even if they adhere to the Court's admonishment, are bound to see a limited amount of information about this. And I see the value in informing them within the context of the courtroom setting so that they know and can ignore it going forward into any further investigation or articles.

So the Court has heard your objection. And I

will take -- the parties will have the opportunity to provide the Court with briefs as to admission of the balance of the document, but the Court admits that sentence today.

MR. BICKS: Well, then, Your Honor, if we're going to do that, then I'd like to have another part of it then admitted. Can I have the highlighter?

THE COURT: It's the official highlighter.

MR. EATON: And how are you going to introduce it to them?

MR. FINCH: I'm just going to read from it. We'll redact it before it goes back --

MR. EATON: Before Rigler's on the stand?

MR. FINCH: Yeah.

MR. BICKS: So we would just not have the recall part, but out of completion, we would have that.

MR. FINCH: I don't think I have an objection to that, Your Honor, as long as it doesn't have anything about recall. I guess I would like -- well, no. Let me talk to Ms. Farinas.

We will read it as highlighted.

MR. BICKS: And subject to our objection.

THE COURT: Pardon? Subject to --

MR. BICKS: Subject to the objections as to the whole.

THE COURT: Over objections.

MR. BICKS: Right. And how exactly are we going to be doing this?

MR. FINCH: I'm going to stand in front of jury, offer Plaintiffs' Exhibit 7, read it to them, and say that a copy will be -- an appropriate copy will be available for -- as evidence.

MR. BICKS: Right. And so can we then -- can he read what he wants to read and then I'd like to read Johnson & Johnson's fairness provision.

MR. FINCH: I'll read the whole thing.

MR. BICKS: No, I'd like to read from Johnson & Johnson the counterpart.

THE COURT: Well, it's his exhibit.

MR. BICKS: Right. But if we were doing fairness --

MR. FINCH: I said I'm going to read it.

MR. EATON: If it were a deposition designation, they would read their part, we would read ours.

MR. FINCH: But I just agreed to read their part, Your Honor.

THE COURT: Well, I understand that.

MR. BICKS: I would prefer to read our part, because he may emphasize a little differently.

MR. FINCH: Far be it from me to emphasize.

THE COURT: Well, you're objecting to its admission; right?

MR. BICKS: Right.

THE COURT: So given that it's his exhibit, the Court's going to let him read it.

MR. BICKS: All right. And I assume he's -- we're not going to have a dramatic --

MR. FINCH: I'm not going to ham it up.

THE COURT: Well, let's hear it now, Mr. Finch.

MS. FARINAS: Mr. Finch, she wants to hear you read it.

MR. FINCH: "Johnson & Johnson, our company, New Brunswick, New Jersey, October 18, 2019. In the United States of a single of its Johnson's baby powder in response to a U.S. Food & Drug Administration test indicating the presence of subtrace levels of chrysotile asbestos contamination not greater than .00002 percent in samples from a single bottle purchased from an online retailer.

"At this early stage of the investigation,

JJCI cannot confirm if cross-contamination of the sample caused a false positive, cannot confirm whether the sample was taken from a bottle with an intact seal or whether the sample was prepared in a controlled environment, cannot confirm whether the tested product is authentic or counterfeit. JJCI has a rigorous testing standard in place to ensure its cosmetic talc is safe. In years of testing, including the FDA's own testing on prior occasions and as recently as last month, found no asbestos. Thousands of tests over the past 40 years" --

You know what, Mr. Bicks, you can read your part because I'm going to mess it up.

MR. EATON: And Your Honor, there's not going to be any context for the document. You're not going to say, this is related to something in the news or -- he's just going to read it in and that's it. Because the idea, of course, is not to draw their attention to going out and looking for something about Johnson's baby powder.

THE COURT: Well, Mr. Finch can ask to offer it and the Court will say that it is being offered over objection.

MR. EATON: Okay.

THE COURT: And do both defendants object? I

don't think that BMW cares.
MR. EATON: Yeah, BMW objects.
MS. WEGLARZ: No objection.
THE COURT: Okay, thanks. So wait a minute. Does that mean yes or no?
MS. FARINAS: They don't object.
MR. HARNEY: Yeah, no objection.
THE COURT: All right, thank you. So are we ready for the jury?
MR. FINCH: If I could have two minutes, Your Honor.
THE COURT: Well, it'll take that long to get them.
We can go off the record.
(Discussion held off the record.)
THE BAILIFF: All rise.
(Whereupon, the jury entered the courtroom.)
THE COURT: Welcome. Please be seated.
Well, we're going to begin again this afternoon. Thanks very much for being so prompt and coming back in time. The Court really appreciates it.
And plaintiffs are going to continue with the presentation of their case.
MR. FINCH: Your Honor, may it please the

Court. Good afternoon, ladies and gentlemen.
We will bring back Dr. Rigler momentarily, but in the interim, plaintiffs would offer Plaintiffs' Exhibit No. 4, which is a press release issued by Johnson & Johnson on today's date. We would offer Exhibit No. 4 pursuant to your Court's rulings.
THE COURT: The Court shows Exhibit No. 4 is admitted over the objection of Johnson & Johnson, as redacted.
MR. FINCH: "Johnson & Johnson, our company, New Brunswick, New Jersey, October 18, 2019. In the United States of a single lot of its Johnson's baby powder in response to a U.S. Food & Drug Administration (FDA) test indicating the presence of subtrace levels of chrysotile asbestos contamination no greater than .00002 percent in samples from a single bottle purchased from an online retailer."
MR. BICKS: And then Your Honor, you've permitted --
THE COURT: Yes.
They're each going to read part of the exhibit.
MR. BICKS: "At this early stage of the investigation, JJCI cannot confirm if

cross-contamination of the sample caused a false positive, cannot confirm whether the sample was taken from a bottle with an intact seal or whether the sample was prepared in a controlled environment, cannot confirm whether the tested product is authentic or counterfeit. JJCI has a rigorous testing standard in place to ensure its cosmetic talc is safe, and years of testing, including the FDA's own testing on prior occasions and as recently as last month, found no asbestos. Thousands of tests over the past 40 years have repeatedly confirmed that our consumer talc products do not contain asbestos. Our talc comes from ore sources confirmed to meet our stringent specifications that exceed industry standards. Not only do we and our suppliers routinely test to ensure our talc does not contain asbestos, our talc has also been tested and confirmed to be asbestos free by a range of independent laboratories, universities, and global health authorities."
THE COURT: And the Court shows that admitted over objection, as redacted.
MR. FINCH: May we recall Dr. Rigler to the stand, Your Honor?
THE COURT: Yes.

MR. FINCH: May I go get him?
THE COURT: Yes. The Court's going to write "Redacted" on this.
Welcome back, Dr. Rigler.
THE WITNESS: Thank you.
THE COURT: You were sworn this morning, and you continue to be a sworn witness. So with that, Mr. Finch may continue.
THE WITNESS: Thank you, Your Honor.
BY MR. FINCH:
Q Good afternoon, Dr. Rigler. Did you have a nice lunch?
A Yes, sir.
Q We were talking about the three-step method for detecting asbestos in any kind of material, whether it's talc or a wall or dust or anything else.
A Yes.
Q Did your laboratory and Dr. Longo's laboratory follow this three-step method in analyzing Johnson's baby powder to determine if it had asbestos in it?
A Yes, sir, we did.
Q And could you walk the jury through that here.
A Sure. We had talked about these earlier this morning. The first step is to look at the shape

and the form, the length and the width. We're looking for substantially parallel size on the fibers or the bundles with an aspect ratio of around five to one. Five to one --

Q Let me stop you right there. You used the term aspect ratio, and I'm not sure -- if the jury's already heard this term, I'm sorry, but I at least have forgotten. Could you just remind me, what is an aspect ratio?

A Sure. That is a number when you divide the length by the width, you get an aspect ratio. For instance, if the fiber is 5 micrometers long and is one micrometer wide, it would be five divided by one, so it would have a five-to-one ratio.

Q So something that's longer and thinner like a pencil would have a higher aspect ratio than something that's, like, short and fat like a fist?

A Yes, it can, that's correct.

Q So five to one or greater, at least five microns in length.

What's the second step that you follow to determine if something's asbestos?

A The second step would be the chemistry. We want to know if the chemistry matches that of the asbestos type that we're looking at. So we will do an

analysis on the electron microscope. If you'll remember, we talked about the electron spectrometer, that's a tool that's on the electron microscope that allows us to do an analysis and get the chemistry of the fiber.

Q What is the third step in the process?

A The third step is the -- what we called the electron diffraction. Remember we talked about the light goes through a prism, breaks it up, you see the different colors. In the electron microscope, the light is the electrons, if you will. They go through the specimen and then they produce a patten of the crystalline structure, and then that pattern is the fingerprint for the type of asbestos.

Q Is this protocol, this three-step approach, discussed in ISO 222 -- excuse me, in ISO 13794 as well?

A Yes. This is another ISO method, standard method. We talked about 22262-2 this morning that has to do with heavy liquid separation methodology. This is another one that has to do with the analysis of asbestos fibers, but it uses the same kind of parameters. It uses the same three-step methodology.

Q And when you published your paper in 1995,

"Crocidolite asbestos fibers in Kent cigarettes," did it also discuss this three-step process?

A Yes, it did, yes.

Q It uses a word called morphology. What is morphology?

A That's just a fancy name for shape or form, morphology.

Q And in the ED, energy dispersive x-ray, that's the chemistry?

A Yes, sir, that's the chemistry.

Q And then this selected area, electronic diffraction, is the -- what is that, the structure, the crystal structure?

A That's the crystal structure, Step No. 3, yes.

MR. FINCH: So can I have the ELMO just a second, Jon.

Q Did I get that right, Doctor?

A Yes, sir.

Q So to avoid having to say a mouthful over and over, that's the three-step -- did you follow that three-step approach for every fiber or structure or bundle that you identified as asbestos in Johnson's baby powder?

A Yes. That's according to the standard methodology in the published peer-reviewed methodology, yes.

MR. FINCH: Can I have the PowerPoint back, Jon.

Q Now, in addition to your own peer-reviewed paper and the International Standards Organization, are you -- you talked briefly about the ASTM method.

A Yes.

Q The ASTM publication. Does the ASTM D5755 also discuss this three-step method that you followed to identify asbestos in baby powder?

A Yes, it does. And as you can see from the title of the method, this has to do with sampling for asbestos in dust. So for instance, if you found dust on a surface somewhere and you suspected it had asbestos in it, this particular standard that's by the American Society for Testing and Materials uses the same three-step process to analyze that dust for asbestos.

Q And does the EPA set forth in the regulations why it chose to use -- required this three-step TEM analysis for detecting asbestos fibers? Does it say -- does the EPA say that?

A Yes, sir, it does. That's from the federal register document for AHERA. We talked about that this morning. It uses the same three-step method.

Q And the method -- just to be clear, the method that

you followed to identify asbestos in Johnson's baby powder is the same three-step method that you and other scientists at MAS have been following for 30 years?
A Yes. And the other asbestos laboratories also follow the same protocols and procedures, yes.
Q And there's a reference in your --
MR. FINCH: Can I have the ELMO back, Jon.
Q There's a reference in your 1995 paper, No. 11, is that the same EPA/AHERA rules, three-step process?
A That's correct, yes.
Q Did you change the way you identify asbestos fibers just specially for talc?
A No, no, it's the same, same kind of procedure.
Q Since 1987, the EPA has updated the AHERA regulations; is that right?
A Yes.
MR. FINCH: Can I go back to the PowerPoint, Jon.
Q And did the current version of the EPA regulations still have this three-step methodology?
A Yes.
Q So it's morphology with an aspect ratio of five to one or greater and using the chemistry and the --
A Electron diffraction.

Q -- electron diffraction?
A Yes.
Q Now, does the EPA regulations also -- Dr. Brody yesterday said that aspect ratios of three to one or greater could be considered asbestos for a public health perspective. You and your laboratory are using aspect ratios of five to one or greater. If you're using a higher aspect ratio, is that going to mean that you're going to be calling less things asbestos than maybe what a public health scientist would?
A Yes, that's true. If you go up to a little higher ratio, you're going to count fewer of the smaller ones. So it's more conservative, if you will. The same thing, just a five-to-one ratio versus a three-to-one. OSHA's rules are for three to one.
Q And do the EPA regulations explain why it is they picked five to one as the aspect ratio?
A Yes. They talked about that is the most probable size of what they call asbestiform asbestos, if you will. If you get down below three to one, then you start to get into what we talk about chunk instead of fiber. So that would not be considered asbestiform, if you will.
So what they're looking for, once you get into

the three-to-one, five-to-one range or higher, then it's most likely that it is asbestiform.
Q And there was a discussion, a debate in 1987, several commentators suggested that the aspect ratio length to width should be extended to ten to one.
A Yes.
Q What was the EPA's ultimate conclusion, which is highlighted in the second column there?
A They believe that it should stay -- a panel of microscopists, experts that were looking at these structures, said it needed to stay at a five-to-one ratio. Otherwise, there are a lot of structures that are asbestiform, and they can get down into the lungs because the smaller they are, the higher the probability they're going to get into the lung tissue, deep into the lung tissue. So they wanted to keep that at a five-to-one ratio.
Q Now, we're going to get to the overall results of your testing in a while, but can you sort of walk the jury through how you applied this three-step method to an asbestos structure found in a sample of Johnson's baby powder from a 1978 bottle. Can we do that?
A Sure.

Q Okay. So what are we looking at here?
A This is a sample of a 1978 Johnson's baby powder product. This is a nine-ounce bottle. The sample number on there, M69042-002, is the laboratory number for it. So when the samples come into the laboratory, each one of them gets logged in, gets its own specific sample number. Then it is tracked throughout the laboratory and the laboratory processes, so you know exactly what you're talking about from start to finish.
Q And the little -- the fine -- as I would say, the fine print at the bottom says, "MAS 1-15-19 Report Backup Data Binder."
This is in the backup to the federal court report that MAS put together through the MDL process?
A To my knowledge, yes, it is.
Q And that was the -- I'll get to more details of this in a little bit. Am I right that you sort of did two rounds of testing on Johnson's baby powder? The first round was from bottles that you obtained either from lawyers like me or from online sources, and the second round was testing that you got where the samples came directly from J & J; is that right?

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A Yes, they were part of their historical samples.
Q In a court-supervised process with the second round?
A Yes.
Q And this is from the second round of testing?
A Yes, sir.
Q So this is Sample 69042-002, what are we looking at here, and what can you tell us about it, Doctor?
A So after the sample was prepared and analyzed for --
Q And by prepared, do you mean using what, the Blount heavy liquid?
A Yes, the heavy liquid method.
Q Okay. Go ahead.
A After that preparation, it was found within that sample asbestos structures. So here's an example of an asbestos structure. It appears to be a bundle. This is anthophyllite asbestos. And it has an aspect ratio of 19.7 to 1. Remember, we're talking about -- we're looking for structures that are at least five to one in length -- excuse me, in aspect ratio. So it has the qualifications and all of the specifications for regulated asbestos fiber.
Q So let me just see if I understand the math here.
MR. FINCH: Can I squat down, Your Honor, so I

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can point to this. Sorry.
Q Anthophyllite, 35.4 microns by 1.8 microns, is that the -- the length is 35.4 microns?
A Yes.
Q And the width is 1.8 microns?
A Yes, sir.
Q And then you get the aspect ratio by dividing 35.4 by 1.8?
A Yes, sir.
Q So that's where the 19 comes from?
A Yes.
Q So that's Step 1. This has -- that means that this structure has a morphology consistent with an asbestos fiber?
A Yes, sir.
Q Or asbestos bundle?
A Yes.
Q What is -- what are we looking at -- wrong way. This is another structure identified in that same sample?
A Yes, sir.
Q And this one has a length of 6 microns and a width of .7 microns?
A Yes, sir.
Q So what is that aspect ratio?

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A It's 8.6 to 1. So that, again, also fits the parameter.
Q For a regulated asbestos fiber?
A Yes, sir.
Q Is this another regulated asbestos -- another structure that meets the morphology parameters for a regulated asbestos fiber?
A Yes. This one is anthophyllite, and it measures 34.5 by 1.1 micron, and the ratio is 31.4.
Q Now, what is a count sheet, when the microscopist -- I assume that the microscopist took the picture of this using the transmission electron microscope when he was analyzing the talc; right?
A Yes.
Q And did you review all of these photomicrographs and all the count sheets in the testing that your lab did?
A Yes.
Q We're not going to put the whole report into evidence, but is it thousands and thousands of pages of count sheets and photomicrographs?
A Yes.
Q And photomicrograph is just a fancy word for photograph?
A Yes.

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Q So what is a count sheet? And if you could explain to the jury what we're looking at here.
A So the requirement by the methodology is that the -- the structures that you find that meet the criteria have to be documented, they have to be measured, and they have to be verified. So what you see here in front of you is an actual count sheet from a laboratory. It has the date of analysis. It has the amount that was analyzed. And then going down the sheet, what it has are the locations of each one of the asbestos structures.
Over on the right, you see the sort of copper looking structure that's there. That's actually a grid that is used. It's like a little wire string, if you will, and it's actually made of copper. It has a little film on it, and the sample is on that film. So there's a little higher magnification of it there, and you can see the numbering and the labeling on it, A through J and then 1, 2, 3, 4. And each one of those is a grid square location, each one of those locations, so if you need to go back and find this structure, you can go to this grid and find the exact same spot of where it lies.
Q Just to orient the jury in terms of sizes here, am I right, this distance here is 1 millimeter?

A Yes, that's 1 millimeter.
Q So this little copper -- what did you say, it was made out of copper?
A It's called a grid.
Q That little grid is about two-tenths of a millimeter?
A No, that scale there is 10 millimeters.
Q Excuse me, it's 2 millimeters, it's about --
A Yeah, it's about 3. It's about 3.
Q And so but in each of these little squares that you look at is a fraction of that?
A Yeah, they're about a tenth of a millimeter.
Q Okay. And then what -- it looks kind of like a Battle Ship board to me.
A Yes.
Q But what is the actual sheet on the left here? What do the rows and grid say? What do they say? What do they mean?
A Well, what you have on the left is the STR number. That's the structure number. So if a structure is found, it's given a number. You see NSD. That means no structure detected for that particular grid square. So B2-B6 is actually the grid box location that it's put in because it's kept in storage at the laboratory in a box, a small box.

And then what you have is the grid number. And then B6 is the grid square location. So if you went over on there and you looked at B and then went down to 6, you can tell exactly what little square the analyst was looking at.
Q And is this a count sheet that shows what, like -- for example, Structure No. 1 was found in grid B8, that's a bundle of anthophyllite, and it tells you the length, the width, the ratio?
A Yes.
Q And then the little checkmarks, SAED and EDS, are those Steps 2 and 3?
A Yes, yes. Again, this is just a portion of this sheet. Some of the images we saw before, they're on this sheet. I think the highlighted one at the bottom was one of the images that we looked at.
Q Okay.
A The --
Q Sorry.
A Oops, sorry. The aspect ratio is calculated there and the X's that are on the sheet show -- it's verified that the analyst looked at the diffraction SAED -- remember we talked about that -- and also the chemistry, the EDS, where X marks the spot is where the analyst did the verification for that.

They actually did that analysis.
Q And in your report, you have the average aspect ratio for all of the asbestos structures you identified in this particular sample of Johnson's baby powder?
A Yes, yes. And again, that's -- this is important to get the average aspect ratio. You can see the ratios here in the chart. The important part here is, again, are they at least five to one or greater, because what that says is this is an asbestos structure and it meets the specification for it. So you can see the ratio here, the average is about 14.
Q Now, in addition to the morphology, you also checked the -- you apply Step 2 and Step 3, you check the chemistry?
A Yes.
Q Can you walk us through what Step 2 was for the asbestos structures you identified?
A Well, each one of them did an EDS, the chemistry, and what you get out of that is a graphic representation. Here we go. And this shows -- the graph is showing the peaks for each one of the elements that are associated with the asbestos structure itself. So you see these peaks that are

on here. One's labeled MG. That's magnesium. One is labeled SI. That's silicon. One is labeled FE. That's iron. And then you see some other peaks that are on here. They're associated with the actual grid, the copper grid itself, so they're not labeled.
Q So this is the -- I don't exactly remember all the abbreviations from the periodic table of elements from high school.
A Yes.
Q But like SI is silicon; is that right?
A Yes.
Q And this shows the relative ratio of silicon. And what is that?
A Magnesium.
Q Magnesium?
A Yes.
Q And then, I guess, FE that's --
A Iron.
Q -- ferrous, iron?
A That's iron.
Q Do you compare this chemical readout to a known reference standard for either anthophyllite or tremolite or other known asbestos?
A Yes. We have reference standards in the

laboratories required by the agencies that you keep those references, and then you compare them.
Q Now, Step 3, explain how Step 3 is applied to the structures identified.
A Okay. Step 3, while you're doing this, essentially you're looking at the structure, just like you saw the picture of it here, in real time you're looking at it. And what the analyst will do, they'll take the electron beam and they can move the beam into a little spot and they can put it right on that structure. And when they do that --
Q Is this an example of that?
A Yes, yes. When they do that, they will get the pattern. Remember we talked about the breaking up of light through a prism and you get the colors. When you run electrons through an asbestos or crystalline structure, you're going to get a pattern, and it looks very much like this, like the little dots that you see here. And those dots, if you measure between them, they're the actual distance between the atoms in the asbestos structure itself.
So we can take these patterns and we can look at them, and then we can tell exactly what it is.
Q Okay. Am I correct that the chemical formula for

anthophyllite is very similar or the same as the chemical formula for talc?
A Yes, it can be.
Q How do you distinguish between talc and anthophyllite asbestos when you are doing this analysis? Which of these three steps does that?
A They both can have similar ratios of magnesium and silicon, the first two big pieces that you saw in that one chart. Now, they can have some amount of iron or very little iron. So --
Q This is the peaks you were talking about before?
A Yes, yes. So that iron, that iron peak that you have seen there can be very low. So once you look at the chemistry, you go, well, this could be talc or it could be anthophyllite. Now, you've already looked at it and see that it's a long rod. Talc, in products like the Johnson & Johnson baby powder, is mostly, practically all flat plates. The talc that's in there, they look like little flat plates, like little tiles everywhere.
Now, there is talc that exists as fibers. It's fibrous talc. So when you're looking at a fiber, you've got to make sure it's not fibrous talc. You want to see if it is asbestos. Now, the funny thing is, the interesting thing is, some

asbestos types can form talc from talc. They can be transitional, what they call transitional. On one end they can be asbestos, on the other end they can be talc. So what the analyst has to do is they have to take this technique with the spots that you see and they have to actually tilt the little fiber structure. And when you start tilting it a little bit, if this pattern changes from spots to what looks like little hexagonal, it looks like a little six spots in a --
Q Is that an example of the hexagon you're talking about?
A Yes, yes. That's indicative of talc right there. So when we're looking at that structure, we would say that that was a talc structure. It'll have the same chemistry as anthophyllite. So we have to look at it and check that.
Q Okay. So this particular structure we're looking at, when the analysts rotated the structure around, you have two different diffraction patterns; is that right?
A Yes, but the spots remain the same and the measurements between the spots will remain the same. So for true anthophyllite, there's a distance, and they will stay the same. But if I

rotate them and I start to see this six-point pattern, then I've got either talc on one end and asbestos on the other end, maybe anthophyllite on the other end, or I've just got a talc fiber. So that's something that has to be always checked with anthophyllite, and we do that.
Q And so does this slide sort of lay out the three-step method that you applied -- that you applied to identify anthophyllite asbestos in Johnson's baby powder?
MR. BICKS: Your Honor, can I just object and ask that we be precise about "we," because there's a lot of testimony about "we" did something. I would request that the witness make it clear who's actually doing things.
THE COURT: I'll sustain that objection.
BY MR. FINCH:
Q Okay. Explain what this three-step -- what this slide shows, Dr. Rigler.
A It shows that -- for this particular structure, it showed the morphology was consistent with asbestos. That is the shape and the form, the aspect ratio. It showed that the chemistry was consistent with an asbestos-type anthophyllite. And then when the diffraction was done, it also showed that it was

consistent with anthophyllite. And in science, we like to measure things multiple different ways to get the answer. If we can measure it in multiple ways, we can get a very good answer like that.

Q Doctor, I probably should have asked you this at the outset. But would you agree that any opinion you're giving to this jury is to a reasonable degree of scientific certainty?

A Yes.

Q Has that been the case for all of your answers up to this point?

A Yes.

Q And will that be the case for the rest of the day?

A Yes.

Q And including, if you come back next week, would that be the case then?

A Yes.

Q So does the EPA have specific recording rules for what you have to count as regulated asbestos?

A Yes.

Q Could you explain that to the jury.

A Well, again, it's nothing new. We talked about it a little bit earlier. It's more of the same thing, which is in this case the aspect ratio needs to be at least five to one for the AHERA/EPA. And OSHA

as three to one. So that's their rule. So you would count even more than they may be smaller. So that's their rule.

The length needs to be at least a half a micron in length. And then you have to record all of these things on a count sheet. You've already seen the laboratory, it has a count sheet, and you have to record those things.

They also, and we talked about this a little bit earlier on, have to be recorded as fibers, bundles, what they call clusters, little matrices. These are groups of asbestos fibers together.

Now, if you saw a group of them together like this, let's say all my fingers were fibers and they were looking like this, you would call that a cluster. But technically, by their rules, you have to call that one structure. So there may be ten there, but we have to call that one. So that would be an underestimate of how many are really there. But by their rules, that's the way we have to call them.

Q Do the regulations also have a definition of what is not asbestos?

A Yes, it does.

Q What is that?

A If you can't get a good chemistry or the chemistry does not match up for the asbestos, then it's not going to be -- it's not even going to be on the count sheet.

If you do a diffraction pattern of it and it's something that's completely different or you have spots that are difficult to read, then it may not also be -- if a morphology is, you know, less than three to one, definitely not.

Q We talked about EPA/AHERA, ISO 22262, and the ASTM. Have you also had the opportunity to look at Johnson & Johnson's specifications for using transmission electron microscopes to analyze talc for the determination of asbestos?

A Yes.

MR. FINCH: And Your Honor, at this time we would offer Plaintiffs' Exhibit 38. I believe it's a stipulated exhibit.

MR. BICKS: No objection.

THE COURT: The Court shows Exhibit 38 admitted without objection.

Q Dr. Rigler -- oops, wrong way.

MR. FINCH: Can I go to the ELMO, Jon.

Q This is Johnson & Johnson Consumer Companies Worldwide Specification TM7024. We happened to

mark it as Plaintiffs' 38. Are you familiar with this document?

A Yes, sir.

Q Method 7024, is that what Johnson & Johnson called its electron microscope method for analyzing talc for asbestos?

A Yes.

Q Were there versions of this that go back sometime to the mid 1970s?

A I believe there are, yes. There are three versions, I believe.

Q This one says 1995 on it?

A Yes.

Q Am I correct that Johnson & Johnson never used the Blount heavy liquid separation method to test its talc for asbestos, generally speaking?

MR. BICKS: Objection on the foundation grounds, Your Honor.

Q Have you reviewed Johnson & Johnson's testing protocols --

THE COURT: So I'll sustain --

A -- for testing talc?

THE COURT: I'll sustain that. But you're asking --

Q Have you reviewed Johnson & Johnson's testing

protocols for testing talc for the presence of asbestos?
A Yes.
Q And this is one of those documents, and you've seen earlier versions of this?
A Yes.
Q In anywhere in this document, does it require or talk about using the Blount or any kind of heavy liquid density separation method?
A No.
Q Does the Johnson & Johnson --
MR. FINCH: Can I go back to the PowerPoint, Jon.
Q Does the Johnson & Johnson TM7024 method have a definition of what is an asbestos fiber?
A Yes, it did.
Q What is it?
A An elongated particle with parallel sides and an aspect ratio of three to one.
Q And the definition employed may vary with the needs of the client?
A Yes.
MR. FINCH: May I have Exhibit P-196.
Q We'll come back to Exhibit 38 later, but I want to ask you about another Johnson & Johnson document.

MR. FINCH: We would offer Plaintiffs' 196, Your Honor. I believe this is another stipulated exhibit.
MR. BICKS: What is it?
MR. FINCH: It's -- I just gave the witness my copy. Do you have any objection to it?
MR. BICKS: Can you just let me know what it is?
MR. FINCH: Yeah. I thought we gave you copies before break. Sorry.
MR. BICKS: No, that's all right. No objection.
THE COURT: The Court shows Plaintiffs' Exhibit 196 admitted without objection.
MR. FINCH: And can I have the ELMO, Jon.
BY MR. FINCH:
Q This is a document dated January 10, 1994, and it's a summary of raw material and finished product testing for baby powder, talc; is that right, Dr. Rigler?
A Yes, sir.
MR. FINCH: And Jon, can I go back to the PowerPoint.
Q In Exhibit 196, is there a definition of asbestos in this document?

A Yes.
Q What is Johnson & Johnson's definition of asbestos in this 1994 document?
A "Asbestos is defined to be the fibrous serpentine, chrysotile and the fibrous forms of amphibole group as represented by amosite, anthophyllite, crocidolite, tremolite and actinolite."
Typo in anthophyllite.
Q No one's perfect, right, not even Johnson & Johnson.
MR. FINCH: The next exhibit is Exhibit 386, which I believe is another stipulated exhibit. We would offer that.
THE COURT: Thank you.
MR. BICKS: Can I just quickly see?
MR. FINCH: Yeah.
MR. BICKS: No problem.
THE COURT: The Court shows Plaintiffs' Exhibit 386 admitted without objection.
Q Am I correct that Exhibit 386 lays out --
MR. FINCH: Can I have the PowerPoint, Jon.
Q -- Johnson & Johnson's three-step method to identify asbestos in talc?
A Yes.
Q This is a document entitled "Analysis of Powdered

Talc for Asbestiform Minerals by Transmission Electron Microscopy dated 1989."
A Yes.
Q And under -- on the first page, "Principle of Method, The combined techniques of transmission electron microscope, selected area diffraction and energy dispersive x-ray analysis (EDXRA) permit the detection of asbestiform minerals based on morphological characteristics, followed by definitive mineralogical identification of each fiber."
Is that the three-step process for identifying asbestos?
A Yes.
Q Does this document also have a definition of an asbestos fiber, at least according to Johnson & Johnson for its own business purposes?
A Yes, it does.
Q In Section 13.1, which is on page -- the Bates page is 7922, how does Johnson & Johnson define an asbestos fiber?
A An elongated particle with parallel sides and an aspect ratio greater than or equal to three to one.
Q How does that aspect ratio compare to the aspect ratio that MAS used?

A It's less conservative. You would find that more structures would fit into that ratio.
Q More structures would fit into the definition of asbestos?
A Yes, exactly. And the one for AHERA that MAS uses is more conservative.
Q With respect to the five-to-one aspect ratio, length to width, in addition to your own paper and the EPA regulations and the ISO procedures in the Johnson & Johnson documents, is there other peer-reviewed literature that discusses the five-to-one aspect ratio?
A Yes.
Q Are you familiar with a microscopist named Jim Millette?
A Yes, sir.
Q Dr. Millette is a published author. Did he recommend using the five-to-one aspect ratio?
A Yes.
Q Now, for this sample of 69042-02, the 1978 Johnson's baby powder sample that you got from Johnson & Johnson, did you do an analysis of how many asbestos structures per gram were detected in that bottle?
A Yes. That was done, yes.

MR. BICKS: Again, Your Honor, can we just be clear about who did what? He said he did it.
Q Did you do a mathematical calculation that took the data recorded by the analysts to determine how many asbestos fibers or bundles were in a nine-ounce bottle; did you do that last night?
A I have done a calculation like that, yes.
Q And the analysts at MAS recorded the asbestos structures following the government rules; is that right?
A Yes, sir.
Q So what are we looking at here?
A This is a calculation of the number of asbestos structures that were found in this product per gram of talc, 63,800 asbestos structures per gram.
Q And what does that mean in terms of asbestos fibers or bundles in a nine-ounce bottle of Johnson's baby powder?
A That means that if you take that number of structures per gram and you look at 9 ounces here, 28.35 grams per ounce, that would be 1,000,880 structures per ounce, totaling 16,278,570 asbestos structures in that particular bottle there based on its weight.
Q Now, you mentioned earlier --

MR. FINCH: Can I have another piece of blank paper.
Can I have the ELMO, Jon.
Q Okay. So when you're talking about asbestos structures, what is that, Dr. Rigler?
A That would be a cluster.
Q What would that be?
A Those would be -- they would be single fibers or you could say they were a bundle if they were closer together like that.
Q But if they're like this --
A That would be a bundle.
Q And then this would be a fiber?
A Yes.
Q So when you are calculating the fibers or bundles in a nine-ounce bottle, if some of the structures identified are bundles, say they're bundles instead of fibers, what would that mean in terms of total number of asbestos fibers in that gram or in that nine-ounce bottle?
A Well, as I explained before, if the analysts saw a cluster, it would only be counted as one. But if it truly has ten structures there, you've undercounted it by ten just to start with. So the number could be much higher. But those are the

rules that we have to go by.
MR. FINCH: Can I have the PowerPoint, Jon.
Q Now, is this another sample of Johnson's baby powder from the mid to late 1970s that the MAS lab tested that you reviewed?
A Yes.
Q What are we looking at here?
A This is an asbestos structure that was found in that talc product. This is what's called a ferro-anthophyllite. This is a high iron anthophyllite asbestos type.
Q And what is this?
A Same thing, another one of the structures. This is a good example of a bundle. You can see the very ends of it appear to be groups of fibers packed together. So that would be a bundle. The size is 16.4 microns by 2.6 microns.
Q And the 2.6 microns, that's from here to here?
A Yes, that's the width.
Q And there could be, it looks like there's many, many fibers --
A Yes.
Q -- that make up that bundle?
A Yes.
Q So am I correct that the -- each fiber that goes

into that bundle would obviously be much, much thinner than 2.6 microns?
A Yes, and the aspect ratio would be much, much higher.
Q What are we looking at here, Doctor?
A Another structure from that sample, another ferro-anthophyllite structure, another bundle.
Q Another asbestos bundle?
A Yes.
Q And this is 68233002-002.
A Yes.
Q What is this, Doctor?
A That's the one we just saw before, a little earlier. The designation 002, 002 is the second structure that was found in this -- in this analysis right here.
Q Do you have some pictures of that same bundle taken with a scanning electron microscope?
A Yes.
Q So what are we looking at here?
A So here we have the -- this is the exact same fiber, only looking at it with a scanning electron microscope. Remember we talked about the fact that each one of us can see each other because the light is reflecting off of us. Well, the principle of

the scanning electron microscope is somewhat same. The electrons are bouncing off, and the microscope sees them more in three dimensions. So you can see the actual bundling here and the fibers clearly, actually more than compared to the TEM picture.
Q And do we have progressively closer magnification of this asbestos bundle using scanning electron microscope?
A Yes. This is a higher magnification of the same thing, of the one end of the structure, the right side of it, yes. And then this is more looking down the length of it. And as you can see, lots of fibers in this bundle.
Q And if we get even closer, what do we see here and why is it significant?
A Yeah. You can see more of the actual fibers themselves that make up this bundle, what's called asbestiform ferro-anthophyllite. It's a very -- it's a beautiful image as far as microscopist is concerned. So, yeah, it's a very good picture of that.
Q Beauty is in the eye of the beholder.
A Yes, yeah.
Q And then what are we looking at here, this curved image?

A That's another one of the structures that is part of this, and it does show you that you have curvature, which again was one of the -- one of the things that was suggested for a more -- a larger or a bulk size piece of asbestos. They can be curved. The fibers can be curved and flexible and all of this. And sometimes you'll see them like this. They're part of the bundle, as you can see, but they'll be sort of lying at angles on top of the bundle or in the area of the bundle.
Q What does it mean for a bundle to have splayed ends?
A That, again, was the first picture that you saw, sort of like my fingers, that's what you considered splayed. They're just sort of spread out.
Q Is this -- which picture are you referring to?
A The very first one, yes. Up in -- yeah, on the right-hand side.
Q Oh, this?
A In that area, yes.
Q That's an example of splayed ends?
A Yeah. And you can see it real well in the TEM too.
Q That would be --
A Right, right. It shows you the splayed ends there. And the reason, again, the structure looks very

dark, because the electrons essentially get stopped in the structure, except for the ends where it's thin enough to go through. So that's part of the thing with TEM, is the specimen needs to be very small and thin so you can see it. But with the SEM, you can see everything. But, again, the SEM, you can't do the crystallinity measurement, you can't do that. So that's why the TEM is very important.
Q Now, with this particular sample, for everything that was identified by morphology as asbestos, was it also identified by chemistry and by the --
A Diffraction.
Q -- diffraction?
A Yes.
Q And this is an example from that same sample of the chemical signature of anthophyllite asbestos?
A Yes. This is the first fiber that was found in there, and it shows you the magnesium and silicone piece that are there and also the iron peak that's there. It's indicative of this type of asbestos.
Q And this is the --
A Diffraction pattern.
Q -- diffraction pattern?
A Yes, sir.

Q And for this particular 1978 museum sample, did you also calculate the average aspect ratio for the asbestos bundles or fibers found in that bottle of -- that sample of Johnson's baby powder?
A Yes. And it came out to 19.4.
Q Again, why is that significant?
A Again, above three to one, five to one, that's when you -- these are considered asbestiform structures. So that's important. They get down below, you know, three to one, you get to two to one and smaller than that, then they're just big chunks that, you know, they're not qualified as the asbestiform asbestos. They don't meet the regulatory definition.
Q Is this another sample of Johnson's baby powder you got from the company from 1984 time frame?
A Yes.
Q And what are we looking at here?
A This is another anthophyllite asbestos structure that was found in that talc product. It's measuring 9.89 by .46 microns. So it's a bundle.
Q Now, here we have a picture that looks -- from this sample looks a little bit different. What is this? What kind of tool was used to take it? What is important about it? That's a bunch of questions.

A Sure.
Q But why don't you first tell us what kind of tool was used to take it, and then we'll take it step by step.
A If you remember earlier today we saw the light microscope, the PLM, the polarizing light microscope. This is from that kind of microscope whereby the sample is prepared in a specific type of fluid that has a refractive index that's used for assessing asbestos structures. And when you put that kind of sample in that fluid and then you take polarizing filters and you cross them, you will get a certain amount of light through them, which will indicate a particular kind of asbestos type.
And in this particular case, it's what we call actinolite/tremolite. You see there's two words put together. There are two different types of asbestos, but in the ground, and in geology, they grade one into the other. So you can see them sometimes together in certain geological formations, and they're all what's called a solid solution series. So one may braid into the other one. So they can be named actinolite/tremolite.
Q What does the polarizing light microscope allow you

sometimes to do in analyzing a material to determine if there's asbestos in it?
A It can also help you determine if it's not there. You can also see in this image, there are other structures that are in here. Most likely they're platy talc, because it is a talc sample. So they will show up in a way that is unique for them too.
Q What are we looking at here?
A This is, again, in the same kind of microscope, polarizing light microscope. They used another kind of technique called dispersion staining with this, and this is where they use a special kind of lens that allows a certain wavelength of light through.
And then when you look at that asbestos in there, the one we looked at before, same one, kind of looks gray in the first one, in this one, it will look blue. And it depends on the angle that you rotate the asbestos in there, and it will be distinctive for the kind of asbestos that it is. It may go from blue to yellow, and that's part of the PLM analysis process for asbestos.
Q Now, with respect to this 1984 Johnson's baby powder sample, was there also -- was there a count sheet that recorded the information about the

dimensions of the asbestos fiber and whether it met both -- all three steps?
A Yes, there was, of course, yes.
Q Is that true for every structure that was identified in the samples?
A Yes, sir.
Q What was the average aspect ratio for this particular sample of Johnson's baby powder from 1984?
A It shows it to be 11.5. When you take the 21.5, the 5.4, and 7.5, you make -- take the average of those, and you get 11.5.
Q Now, you mentioned before that when you do an analysis of a fiber to determine if it's chemically the same as asbestos, to compare it to a known reference.
Do you recall that?
A Yes.
Q Remind us, what is the NIST and where did the known references come from?
A NIST is the National Institute for Standards and Testing in Washington, D.C. They are the ones who oversee the programs for the asbestos analysis laboratories, the NVLAP, National Voluntary Laboratory Program. And what they do is they have

their own standard sample of asbestos, and here you see a picture of it. This is what's called the 1867 standard. It's pure tremolite asbestos that's in that vial right there.

And so the laboratories are required to keep a sample of this, and then what they do is they go make a TEM grid of this sample. They put it in the electron microscope, and then they'll look at those asbestos fibers and structures and be sure that the lab is complying with this standard.

Q Does the reference standard have the chemistry, the EDXA?

A Yes.

Q Is this an example of the reference standard for tremolite?

A Yes. In this panel you see two micrographs that each show a tremolite fiber, asbestos fiber from that standard, from this standard. The top one measures, what is it, 20.2., and the bottom one measures 5.5. They have the correct aspect ratio.

And then on the right side, you can see the chemistry. And in this case, for tremolite, tremolite also has the magnesium and the silicone peak, you can see that. But it also has a calcium peak, which goes right around with the chemistry of

what tremolite is. It has a little bit of iron. It can vary depending on the geological deposits.

So there is the EDS. On the left, you've got the morphology of it, the shape and structure and the correct aspect ratio, and then on the right, you've got chemistry.

Q In addition to the chemistry signature for the reference standards, is there also an SAED, it would be a crystalline structure standard?

A Yes. So here again, the same two images, same two structures, and what the microscopist has done is set it up to do the diffraction. And you see in this case the diffraction pattern, which are the pattern lines and spots. And again, if you went and measured the inter-row spacing, you would get the dimensions for the amphibole tremolite. If you rotated this like we had talked about before for anthophyllite, that pattern will not change. It may adjust a little bit, but it would still look like the same kind of pattern.

Q And did the analysts in your laboratory when you were at MAS compare each chemical signature and each crystalline structure to a known reference when they were doing the analysis in real time with the talc?

A There -- yes and no for that answer. They can rely on the chemistry and the diffraction, of course, and the morphology to verify that. The standards are checked periodically, and when the analysts are -- when the auditors come, they have to demonstrate their proficiency in being able to obtain these patterns and do the chemistry. So they're tested on that by the auditors.

Q Are you familiar -- you've talked about morphology. When you described for the jury bundles and fibers, was that just your definition, or is that out there in the published literature and in the regulations?

A That's in the published literature and the regulations. That's not our -- we have to follow those definitions. That's part of what we have to do, or the laboratory has to do.

Q Are you familiar with a publication by the Bureau of Mines from 1977, lead author Campbell, entitled "Selected Silicate Minerals and Their Asbestiform Varieties: Mineralogical Definitions for Identification and Characterization"?

A Yes.

Q Do you regard that as generally reliable and authoritative on the question of whether something is asbestos or not asbestos?

A Yes, sir.

Q And does this publication have pictures that allow you to describe or show you asbestiform versus things that aren't asbestiform?

A Yes, it does. And you can see from the different types of structures that are here, they are described as asbestiform. And the structures that you see here, remember we had talked about different gradations in a geological deposit, you can have combinations of these and mixtures of these. So defined pure deposits is kind of a misnomer to some degree because they're all somewhat blended together.

Q And in the same publication, do they have a map of the regions in the United States reported by the Environmental Protection Agency to contain asbestiform minerals in the bedrocks?

A Yes.

Q Is that that map?

A Yes. That shows regions in the United States where asbestiform minerals occur, across the hatching patterns.

Q Does an asbestiform mineral generally mean asbestos?

A Yes.

Q Is the state of Vermont on that map?
A Yes.
Q Dr. Blount, the Rutgers scientist that the jury's heard a little bit about in opening -- they've seen a couple of documents -- did she publish in her 1991 paper a discussion of the morphology of asbestos structures?
A Yes.
Q And what did Dr. Blount say about the morphology discussed with these structures?
A In her paper, she states that if it's in a bundle, that it appears to be in a bundle form, it's definitely asbestiform.
Q Is the exact quote, "With true asbestiform amphiboles, one generally sees some particles showing bundles of fibrils which removes any doubt about the nature of the amphibole"?
A Yes.
Q Does ISO 22262-1, one of the ISOs that you rely on, have a description or a discussion of the things -- what to look for to determine if fibers are, in fact, asbestiform?
A Yes.
Q What does ISO 22262-1 say about that?
A Well, as you can see in the outline here, there are

five characteristics, parallel fibers occurring in bundles; fiber bundles displayed -- displaying splayed ends, which we've already talked about; fibers also in the form of thin needles; matted masses of individual fibers, we talked about those. You know, cross your hands. You know what those are. And also fibers that show curvature, and we saw an example of that too.
Q This is an asbestos fiber bundle found in Johnson's baby powder?
A Yes.
Q This is the image we looked at before showing the splayed ends?
A Yes.
Q And the curvature?
A Yes.
MR. FINCH: May I approach briefly, Your Honor.
THE COURT: Yes.
(A bench conference was held outside the hearing of the jury.)
MR. FINCH: I don't think I'm going to finish with him today, but I would like to take stretch break or something. The jury's getting a little bit --

THE COURT: Yes, I was just thinking about doing that.
MR. FINCH: Would it be okay to do that now?
THE COURT: Yes.
(Resumption of live trial proceedings.)
THE COURT: We're going to go off the record for a couple minutes to give the jury a chance to stand up, have all of this -- just take a break for a moment. As I said yesterday, we were going to end a little bit early today, and this'll give us a chance to keep going without losing too much time.
(A brief recess was taken.)
THE COURT: Mr. Finch, you may begin.
MR. FINCH: May it please the Court.
BY MR. FINCH:
Q Last lap for today.
Dr. Rigler, let's talk about the total amount of testing that your laboratory did of Johnson's baby powder. And does this chart lay out the sort of -- the two rounds of Johnson & Johnson testing and also some testing you did of a cosmetic talc product called Cashmere Bouquet?
MR. BICKS: Your Honor, again, the question was that you did. And if we could just be clear about what he did versus what others did.

THE COURT: I'll sustain the objection.
Q Could you explain for us the testing that was done at MAS while you were the chief scientist there in 2017 through 2019 of Johnson's baby powder or Cashmere Bouquet?
A Yes. This is representative of the samples that were tested of Johnson's baby powder samples and also Colgate-Palmolive Cashmere Bouquet samples.
Q Okay. So walk us through this chart here, Dr. Rigler.
A Well, what we see here are three groups of testing that the laboratory did. The label Round 1 is testing that was done in 2017 through 2018. The ore, the source of the ore talc material was from Italy, Vermont, and also from China. So the containers that were tested at the laboratory, the source of the talc was from those locations, and there were 36 of them.
The prep method that was used was the heavy liquid density prep method, as you see there, and also the TEM method was used.
Then in Round 2 --
Q And the source of the containers tested, it says, "Client samples, eBay/collector samples." What does that mean?

A Yes. These were samples that were brought into the lab, and the source materials came from collectors, if you will. They're all kinds of collectors in the world, all kinds of things, as you well know. In fact, in the Kent cigarette case, I was amazed to find at the beginning there were all kinds of people that collect unopened cigarette packs. They're out there.

So, of course, that was our objective, where to get unopened cigarette packs for the testing we did, and we were able to do that. So those are some of the collector sources.

Q What's Round 2?

A Round 2 is another group of samples. These included the archived or what are called historical samples from Johnson & Johnson. Again, they were sourced from Italian mines, Vermont mines, and also from mines in China. 57 of those were done. They were prepped in the same fashion, and PLM microscopy was also done in addition to the TEM that you see here.

And in the last group that you see labeled Colgate-Palmolive, these were talc products named Cashmere Bouquet. You may remember some of those products if you have folks in your family that used

them or folks that you know that may have used them. Their source material came from -- also from Italian mines, but other mines such as in North Carolina and Montana. So talc was also sourced from those areas.

They came from the archive, the Colgate archives and also from collectors too. And we analyzed 15 of those. They again were prepared in the exact same way and analyzed in the exact same way.

Q And it says, "15 sealed (Italian)," is that of the Italian, North Carolina, and Montana, there were 15 that came from Italy?

A Yes, they were factory sealed. They actually had the wrapper sealed onto them.

Q I don't think there's any dispute about this, but --

MR. FINCH: May I have the ELMO, Jon.

Q -- is this consistent with your understanding that the places that Johnson & Johnson got its talc sources for were -- up to about 1967 were from Italy, from 1967 to 2003 were Vermont, and then from 2004ish to now is China?

A Yes, that's correct. I think there was a year in the '60s where some was also sourced I think

from -- possibly from Italy too for a short period of time. But yeah, generally this is correct.

Q Now, for the first round --

MR. FINCH: Can I go back to the PowerPoint, Jon.

Q The first round of the Johnson & Johnson containers tested, these obviously didn't come directly from Johnson & Johnson; right?

A Correct.

Q And -- well, we're missing a slide.

MR. FINCH: Can I have the ELMO, Jon.

Q So of the 36 containers, does this explain where that first batch came from?

A Yes.

Q Now, what did -- while you were at MAS, did you have chain of control -- chain of custody procedures for any kind of sample you were asked to test from the time it got to the lab until it was tested by the analysts?

A Yes, we do.

Q While you were at MAS, did MAS do asbestos product testing, not only for lawyers for people who are plaintiffs in asbestos litigation, but did you also do testing for companies that made asbestos-containing products?

A Yes. The laboratory did testing for companies that made the products. It also did testing for homeowners that wanted to know if there was asbestos in the floor tile that they were about to tear out or an insulation product. So there were all kinds of clients that had products that they wanted to have tested to see if they had asbestos.

Q And did the chain of custody procedures vary depending on who the lab got the products from or got the samples from?

A No.

MR. FINCH: Can I have the PowerPoint again, Jon.

MR. BICKS: Can I have a copy when you -- of that document you just used, if you have one?

MR. FINCH: This one? Sure.

MR. BICKS: Yeah. Thank you.

Q Was one -- could you just explain just generally, briefly, what did you and the other people at MAS do to verify the authenticity of the first batch of Johnson's baby powder you were testing?

A The samples were compared to historical documentation, photographs, that kind of thing, to see if they matched up, were they the same kind of product containers, did they have the same kind of

markings, did the weights appear to be correct, that kind of thing. So, you know, some of these went back to the '40s and '50s.

Q What else did you do to determine whether or not the containers had been tampered with or changed in some way before they were tested?

A We did some specialized testing for looking at containers. For instance, you see in this image where there is a seal that's a plastic seal around. It's a little difficult to see, but where the number 2755RB is, there's a plastic seal that's there that has to be broken prior to opening that container.

So the -- what we did was we broke -- we photographed it before, and then we broke the seal later on to see how it would be disturbed, what it would look like. And then you could inspect any kind of container like this later on to see if there had been any kind of tampering with it. So that was some of the testing that we did.

But these were designed to be tamper proof. So if you had a container that was, you know, sealed like this, you know that it never had been opened.

Q What is a particle size distribution for a talc

product and how did you use that to analyze the contents of what it is you were testing?

A The products themselves have -- they have a character -- a particular range of size, if you will. The manufacturer makes them according to a certain kind of specification, but they're called like a mesh size number it. And what it is is those flat plate talc particles that we talked about before, they want to get that product as consistent as they possibly can.

So they have a range of particle size from 75 microns down -- it can be smaller, but what they're trying to shoot for, a particle size that sort of stays out of the respiratory range. So what we did was we did a bunch of particle analysis on a number of the products and matched them up, and they matched up with what would have been that kind of particle range, that size range. They were consistent for their product.

Q What is this graphic showing us here? What is this showing?

A That's actually showing a graph of -- on the top left, you actually see in the scanning electron microscope, you see talc particles. They are from the Johnson & Johnson product. And you can see

that they look -- they look flat and they're platy. They are flat. But they're irregular in size. And what the analyst did was analyze these using a specific algorithm to fit the shape and then measure exactly what the shape parameter is. And then once they figure out what the shape parameter size was, they went ahead and graphed each one of these types and categories onto the graph that you see here.

So you've got the size range all the way down to, I guess it's -- it looks like about 1 micron. So the 1 micron is the blue bar at the very bottom.

Q Did you compare this to a control sample of Johnson's baby powder to see if it was consistent?

A Yes.

MR. BICKS: And again, Your Honor, when he says did you do it?

Q Did the analysts at your laboratory that you were the chief scientist of --

A Yes.

Q -- compare this to a control sample?

A Yes, they did.

Q Round 2, did you and Dr. Longo do a series of reports related to the 56 containers you got directly from Johnson & Johnson of Johnson's baby

powder?

A Yes.

Q Have you summarized for us the results of testing of Johnson & Johnson cosmetic talc products?

A Yes.

Q This is the Round 1 results. What percentage of the containers, either bottles or tins, had detectable levels of asbestos?

A Of the 36, 20 of them did, which is about 55 percent.

Q What were the types of asbestos that were found?

A There were specifically three major types. Well, the tremolite, actinolite and anthophyllite. Now, you see another term in there, it says richterite. That's another form, if you will, of -- remember I talked about the solvent solution series. This form has some sodium with it. So it fit -- it fits in the same category, in the same group.

Then there, of course, is the fiber size range. The numbers that we found per gram range from 7,000 up to 15 million fibers per gram in the product. So there's an average fiber count there for that -- for that range, which is 1,087,000. But then if you take out the highest number, because that can also, you know, maybe bias it high

and you just look at that average, then it's about 360,199. And the average aspect ratio was 12 to 1. So everything fit, as it should, for that type of asbestos.

Q What about the Round 2 results, not including the Asian samples?

A Here again, in the 50 -- that's with that -- there were 57 in that group, and seven of them were from a Korean mine. Of those 50, 36 of them were positive for asbestos, which is 72 percent.

Q The 50, not including the seven that came from Korea, was the 50 that came from either Italy or Vermont or China?

A Correct.

Q And what were the types of asbestos identified in the Round 2, the containers you got directly from Johnson & Johnson?

A As you can see, tremolite and anthophyllite were the major asbestos types, anywhere from 7,240 per gram up to 268,000. Average fiber count there, 37,000 per gram, and the aspect ratio was about 13 to 3. And you all are experts in aspect ratios.

Q Now, there's also something, recent source talc with detectable asbestos from railroad car samples. The jury hasn't heard about that yet. What were

the railroad car samples and what was done to them and what was the results?

A These, again, are historical samples that were actually taken from railroad car loads of talc that were going to be processed to go into the Johnson's baby powder products. And MAS laboratory tested 15 of these. So there again, historical samples, their product that Johnson & Johnson was going to use to make their product.

Q What were the types of asbestos found in the railroad car samples of talc?

A Here again, tremolite and anthophyllite, 4,600 to 59,000 fibers per gram, averaged 19,462, and then average aspect ratio of 17.7 to 1.

Q And combining across both rounds of testing, what percentage of the containers had detectable asbestos?

A 65 percent of them did. If you look at all the containers, and then if you look at the railroad car or the source containers, about 53 percent of them had -- were positive for asbestos.

Q And again, this has the fibers per gram range from low to high and the average aspect ratio?

A Yes, 4,600 to 15,000,100 fibers per gram, tremolite, richterite, actinolite, anthophyllite,

and average aspect ratio, if you put them all together, 12.7 to 1.

Q Can you give the jury an example of something that would weigh a gram? How much is a gram of something?

A You could think maybe of a sugar cube. Well, maybe something a bit smaller than that. Yeah, something like that.

Q So not a lot of material if I have anywhere from 4,000 to 15 million asbestos fibers per gram?

A Yeah, it wouldn't be much.

Q Did you also do an analysis of the Johnson & Johnson testing where you, instead of dividing it by Batch 1 and Batch 2, you divided it by the years for the years it was Italian sourced talc, Vermont sourced talc, and Chinese talc?

A Yes. We divide them up into the 1960s, the '70s, the '80s, the '90s, and the 2000s.

MR. BICKS: Again, Your Honor, it's the "you" and then the "we." And I don't think solving it is, you while you were the chief science officer, because we know what his role was at the last hearing.

Q Dr. Rigler --

THE COURT: I'll sustain the objection.

Q -- in the report that you co-authored with Dr. Longo, did you do an analysis of what percentage of the talc tested positive for asbestos, you personally by you?

A Yes.

Q Did you do -- did you review every single photomicrograph taken by the analysts, every count sheet done by the analysts for all the reports you've talked about here?

A That was part of my job, yes.

Q Did you do quality control for all of the reports you've talked about here?

A Yes.

Q Did you from time to time sit down beside the analysts while they were looking at a talc particle or asbestos fiber found in a talc particle to discuss with them what they were seeing?

A Many times, yes.

Q Did you -- during the time that this testing was going on, how much -- what percentage of the time were you in the laboratory?

A I was in the laboratory 99 percent of the time.

Q During the time that this testing was going on at MAS, did you personally have discussions with both the analysts and Dr. Longo about the analysis that

was being done and what the results were?
A Yes.
Q And did you author the reports, along with Dr. Longo, of everything you've testified about here today?
A I co-authored them, yes.
Q In the same way that you co-authored the scientific paper that was published in the peer-reviewed literature in 1995?
A Yes, sir.
Q Now, breaking it down by years or sources, what percentage of the Italian sourced talc in Johnson's baby powder was positive for asbestos?
A Well, up to 1967, the Italian type is 65 percent positive.
Q What about for the Vermont sourced talc in the 1967 to 2003 time frame?
A 82 percent were positive.
Q And what about the Chinese talc?
A 39 percent.
Q Would it surprise you if any particular bottle tested was a nondetect or no asbestos detected?
A That wouldn't surprise me.
Q Does the fact that a test registers no asbestos detected or a nondetect mean that you could be a

hundred percent certain there's not asbestos there?
A You can't be a hundred percent certain because of your detection limits.
Q So even if there was no asbestos detected by MAS, that still doesn't mean there wasn't asbestos there but at a level that's still there but below the detection limit?
A Yes, that's possible, yes.
Q And the Cashmere Bouquet product, is it your understanding that the source of Cashmere Bouquet talc in the early '60s was the same mine that Johnson & Johnson used?
MR. BICKS: Your Honor, I don't think, given where we are, the relevance of Cashmere Bouquet, I'm trying to understand, and I'm wondering if the jury's going to be confused with that information.
MR. FINCH: Okay. I'll pass the Cashmere Bouquet.
Q Let's turn now to --
THE COURT: So you've withdrawn the question?
MR. FINCH: I've withdrawn the question.
BY MR. FINCH:
Q Historical testing of Johnson's baby powder. There was a lot of discussion by Mr. Bicks in opening statement about lots and lots and lots of testing

done of Johnson's baby powder, never, ever, ever any asbestos ever found in baby powder, and that there was -- the talc has always, always, always been asbestos free. I want you to assume that was stated in opening.
MR. BICKS: Your Honor, I'd just object. It's argumentative and improper use of an opening.
MR. FINCH: All right.
MR. BICKS: Can he just ask a question?
THE COURT: I'll sustain that.
BY MR. FINCH:
Q Have you reviewed Johnson & Johnson's historical testing of its baby powder and its talc, including testing done by its outside laboratories, such as McCrone?
A Yes.
Q And do you have an opinion as to why there are so many nondetects or no asbestos detected in the Johnson & Johnson and McCrone's tests?
A They -- there are a number of reasons. It's kind of obvious.
Q Well, then could you lay them out for us?
A Well, they didn't -- they didn't do any heavy liquid separation work.
Q Why is that important?

A Again, to detect these low levels and to separate the talc so that you can count the asbestos. It's very important. So that's one reason.
Q What's another reason why there were so many nonasbestos detected or nondetects?
A Their detection limits were high. And that may not seem like it means something, but understand that in their TM7024, Johnson & Johnson's own protocol for testing, if you didn't find at least 5 asbestos fibers in your analysis, then it didn't exist. So what that means is that you see the asbestos fibers that have been counted by the laboratory, and when you do the calculation to how many per gram, that kind of thing, five is very significant.
Because of the way that they did this, you would essentially -- if you just had four fibers, just four, and you said, well, you know, how many is that really? That can come to tens of thousands, if not millions, of fibers in the product that they would say didn't exist. They didn't exist. Unless we found five, they didn't actually exist. And that's actually part of their testing protocol. So that's one reason why they didn't find it, and that's what we call very high detection limits.

So MAS's detection limits, because of the heavy liquid separation is in the range, you've seen some of the numbers here, 7,000 structures. If you find just a few of them, 7,000. And so they would have to find, in some cases, tens of millions of them before they'd say yes, there's something in our product.

Q There's -- right at the beginning of your direct, it was a couple hours ago now, you talked about x-ray diffraction. I guess it's been longer than a couple of hours.

A Yes.

Q But how, if at all, did the use of x-ray diffraction play into all these nondetects?

A The -- you have to understand that for talc products, because talc is also being used in pharmaceutical applications and cosmetics, that kind of thing, that there was a specification for testing them. And there was a group called the Cosmetic -- CFTA, I believe the cosmetic fragrance association, and what they did was they used a specific testing method which is from the U.S. Pharmacopeia, which is the outfit that sets standards for drug testing. U.S.P., you've seen that if you take a bottle of aspirin or whatever,

it has U.S.P. on there.

What that means is it tests according to their specification. It tests according to the drug manufacturer's specification, U.S.P. So there's a talc specification for that. And one of the testing parameters was called XRD, x-ray diffraction. Remember that square machine in the one image that we showed earlier on. So x-ray diffraction.

The problem with x-ray diffraction is it's very limited. You can maybe see down to a tenth of a percent of asbestos, which is not very much. So if it's less than a tenth of a percent, that's a lot by TEM, and the x-ray diffraction technique would miss that. But that's part of their specification. X-ray diffraction is a part of their specification. So that's why they could miss it.

Q Okay. Let's go through a few documents from Johnson & Johnson's files or the CTFA that illustrate this.

MR. FINCH: Can I have Exhibit 619? May I approach, Your Honor.

THE COURT: Yes. And has this been stipulated to?

MR. FINCH: I believe it's been --

MR. BICKS: No. We haven't.

MR. FINCH: This is a document on Johnson & Johnson letterhead dated February 28, 1975.

MR. BICKS: Right. But he's not a witness with foundation to use this unless --

MR. FINCH: I can lay a foundation.

BY MR. FINCH:

Q Doctor --

MR. FINCH: First of all, do you have any objection to the admissibility of the document?

MR. BICKS: I just don't think he's got a foundation to talk about the document, so it couldn't be admitted here.

MR. FINCH: May I lay a foundation, Your Honor?

THE COURT: Yes.

BY MR. FINCH:

Q Dr. Rigler, have you seen Plaintiffs' Exhibit 619 before?

A I'd have to see it.

Q Yeah.

A Yes.

Q It's a document on Johnson & Johnson letterhead dated February 28, 1975?

A Yes.

Q It's a discussion of the review of CTFA methodology for the detection of asbestos in talc as well as comments on the TPF methodology?

A Yes, sir.

Q Is it a document that you have relied on in at least in part for some of your opinions with respect to this case?

A Well, in reference to x-ray diffraction as a technique.

Q Also, is it a document that on the last page -- without showing it to the jury, could you go to the last page. Does it discuss a concentration technique in paragraph 4?

A Yes, it does.

Q And you're familiar with that part of the document?

A Yes, sir.

Q Does that inform your opinions, at least in part, in this case?

A Yes, sir.

MR. FINCH: Your Honor, I would offer at this point Exhibit 619. I don't believe there's any dispute as to its authenticity or that it's a Johnson & Johnson document. And I believe this witness has established the foundation to testify

about it.
THE COURT: Any objection?
MR. BICKS: No objection.
THE COURT: All right. The Court shows Exhibit 619 admitted without objection.
MR. FINCH: Okay. Can I have the ELMO, Jon.
Q All right. So this is Plaintiffs' 619. And am I right, this is sort of the time frame when the CTFA is coming up with the x-ray diffraction as a methodology to test talc?
A Yes.
Q This is from Robert Rolle at Johnson & Johnson, on Johnson & Johnson letterhead, to Ian Sloan at Johnson & Johnson in Great Britain; right?
A Yes.
Q And the letter was written by somebody in New Brunswick, New Jersey? You see that? On the ELMO?
A Yes, sir.
Q Oh, sorry, yes.
MR. BICKS: Did you ever --
MR. FINCH: I thought you had a copy?
MR. BICKS: No, I do. But the foundation with him to narrate through the documents, there's no foundation for that.
MR. FINCH: Your Honor, I thought I laid a

foundation, and you had overruled the objection.
THE COURT: Well, he didn't -- the Court admitted it without objection.
MR. BICKS: Right.
THE COURT: And you're objecting that there's no foundation for the witness to discuss the document?
MR. BICKS: To start saying who wrote the document, where are they from. He won't know any of that.
THE COURT: The witness -- I'll overrule that. The witness testified he had viewed the document and was familiar with it.
BY MR. FINCH:
Q All right. Turning now to paragraph 4 on the last page of the document. First of all, you said that you relied on this in part because there was a description of the CTFA, what eventually became the CTFA J4-1 technique?
A Yes.
Q And that's the x-ray diffraction?
A Yes, sir.
Q And that only allows, at least at the time, a detection down to .2 percent or something?
A Yeah, .11 percent.

Q And then the last page of the document, "We are presently practicing evaluating the Pooley flotation method so we are not in a position to recommend it at this time. Besides, we feel that a detectability limit with our two present methods of 0.5 percent to 1 percent is reasonable and provides us a safety margin of 48,300 (see report August 15, 1974). Our major problem with the Pooley procedure is that since one can continually recycle tailings (concentrate) given enough time, it is possible to arrive at levels of detectability of asbestos in talc in the parts per million range - at what stage of recycling do you stop? We really want to exclude concentration techniques in any proposed analytical procedure and are really looking at the method very quietly so that we will be informed and up-to-date with this area of technology. We want to avoid promotion of this approach."
Did I read that right?
A Yes.
Q Is that a description of a potential heavy liquid separation method, in your opinion as a professional material scientist?
A Yes. It's a concentration method, yes.
Q Based on the TEM testing specifications, which is

in Plaintiffs' Exhibit 38, was there any -- ever any requirement for Johnson & Johnson or its -- anyone who was following 7024 to do a heavy liquid concentration preparation first?
A No, they didn't do that.
MR. FINCH: May I have Plaintiffs' Exhibit 185.
May I approach?
THE COURT: Yes.
BY MR. FINCH:
Q Dr. Rigler, are you familiar with Plaintiffs' Exhibit 185?
A Yes.
Q This is the final CTFA method J4-1?
A Yes.
Q Asbestiform amphibole materials in cosmetic talc?
A Yes.
Q Is that the x-ray diffraction method you were referring to a few minutes ago?
A Early on, yes.
Q This is a document that came from the files of Johnson & Johnson?
A Yes.
MR. FINCH: Your Honor, we'd offer Plaintiffs' Exhibit 185.

MR. BICKS: No objection.
THE COURT: The Court shows Plaintiffs' Exhibit 185 admitted without objection.
BY MR. FINCH:
Q This is the method that the talc industry, the cosmetic talc industry chose to follow to look for asbestos in talc; is that correct?
A To my knowledge, it is, yes.
Q This chart, or I guess an engineer would call that a flowchart maybe.
A Yes.
Q Or maybe they wouldn't, but what is this chart on the bottom? What is it showing us?
A It shows that the process for analyzing talc, starting with x-ray diffraction, if none is detected by x-ray diffraction, stop. We won't go any further. Just stop. If you do find something, then you move on to optical microscopy and dispersion staining.
Q And at this stage of x-ray diffraction, if there is amphibole present below .5 percent, do you just -- what happens?
A Stop. You don't do anything.
Q So if -- and you don't even test to see whether it's asbestos amphibole or not asbestos amphibole?

A You just stop.
Q So if you have a lot of talc -- and by "lot," I don't mean a big amount, but say a railroad car full of talc, and there was actually asbestos there at a level of .01 percent concentration, and you tested it a million times, using x-ray diffraction, would you ever detect the asbestos that was there?
A No.
Q Now, you mentioned the high cutoff values in terms of how many asbestos structures have to be present before you would call something as testing positive for asbestos. Do you remember telling the jury about that?
A For the Johnson & Johnson.
Q And this is Exhibit 38 already.
MR. BICKS: And Your Honor, just so -- when we keep talking about the Johnson & Johnson method, are we including TEM as well or are we just talking about CTFA 41? Because this is kind of misleading.
MR. FINCH: This is -- I'm talking about --
A 7024.
MR. FINCH: -- 7024 is Johnson & Johnson --
Q What is the title of this document, Dr. Rigler?
A "Analysis of Powder Talc for Asbestiform Minerals by Transmission Electron Microscopy."

Q So are we talking about electron microscopes?
A Yes.
Q And this is Johnson & Johnson's --
THE COURT: Is there an objection?
MR. BICKS: No, Your Honor.
THE COURT: All right. Thank you.
Q This is Johnson & Johnson's method, whenever it used, or McCrone used, an electron microscope, this is the method they followed from whenever this began in the '70s, all the way up to whatever the most recent document we have?
A Yeah, this is the method with, if you didn't count at least five structures, that it wasn't there.
Q So there's a few things about this document. The jury's already seen, and they'll have this one back. The jury's already seen Johnson & Johnson's definition of a fiber; elongated particle with parallel sides and an aspect ratio bigger -- longer than three to one; right?
A Yes.
Q Now, in Section 6.0, "Limit of Quantifiable Detection."
A Yes.
Q "The detection of five or more asbestiform minerals of one variety in an analysis constitutes a

quantifiable level of detection. When no asbestiform minerals are detected, a representative fiber size is used to calculate the detection limit."
What -- as a scientist, what is your understanding of a limit of quantifiable detection when you have a five fibers of one variety limit?
A Well, you've limited yourself to, say, if we don't find five fibers of one variety, that, you know, it's not a quantifiable level.
Q Have you done a calculation as to the total asbestos fiber concentration per gram of Johnson's baby powder that would be below the limit of quantifiable detection per this standard?
A Yes.
MR. BICKS: Can I just have the foundation as to when that was done?
Q When did you do these calculations?
A These calculations were done, I believe, while I was still at MAS.
Q So --
A It's been quite a while.
Q -- at least prior to May of last year?
A Yeah, somewhere in that amount of time.
MR. BICKS: Can I just have a representation

that those were disclosed in his expert report? Because I didn't see them in the case.

MR. FINCH: They were in the -- I believe they were disclosed, Your Honor. I don't know if it was in the expert report, but in all of the backup materials that were disclosed, these calculations were disclosed.

A Yeah, there's a calculation in there. It's calculated for four fibers of one type of asbestos, four fibers of two types of asbestos, four fibers of three types of asbestos, and the calculations are done like that.

Q Can you replicate those calculations now? If you had four fibers of tremolite, would that count as -- in a gram of -- four fibers in a gram, would that count as a detectable level of asbestos under this method?

A No.

Q And what is -- if there were four fibers in the grid, what would that mean in terms of tremolite fibers per gram of talc?

A Well, I don't remember the exact numbers, but it would be -- it would be tens of thousands of fibers, maybe hundreds of thousands. Possibly millions. So again, I don't remember right off the

top of my head, but a calculation was done.

This particular method that they use does it on a weight percentage, and I don't want to complicate it or confuse you guys, but there -- this calculation is done in a different way. What the health authorities believe, the calculations should be done on single fiber, on fibers, on bundles, on single ones.

This is done by taking a single fiber, figuring out what the mass of that is, and then basing your counts on that. And that's -- that can be very misleading as to the number of fibers or structures that are actually in it. But this is the way that Johnson & Johnson has chosen to do it, to do it by a weight percentage.

So once again, it's a representation, though you can do it this way, but it doesn't give you the impact or the idea of how many actual fibers or structures are in the product. It'll just give you a weight percentage. So those are some of the major differences there.

MR. FINCH: Your Honor, I note the time. We're getting close to the end, but we're certainly not going to be done in time for our stopping time. So I'm getting ready to move to a different area.

And we will be wrapping up in the next hour or so, but we made a commitment to one of our jurors, and I would request respectfully that we cease for the day.

THE COURT: Yes. Thank you. Then we'll conclude for the day. And as always, we'll conclude with our admonition.

We are now going to take a break for the day and for the weekend. Please be back at 9 a.m. Monday morning.

Before we recess, I have told you not to talk about the case and to keep an open mind concerning it. You are not to discuss the evidence or the case with anyone else, and you are not to permit anyone else to discuss the case with you or to talk about it in your presence on any subject or matter connected with the trial.

It is your duty to keep an open mind about the case until it is submitted to you for final deliberation. If anyone tries to discuss the case, get their name and report it to the Court. Furthermore, during a recess, you are not to talk to any of the attorneys, staff, or witnesses about anything, not even to pass the time of day.

In addition, jurors are not allowed to read

anything concerning any of the parties or products in the case. This includes simply reading the paper, listening to the radio, or internet articles that seem to pop up everywhere. Also, you may not Google anything or anyone concerning the parties or products involved in this case. You may be and must appear to be impartial at all times during the trial.

Lastly, there is no -- the Indiana Code of Judicial Conduct prohibits broadcasting, televising, recording, or taking photographs in the courtroom or adjacent areas.

So with these admonitions, you are released for the weekend, and we look forward to seeing you Monday morning at 9 a.m.

(Whereupon, the jury exited the courtroom.)

THE COURT: While we're still on the record, just a few housekeeping matters, and then if there are any matters that the parties would like to discuss with the Court, of course we can do so.

This morning the Court permitted a recross, and the Court's not going to do that anymore. So just going forward, so everybody is clear about that, if one party exceeds the scope of cross on redirect, then you just have to object in a timely

fashion.
And just so that I'm clear, the parties intend to submit briefing on whether the balance of the item that was partially admitted into court today can be admitted in full. So I'll receive that sometime over the weekend?
MR. BICKS: Yes.
THE COURT: Now, lastly, as to page and line designations, will I be receiving those, and if so, when?
MS. FARINAS: Your Honor, what is your -- just to back up to the last one, I wrote down when we were talking about that earlier that you gave defendants till noon on Sunday to file their briefing and us till noon on Monday to file the response on the FDA -- the recall issue, the document.
THE COURT: Yes. Because Monday is all Dr. Hopkins, is that correct?
MS. FARINAS: I just wanted to be clear that our response was not also due, like, Sunday night at midnight or something like that.
And then with respect to the page and lines on Melody's deposition, I was talking earlier with Todd Barnes from our office who has been doing it,

and I think perhaps the best option is to have -- maybe we can come to an agreement on a highlighted deposition that has the different portions that are at issue, that then for each side to submit written objections to the page and lines that are offered by another party with their objection written out and a column for you to rule on those objections. I think that's going to be the best way to actually get some clarification and some rulings. That would be our suggestion, Your Honor.
THE COURT: And you intend to play her video on Wednesday?
MS. FARINAS: Yes, Your Honor.
THE COURT: Personally I would like to have those over the weekend so I can do it on Sunday, because Monday and Tuesday I would expect to be in court.
MS. FARINAS: And we can make that happen.
THE COURT: So if you could submit them Sunday at noon.
MS. FARINAS: Sunday at noon as well for those?
THE COURT: Sunday by noon.
MR. FINCH: And with respect to Hopkins, I am advised that there's only a handful of potential

objections. I'm going to be in communication with counsel for Johnson & Johnson over the weekend, either Saturday or Sunday, see if we can work that out. If we can't, I don't anticipate we'd need more than, what, 10, 15 minutes of argument time.
MS. MALIK: Yes, Your Honor.
THE COURT: Yeah, I took a look at them, and there aren't very many.
MS. FARINAS: And the only other deposition, I think, that's coming up as well is a deposition of Alice Blount that we would like to enter into evidence as well. I think there could be potentially a few more arguments with respect to that. We can try to reach out and discuss that as well this weekend and get the positions.
THE COURT: I don't have her on my list. When did you want to play that deposition?
MS. FARINAS: It would be after Hopkins at some point.
MR. FINCH: It would be after Hopkins is over, after Rigler is over.
THE COURT: So after --
MR. GREENE: Later on in the week.
MS. MALIK: It's not very long.
MR. FINCH: No, it's not.

MS. FARINAS: It's very small.
MR. GREENE: Some of those objections, Your Honor, to what the plaintiffs want to play are essentially the same objection throughout. So once the Court makes a conclusion, we'll know most of what's in or out.
THE COURT: So do that Monday?
MS. FARINAS: We can find a hole on Monday.
THE COURT: If you want to play it on Tuesday, we can do that Monday sometime.
MS. FARINAS: We can talk over the weekend and find a hole on Monday to talk about anything that we need to.
THE COURT: Anything else?
MR. BICKS: I would just notify the Court and opposing counsel that with Kerr departing and each party reserving the right to call any expert retained by another defendant, that we're inclined to likely call Dr. Roggli and probably likely not call Dr. Chireac. So that's --
MR. FINCH: Your Honor, I took Roggli's -- Dr. Roggli's deposition and he specifically said he was only working for Kerr in this case, he was not working for Johnson & Johnson. I don't think it is fair or proper for them to now call him as their

expert. If they were to have designated him as their expert, I would have done a somewhat different deposition of Dr. Roggli.

I don't think -- I mean, yes, you can have a right to -- reserve the right to call another side's expert, but that's if the expert is properly disclosed. And he was not -- in his opinions, he did not say -- when I asked him, he said he was giving opinions about Kerr dental tape for this case and he wasn't working for Johnson & Johnson or Cashmere Bouquet for that matter.

So I think we would be prejudiced for them to call him as an expert witness in their case when he was designated by Kerr and he told me under oath in his deposition he was only working for Kerr and wasn't going to be working for Johnson & Johnson. I think that is prejudicial because I would have done a somewhat different cross-examination of him at the deposition.

MR. BICKS: We're using him on the exact topic that you did depose him on, his finding of an asbestos body. And we expressly reserved the right --

THE COURT: I'm sorry, his what?

MR. BICKS: The finding of the asbestos body.

It's a very short examination, and it is what you deposed him on. The part about the Kerr exposures, that's a whole nother issue. We're obviously not getting into that. And in our filing with the Court that everybody has, we stated that we expressly reserved the right to call any expert witness designated by any other party to this action, including any defendant subsequently dismissed from the action. And there's no surprise. It's the same topic that you examined him on.

MR. FINCH: Can I confer with my co-counsel and think over the weekend what our position is going to be on this, Your Honor?

THE COURT: Yes. And can the Court have --

MR. FINCH: You said somebody is going to be showing up next week. Is he --

MR. BICKS: I'm just trying to give the Court a heads-up because, honestly, with all the deposition stuff, I can anticipate we're going to have a problem. So I'm focusing on Friday, a week from today, to make sure that we've got everything in order for the Court. So I'm focusing a week out so the Court knows what's going on it.

And Your Honor --

MS. MALIK: The same day he was going to come.

MR. BICKS: The same day he had been previously scheduled to come is on that day.

MR. FINCH: Okay. I will consult with my boss and my brains over here --

THE COURT: Very good.

MR. FINCH: -- and give you a --

THE COURT: Is there a TID as to the portion of his deposition, so the Court would like to look at it so in case there is any argument as to prejudice?

MR. BICKS: Sure.

MS. FARINAS: I don't think it's filed on the system, Your Honor. Perhaps J & J could upload it to the deposition docket for you.

MS. MALIK: Sure.

THE COURT: Or if it's short -- sure. Just do this. And then if you make an objection, I'll know where to go. Thank you.

Okay. So anything else?

MS. FARINAS: No, I think that threw us for a loop before the end of the day.

THE COURT: Well, thanks very much. We can go off the record.

(The proceedings concluded at 3:50 p.m.)

STATE OF INDIANA
COUNTY OF HENDRICKS

I, Debbi S. Austin, a Notary Public in and for said county and state, do hereby certify that on the 18th day of October, 2019, I took down in stenograph notes the foregoing proceedings in the aforementioned matter;

That said proceedings were taken down in stenograph notes and afterwards reduced to typewriting under my direction; and that the typewritten transcript is a true record of the proceedings;

I do further certify that I am a disinterested person in this cause of action; that I am not a relative of the attorneys for any of the parties.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this 18th day of October, 2019.

My Commission Expires:
July 13, 2023