SUPREME COURT OF THE STATE OF NEW YORK

COUNTY OF ERIE : CIVIL TERM : PART 2

JAMES W. GINTER,
Plaintiff,

-vs- Index #4061-2010

FORD MOTOR COMPANY,
Defendant.

Erie County Hall
Buffalo, New York
June 27, 2011

B E F O R E:

HONORABLE JOHN P. LANE,
Judicial Hearing Officer

A P P E A R A N C E S:

MICHAEL A. PONTERIO, ESQ.,
KEITH R. VONA, ESQ.,
Appearing on behalf of the Plaintiff.

BRIAN P. CROSBY, ESQ.,
C. CHRISTOPHER BRIDGE, ESQ.,
Appearing on behalf of the Defendant.

I N D E X T O W I T N E S S E S

WITNESSES	DIRECT	CROSS	REDIRECT	RECROSS
JAMES W. GINTER	180	293		
JERROLD ABRAHAM	299	355		

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THE COURT: Bring the jury in.

COURT CLERK: Please answer when your name is called.

(Roll call taken)

COURT CLERK: All jurors present, all counsel present.

THE COURT: All right. Good morning, members of the jury. We were a few minutes behind here but we're going to get rolling. In the morning when you report I want you to go directly in the room. The reason I do that, I know it's a little, kind of small room, but the reason I want you to do that is it avoids the possibility that a witness or somebody else in the hallway that's going to testify might start talking in your presence about the case. So please when you come here in the room and we'll try to -- when we say we're going to start at 9:30, we're going to try to do that. Unfortunately we were delayed a few minutes today but we're ready to go. All right. Let's go.

MR. VONA: Judge, may Mr. Ginter take the stand again?

THE COURT: Yes.

COURT CLERK: Mr. Ginter, you're reminded you remain under oath.

THE WITNESS: Yes.

JAMES W. GINTER, after already having been first duly sworn, was examined and testified further as follows:

MR. CROSBY: May I proceed, Your Honor?

THE COURT: Yes.

MR. CROSBY: Thank you. I think I'll use the microphone this morning. There seemed to be some difficulty hearing me the other day.

THE COURT: There's a lot of volume in here with the high ceiling.

CONTINUED CROSS EXAMINATION

MR. CROSBY:

Q. Mr. Ginter, when we broke on Friday, you had told us about various exposures that you had had over your career to asbestos or asbestos containing materials, is that correct?

A. Yes.

Q. If I understand your testimony and the questions from your attorney, it is your position that a number of different entities are responsible for your mesothelioma, one of which you say is Ford?

MR. VONA: Object to form. Calls for a legal conclusion.

THE COURT: Pardon?

MR. VONA: Object to form. It calls for a legal conclusion.

THE COURT: Read the question back.

(Whereupon the reporter read back the pending question)

THE COURT: Objection is sustained.

MR. CROSBY: May we approach for a moment, please?

THE COURT: Certainly.

(Whereupon a bench conference was held).

BY MR. CROSBY:

Q. Mr. Ginter, you agree with me that you have made claim against a number of different corporations for responsibility for your asbestosis?

A. That's correct.

Q. And if I were to read a list of companies, would you agree with me these are the companies against whom you made such a claim: Anderson & Vreeland Incorporated?

A. Yes.

Q. Asbestos Corporation Limited?

A. I'm not sure of that name.

Q. Bondex International?

A. No.

Q. All right. Borg-Warner Corporation?

A. Yes.

Q. Fisher Scientific Corporation?

A. Yes.

Q. Ford Motor Company who's here today?

A. Yes.
Q. Frontier Insulation Contractors?
A. No.
Q. Garlock Sealing?
A. No.
Q. General Electric Company?
A. No.
Q. No?
A. No.
Q. Hedman Resources Limited?
A. Yes.
Q. Georgia-Pacific Corporation?
A. Yes.
Q. Honeywell Division of Allied a successor to Bendix?
A. Yes.
Q. And Bendix was a brake manufacturer, correct?
A. Yes.
Q. Industrial Insulation Sales?
A. No.
Q. Insulation Distributors, Inc.?
A. No.
Q. McLaughlin Insulation Company?
A. No.
Q. Niagara Insulation, Inc.?
A. No.

Q. Didn't you testify that Niagara Insulation, Inc. was the contractor that was working doing insulation work at Allied?

A. No, I dd not.

Q. Plastic Engineering Company?

A. Yes.

Q. Pneumo Abex, same company?

A. Yes.

Q. Reichhold Incorporated?

A. Yes.

Q. Rogers Corporation.

A. Yes.

Q. And United Gilsonite?

A. Yes.

Q. And are all those corporations suppliers of materials that you believe to have contained asbestos that you have ingested over the course of your career? All but Ford Motor Company?

A. I don't understand the question there, sir.

Q. Let me rephrase it. Is it true that you have made claim that all of those companies with the exception of Ford have either supplied asbestos or supplied materials or supplied products that contained asbestos --

A. Yes.

Q. -- that you were exposed to?

A. I was exposed to, yes.

Q. Okay. Now, I want to talk about that exposure. And go back to the beginning. Your first exposure that you've talked about to asbestos that you're aware of was in your teenage years, is that correct?

A. Yes.

Q. And that was when you were living on South Ogden Street?

A. In my parents' home, yes.

Q. Parents' home. And at that time you were involved in some construction work at your parents' home?

A. Yes.

Q. You were rebuilding some walls with plaster and plasterboard?

A. One wall, yes.

Q. And that in the course of that you utilized a product called Georgia-Pacific joint compound, is that correct?

A. Yes.

Q. And that joint compound is your understanding or your claim contained asbestos?

A. That's my understanding, yes.

Q. And you're involved in sanding and other preparation and construction work with that product?

A. Yes.

Q. And that it created dust?

A. It did.
Q. And that you breathe in that dust?
A. That would be my expectation, yes.
Q. And that's your recollection I take it?
A. Well, I don't remember breathing it in but I expect I did breathe some in.
Q. And then you had another project at 145 Hagen Street?
A. Yes. That was my first home after I got married.
Q. And again you utilized Georgia-Pacific joint compound?
A. Yes, in one instance.
Q. Did you use other joint compound as well?
A. I used joint compound from UGL on another project.
Q. Well, let's stick with 145. Were you using Georgia-Pacific joint compound there?
A. I believe so, yes.
Q. And the same effect, created dust as you sanded it?
A. Yes.
Q. And how many times would you have to sand the particular joint, for example, before it was completed?
A. Typically three times.
Q. Okay. So it would be over, what, a three day period?
A. Several days.
Q. Okay. And then you did some work at 23 Honduras Lane, is that correct?

A. Yes.
Q. And that particular project, did you utilize insulation?
A. No. Oh, insulation? No, I did not.
Q. Was insulation installed while you were in the room?
A. Yes. Well, I don't know if I was in the room but it was installed by the contractors that I hired.
Q. Was it exposed for a period of time?
A. I can't recall.
Q. And you recall what kind of insulation it was?
A. I think it was -- I think it was fiberglass, Corning.
Q. And did you also utilize joint compound there?
A. Yes, on one wall.
Q. And that was UGL, correct?
A. I believe so.
Q. And is it your understanding that that contained asbestos as well?
A. I later found out I did.
Q. And again you were exposed to dust over a number of days?
A. Yes, several days for short periods of time each day.
Q. Have you done any construction projects since your work at 23 Honduras?
A. That was in the mid '80s. I think that was my last exposure. But excuse me, I have to make a correction. I'm

not certain that the joint compound that I used in the '80s -- as a matter of fact I think the joint compound in the '80s I'm told did not contain asbestos.

Q. What's the source of that knowledge?

A. I'm not certain.

Q. So you don't know whether it did or it didn't?

A. I'm told -- I'm told it did not. I was told it did not contain asbestos after a certain time. And I used it in the middle '80s.

Q. Okay. Then you told us you went to work at Allied Chemical Corporation, is that correct?

A. Yes, in 1968.

Q. And in 1968 you were a lab analyst there?

A. Yes.

Q. And over the four months approximately you were there?

A. Three.

Q. Three months. It was essentially a semester I think you told us?

A. Yes.

Q. You were exposed to asbestos in equipment at the facility?

A. I was in proximity of people doing work on piping that I found out later was wrapped with asbestos.

Q. We'll get to that in a moment. Weren't you also

utilizing glassware, beakers, glass, Bunsen burners, hot plates?

A. I was utilizing all those items.

Q. And haven't you testified that they all contained asbestos?

A. No. The beakers and glassware and such didn't contain asbestos. The forceps if they were hot and came from an oven, then I used equipment to retrieve it from the oven either a glove or some forceps and those items, while I later found out were tipped or insulated at the tips with asbestos to prevent direct contact between the metal forceps and the hot glass. But the glassware itself did not contain asbestos.

Q. But the equipment you were utilizing with gloves, forceps, the hot plate --

A. I don't know if the hot plate contained asbestos. Nor do I know for sure if the gloves contained asbestos.

Q. Well --

A. They were insulated, heavily insulated.

Q. Was it your understanding -- is it your understanding that they did contain asbestos?

A. I'm not sure if it contained asbestos. That's my understanding that the forceps and the other utensils that I used to handle hot equipment contained asbestos but I'm uncertain of the gloves. They could be fiberglass. They

were heavy, heavy gloves. Insulated. And as far as the hot plates, I have no knowledge whatsoever if that contained asbestos.

Q. How but the Bunsen burner pads, you testified that they were white, chalky and dusty and you believe that was asbestos?

A. I later found out that was asbestos. And if you dropped it or handled it roughly, pieces would break off from it and, yes, there would be possibly some asbestos dust in the air.

Q. It was friable?

A. It was friable if it was handled roughly.

Q. And you saw it flake away?

A. If you dropped it.

Q. And who was your understanding was the supplier of those pieces of equipment?

A. In the places I worked I think it's generally an available laboratory item. Probably available from many suppliers. But in my case we had an urging, an urging if you will from purchasing to use Fisher Scientific as our source and if things weren't available from Fisher then we certainly can get items from other suppliers.

Q. Was it your understanding that the equipment that contained asbestos that you were utilizing came from Fisher?

A. That's my understanding.

Q. And do you know who it was manufactured by?

A. No, I don't.

Q. Now, you also indicated that in addition to that there was an ongoing project having to do with pipe removal and removal of asbestos around the pipes and replacement of asbestos around the pipes, correct?

A. Well, I can't speak to the removal of the asbestos, no, from the pipes. I can only speak to the installation of new pipes which were then moved into position.

Q. Didn't you see them take down the old pipes?

A. I saw them take down the old pipes but I didn't see them remove the asbestos.

Q. And am I correct this pipe insulation created dust?

A. It created dust when it was hacksawed and fit to the contours of the piping.

Q. And you recall who the installer was?

A. I recall it was Buffalo Insulation.

Q. And that's one of the parties against whom you've made a claim?

A. Yes.

Q. Okay. And do you recall breathing in that dust?

A. I have no specific recollection of it, actively breathing it in, no. I was in proximity to the work that was being conducted.

Q. Didn't you testify, sir, at a video taped deposition

that the pipe insulation created dust which you breathed in?

A. I said it was likely that I did, but I have no recollection of breathing it in. It was -- I was in proximity to the work that was being conducted.

Q. And this work was going on the entire three months you were there?

A. I don't -- it was going on and I'm sure on a regular basis throughout that period I observed it a couple, three times maybe.

Q. Didn't you testify, sir, in your video deposition that you were in the area where this was being done twice a week during the three months that you were there?

A. No, sir. I would go to the plant twice a week on necessary occasions to retrieve samples and on various excursions to the plant I would see work being performed. On some of those occasions I would stop and make some observations with a colleague that was also standing around. We were both sort of acting like sidewalk superintendents and I would spend from a very few minutes depending on how much time I had to maybe fifteen minutes and then I would have to get my sample and get back to my work station.

Q. You recall testifying that pipe removal created dust that you were breathing in as well?

A. I don't remember that testimony.

Q. We'll come back to that when we get a copy of your

deposition.

A. Sure.

Q. Let's move onto Spaulding Fiber Company. You were there for again an interim semester, is that fair statement?

A. It was over the summer.

Q. Summer semester?

A. Of 1969.

Q. Again if you utilized heat and heat samples in your lab?

A. We had ovens that would -- ovens and hot plates that would heat samples and heat equipment and if it was hot we oftentimes would use a utensil to retrieve it from the oven. These utensils were coated or had a sleeve material which I later found out was asbestos.

Q. And again, is it your claim that that asbestos was in the atmosphere and you breathe it in while you were there?

A. I was in proximity to that material during the course of my work experienced at Spaulding Fibre.

Q. Let me go back for a moment to your experience at Allied Chemical. Sir, didn't you testify that you used instruments and utensils that were needed to pick up hot glassware and these utensils were often tipped with asbestos to prevent heat to get through to the metal surface?

A. Yes. I believe that's why it was insulated.

Q. In the course of doing that they would shed dust and

the dust would be airborne and it would be in proximity to that when you used the items? I believe that's what you testified to.

A. Yeah. If they were handled roughly, if they were dropped, sometimes pieces would flake off in the drawer if they were in the drawer along with other metal utensils. These -- just like silverware in the drawer they would slide around and some pieces could get knocked off.

Q. Well, you said in the course of doing that and that was using instruments and utensils to pick up hot glassware.

A. Yes, I did.

Q. Didn't you also testify that you would make trips to the plant to retrieve samples and we would have work being performed on various pieces of processed equipment. I would see overhead piping being removed because it was plugged, is that correct?

A. It may have been plugged. I know it was removed for some reason.

Q. And that equipment was wrapped in a whiteish coating that you later learned to be asbestos?

A. I testified to that, yes.

Q. So you did see asbestos on the pipes being taken down as well as the pipes being put back up?

A. Well, I saw whiteish material which later I learned was asbestos. At least the material that was being

reinstalled. I really can't comment on what was up there and what was being dropped to the floor, over to the floor with a chain hoist.

Q. Okay. And as to what was going to the floor, isn't it a fact that the pieces would be suspended overhead and dropped out of place, flanges were unbolted, the section of pipe with the insulation was dropped and there would be pieces of this white material falling down being scattered about?

A. No, I didn't testify to that.

Q. You didn't. Okay. Again, you understand I'm asking about your experience at Allied Chemical?

A. At Allied Chemical, okay. Yes.

Q. That's where the pipe work was being done?

A. Yes.

Q. While we're looking for that section, was anyone other than Buffalo Insulation doing asbestos work at Allied while you were there?

A. Not to my knowledge.

Q. We talked about Spaulding Fibre where you utilized and had the same experience with regard to asbestos equipment that you were utilizing, is that correct?

A. Yes.

Q. Okay. Then you went to work for Moore Business Forms, didn't you?

A. Yes, I did.

Q. And when you went to work for Moore Business Forms, again, were you exposed to asbestos in the same way as in the lab?

A. Yes, in the lab I believe the same way as we've already discussed.

Q. Bunsen burner pads contained asbestos?

A. That's my understanding.

Q. They were manufactured by whom?

A. I don't know who manufactured them.

Q. Did you indicate in your deposition they were manufactured by Fisher?

A. I indicated they were supplied by Fisher.

Q. Okay. How about the beaker tongs?

A. The same.

Q. You were also exposed to asbestos in the printing press trials, were you not?

A. Yes.

Q. Tell the jury what the printing press trials were.

A. Well, from my project prospective we would be evaluating the performance of an ink. The printing press could be used for many different types of trials, but again, I was there to evaluate some inks to see how they ran. And it was often easier, less expensive certainly to run a trial on a small pilot press than to take it out to production and

use large production piece of equipment. So we would formulate a series of inks and take them to the area for trial. Among that preparation, that preparation included making a rubber mat from something called a matrix board. Matrix board is a hard sheet if you will. It's fairly thin. Maybe it's not quite 8th of an inch thick. Less in fact. And it was -- and it was used to make an impression in a rubber mat. And depending on the dimensions and the surface texture of the matrix board, that's the impression that would be on the rubber mat. If the matrix board had high spots, then it needed to be sanded, and when that sanding was done, it was blown off with air, air hose and then the rubber mat was made to see if the dimensions were correct. And that was done until everything was just right. And then the mat was used to conduct a printing trial.

Q. And the matrix board contained asbestos, didn't they?

A. I later learned it contained asbestos.

Q. And it was your understanding that you were exposed to asbestos and you breathed in asbestos while you were there?

A. That would be my expectation.

Q. Well, in the course of getting the press ready to run, you'd be in close proximity to the mats being made, wouldn't you?

A. I observed the process.

Q. By close proximity we're talking about within one or two feet?

A. I would say from that distance on out to maybe five or ten feet. But it would be in that range of distances.

Q. And as they sanded and cut, haven't you testified that lots of dust would come off the mat?

A. I forget my exact words, but dust would come off the mat as it was blown away with it with the air hose.

Q. Well, lots of dust would come off the mat and subsequently they'd blow out the mat out with compressed air?

A. Dust would come off when they took the mat off with the compressed air. That's when the dust was generated.

Q. Wasn't the dust generated during the course of sanding and cutting it?

A. There were some.

Q. And then it would be blown off into the room?

A. Yes.

Q. Where you would be standing?

A. I was in the room.

Q. And this would be done with some frequency, wouldn't it.

A. They were -- anywhere from -- they got pretty good at it. They did it all the time. But from maybe one to as many of two or three times until they got the height

correct.

Q. Okay. And these printing press trials that you were conducting, you would do them about twelve times a year, wouldn't you?

A. Probably. Maybe twelve would be the most. Depending on how many the project would run. I am speaking of a project that would run as many as a dozen times I might be there for the project. Bring new inks in. But if I didn't have a project, I would have no need to go into that area.

Q. Well, didn't you say that the printing press trials took place approximately a dozen times a year? Isn't that what you testified to?

A. The project took place. The times I went into the area to conduct my trials probably totaled about a dozen times in the course of a year.

Q. Okay.

A. If I didn't have a project, then I wouldn't be in there every year.

Q. So you were in there?

A. I didn't have a project every year of ink trials.

Q. So you were in there about a dozen times a year, isn't that what you just said?

A. I was in there a dozen times over the course of a project.

Q. And you were at Moore for six years, isn't that

correct?

A. That's right.

Q. And this was an ongoing process there, the matrix boards?

A. For them, for the people that operated the press, yes. Not for me.

Q. And it's your understanding that the matrix board material was supplied by whom?

A. I later found out it was supplied by Anderson Vreeland.

Q. Was it also supplied by Rogers Corporation?

A. I think they had some involvement, but I'm not certain.

Q. Have you claimed that they did and that they were responsible for providing asbestos that you ultimately breathed in?

A. Again, I think they have some involvement with Anderson Vreeland, but I'm not sure their relationship.

Q. By the way, when you would be in there you'd be in there for a lengthy period of time, wouldn't you?

A. It would vary.

Q. Well, wouldn't you be there anywhere from one to four hours?

A. That sounds right.

Q. So it wasn't just passing through? You were in that

in that room for a lengthy period of time on each occasion?

A. It was varying. And it was depending on the project. If didn't have a project in ink, I wasn't in there.

Q. I'm just talking about when you were there.

A. Yes.

Q. And when you were there and this dust was being created that you believe was asbestos latent, did you utilize any mask or any protective equipment?

A. I don't recall using any mask or protective equipment.

Q. And when the sanded or cut material that resulted in the dust would be cleaned off, it would be cleaned off with an air compressor?

A. A hose, yes.

Q. A hose. And would that disburse it all over the room as well?

A. I'm sorry?

Q. Would that disperse it all over the room?

A. Undoubtedly.

Q. Now, after leaving Moore, you went to work for Hooker or Occidental?

A. Hooker, but they changed their name to Occi.

Q. And that was in 1977, is that correct?

A. 1976.

Q. 1976. And your initial position was what?

A. Technician.
Q. Staff technician?
A. I think I was hired as a technician and became staff technician very soon thereafter.
Q. And your primary place of work was over on Grand Island at the laboratory, correct?
A. Yes.
Q. But I think you told us that there were occasions where you were on a project for Durez?
A. Yes.
Q. And you would be dispatched over to Durez's facilities, is that correct?
A. That's correct.
Q. Okay. And you would go to their molding compound laboratory, correct?
A. Yes. Among other places.
Q. And over that period of time when you were a technician, do you agree with me that you were in buildings that utilized asbestos in their compounds about ten times?
A. Approximately. Eight to ten times I would say.
Q. And what was the purpose of you going there?
A. Well, it was to follow-up on projects that were assigned to our group out of Grand Island which was a research group and the research group worked for the divisions, Durez being one of the divisions and it was to

report on our project and also to observe their manufacturing processes and laboratory processes as well.

Q. So your purpose in going over there if I understand it was to view the trials that were being done and the process of manufacturing?

A. They wouldn't necessarily be trials. They were production runs. Sometimes they were small scale batch preparations.

Q. And this had to do with the production of phenolic resins?

A. No.

Q. Phenolic molding compounds?

A. Phenolic molding compounds, yes.

Q. Walk us through the process that would occur on these visits.

A. Well, we would generally meet with one or more individuals from their molding compound business area. Could be one of their managers or chemists. It could be some of their people in there analytical or testing laboratories. And these would all be in different areas. We'd start perhaps in a meeting room or finish in one of their meeting rooms and then during the course of our visit we would, we would make the rounds. We would go to a test lab if need be. If we had to view a particular process and one was running at the time, then we'd make an excursion to

see the process.

Q. I would like you to walk us through the process that you observed.

A. Well, again, it depends on what we were there for. I can outline the entirety of it which I wasn't necessarily present for on every occasion. But the entirety of the process would fundamentally include loading the raw materials into a mixture. The product, the ingredients would be blended for a time. And they would be conveyed to a set of hot rolls and the rolls would mix and melt the phenolic resin again acting as a binder and a glue. It would melt the resin and incorporate the dry ingredients. And after a certain length of time the sheet that was formed from this rolling process was cut off and dropped into a grinder and the grinder would grind it to size, a certain size that was called often even times by the application or by the customer. And then from the grinder it went into a pack out which was either in drums or bags.

Q. Okay. And you believe you were exposed to asbestos during this process, didn't you?

A. Not every process because not every process contained asbestos.

Q. Well, let's cut right to it. You were there about ten times, weren't you?

A. I would say approximately.

Q. And didn't you say that the majority, the large majority of those times you were observing a process that involved asbestos?

A. I can't recall how many times it was containing asbestos.

Q. Didn't you say six to eight of the ten?

A. That's sounds about right.

Q. Okay. And the time period that you were there was one to four hours at a time, correct?

A. That's right.

Q. All right. And during every stage of the process that you observed, a considerable amount of dust was kicked up into the air, wasn't it? During every stage?

A. I wasn't there for every stage.

Q. Did you testify, sir, that during every stage of that process that I observed, a considerable amount of dust was kicked up into the air?

A. Each stage of the process had an opportunity to distribute dust into the surrounding air whether it be loading or the blending or the pack out. Each one had an opportunity for this.

Q. From the time the products were charged to the blenders and mixed, dust came out, correct?

A. Some dust came out, of course.

Q. Didn't you say, sir, that during the blending, during

the charging process that the charging process was a dusty process, it kicked up a great deal of dust?

A. I'm not sure of the exact testimony, but it did kick up dust.

Q. Didn't you also say when it went into the grinders it would kick up more dust because now you're reducing this big slab to small particles?

A. Particle size was approximately the size of aquarium gravel. It had fine material that was finer than that and there was material that was greater than that. So they would screen out the fine material to a certain degree and screen out the oversize and then they will pack out into drums or bags the remainder.

Q. My question, sir, is when it went into the grinders it would kick up more dust?

A. I said --

Q. Is that correct?

A. Yes, it does kick up dust.

Q. Sir, didn't you also testify that the building was literally full of dust?

A. I don't think it was full of dust.

Q. That's not what you said?

A. My recollection -- it depends on your identification of full I suppose.

Q. Sir, let me --

MR. CROSBY: Let's mark this first of all.

(Whereupon the reporter marked the Deposition Transcript as Defendant's Exhibit C for identification.)

BY MR. CROSBY:

Q. Mr. Ginter, do you recall testifying in the deposition on May 10th, 2010?

A. I recall testifying, yes.

Q. And that deposition was under oath, was it not?

A. Yes, it was.

Q. And all of your testimony was taken down by a court reporter similar to what we have here in the courtroom today?

A. Yes.

Q. Okay.

MR. CROSBY: May I approach the witness, please, Your Honor.

THE COURT: Yes.

BY MR. CROSBY:

Q. I have with me -- I marked the entire transcript. And this is the first volume. And I'm going to turn your attention --

THE COURT: What is the exhibit?

MR. CROSBY: Exhibit C, Your Honor.

THE COURT: Okay.

BY MR. CROSBY:

Q. Turning your attention to Page 173 and do you recall being asked this question, sir, at Line 7: So during the blending process, that is a dusty process, question mark. And giving this answer: During the blending, during the charging process was it a dusty process. First of all they had to charge the blenders with goods with a dry resin and with dry fillers and with maximum waxes or any other ingredients that the chemist would formulate or deemed appropriate for the recipe. So then they blended it. They kicked up a great deal of dust. The building was literally full of dust. Isn't that what you said?

A. I'm recollecting that now sir. Thank you.

Q. And that was the condition that you encountered on the six to eight visits of one to four hours when asbestos was being blended, correct?

A. If I happened to be in the building when those processes were being conducted. Now, I said I believe that I wasn't there for every step of the process on every visit. It's a long process making phenolic molding compounds and if I happened to be there for just an hour that day, I certainly couldn't see all the steps.

Q. Well, it's a long process, but one to four hours of being in that process was an environment that was in a building full of dust in a process that was spewing dust,

correct?

A. Not every step of the process was as dusty as other steps.

Q. Sir, did you tell us when you would go into that facility for those processes that you had coveralls over you, is that correct?

A. Coveralls and a hard hat.

Q. And you had to have coveralls over your clothes but when you wanted to leave the building you were just covered with stuff. That's the dust, right?

A. That would be the dust, yes, from the building process.

Q. So the operative procedure was to blow you down so that your friend or the operator, somebody you know had a hose or air hose and you stood there with your arms out and he gave you a hosing and then you turned around and gave you another hosing, right?

A. Yes.

Q. Did you also say dust was all over the place?

A. Depending on when I was there, yes.

Q. We're only talking about when you're there.

A. Depending on the time that I was there and depending on the process that I observed.

Q. Did you also say that dust was on you when you were sweating and you were sweating whether it was winter or

summer and stuff would be sticking to you? Did you testify to that?

A. I did.

Q. And that was when they were doing a five step process, raw filler which is mixing, right?

A. Yes.

Q. Mixing raw asbestos and other materials, right?

A. And other materials and mixers.

Q. Charging process?

A. Yes.

Q. Blending process, right?

A. Well, the blending is the mixing, sir.

Q. Didn't you say there were five steps? There's a raw filler, there's a charging process?

A. No.

Q. There's a blending process, grinding process and pack out process?

A. The filler and all the other dry ingredients including the resin, including any other ingredients that the chemist called for are charged to a mixture. They're all mixed together at one time. They're all charged to the heated rolls at one time. They were all blended on the rolls. The blending process I think you're referring to is different from the blender that is mixing the dry ingredients. The materials are blended not only in the

mixtures, they're also blended on the hot rolls and they're blended as the resin melts and coats the dry ingredients.

Q. Well, you agree with me there are five stages, five steps, isn't that what you testified to?

A. I think there's a misinterpretation there, sir. Mixing process of all the ingredients. There's a conveyance to the hot rolls which blends the product. I think you're perhaps misinterpreting the blending which occurs initially on the dry ingredients in the mixers.

Q. Let's take it one step at a time. Haven't you told us that during every stage of that process a considerable amount of dust was kicked up into the air? Didn't you say that?

MR. VONA: Asked and answered, judge.

THE COURT: Pardon?

MR. VONA: Asked and answered multiple times.

THE COURT: Overruled.

BY MR. CROSBY:

Q. Didn't you say that?

A. I'm sorry, could you repeat the question?

Q. During every stage of the process a considerable amount of dust was kicked up into the air?

A. A considerable amount.

Q. Okay. From the time the products were charged to the blenders and mixed, that's the first stage or the second

stage?

A. Yes, that's the first stage.

Q. Dust came out of that unit?

A. I used the term blender and mixer interchangeably.

Q. Dust came out of that unit?

A. Yes. During the course of charging the blender, that generated some dust.

THE COURT: What does charging mean?

THE WITNESS: I'm sorry, it's adding the raw materials. The ingredients that are part of the recipe, the process of adding that to the blenders or mixers. Again, I used that word -- those words interchangeably. The process of adding those to the mixer certificate is called charging.

BY MR. CROSBY:

Q. The materials would be dumped into it, wouldn't they?

A. They'd be added through a port that was usually a couple of stories up in the building.

Q. Within the same room?

A. Well, no, there were different floors to the room, to the building.

Q. But dust --

A. Charging floor, and you have a mixing floor where the blenders are. You had the rolls on another floor down at the bottom of the -- generally the bottom of the building.

Q. Have you told us --

A. Different floors.

MR. VONA: I'm sorry, were you finished, Mr. Ginter? Were you finished with your answer?

THE WITNESS: Yes, I'm finished now, thank you.

BY MR. CROSBY:

Q. Is it a fact, sir, that were no air handling equipment other than dust collector bags on the roof to accommodate any of this dust?

A. I'm not familiar with the mechanics of the building in great detail.

Q. Did you tell us that there was no air handling equipment.

A. I said there was no air handling equipment in some of the testing laboratories. I know there were -- there was air handling equipment that went to dust collector bags on the roof of the building.

Q. After it was in the blender it was dropped onto the rolls, is that correct?

A. Yes.

Q. What are the rolls? Describe them. Tell us what they are.

A. Well, they were about approximately six feet in diameter. And there's two of them. They're in close

proximity to one another with a short narrow distance between them, perhaps a quarter of an inch to a half an inch. And the rolls turn at different speeds. And as the dry materials come down from the blender and they drop onto the hot rolls, the resin begins to melt and it begins to flow and incorporate the dry materials and all the while these rolls are turning, they're heated and the resin melting incorporates everything into a uniform or what we hope is uniform product.

Q. And didn't you tell us, sir, that as the material, the raw material -- that contains the asbestos --

A. Yes.

Q. -- dropped out of the blender onto the rolls, more dust was produced before the resin could soften enough to travel?

A. That's true. But that was a very short term process. The resin melted as soon as it saw and hit the hot rolls.

Q. And once they were mixed with the rolls, is that what it's doing, it's mixing in the resin?

A. It's melting the resin and mixing intimately the ingredients that's coming from the blender.

Q. The mixed property on the rolls was then moved to or discharged to the grinders, correct?

A. Yes.

Q. And the grinders generated another level of dust,

correct?

A. Yes.

Q. That then was taken up into bags or drums?

A. Correct, after screening.

Q. And as the material came out of the hoppers into the bags, more dust was generated?

A. Yes.

Q. In fact, so much was generated that there were layers of dust on every surface imaginable in the building, isn't that true?

A. Over a time and probably I would estimate three to six months. There was enough dust collected on the surfaces where they cleaned the building.

Q. Sir, you testified, did you not, that the bags, the dust from the bags created layers of dust on every surface imaginable in the building? Isn't that a fact?

A. Every horizontal surface.

Q. That was your observation, wasn't it?

A. Yes.

Q. Okay. So that's what you observed and that's what you breathed when you were there?

A. I don't deny that. I testified to that last year.

Q. If you wanted to leave that building, you would have to be dusted off, correct, before you went to lunch or break or anything like that?

A. Depends on what was going on in the building at the time I was there. If I was there during a particular dusty process or if I was there for a very long period of time, say three or four hours, then that was the procedure. If I was there for less time or if there wasn't a dusty process, particularly dusty process being conducted at that time, then, no, I wouldn't get dusted off. I'd walk in and out of the building wearing my hard hat and safety glasses and coveralls.

Q. Let's stick with the six to eight times that you were there that they were mixing, molding, blending asbestos.

A. Okay.

Q. On those occasions didn't you wear coveralls?

A. That was a plant requirement. Sir, yes, I did.

Q. And on those occasions when you went, you wanted to leave the building, didn't you have to get blown even if it was just for a break?

A. No. Not every time.

Q. And you agree with me that asbestos was a particular ingredient that was utilized with a lot of frequency in building 88 where this was going on?

A. Yes, in building 88.

Q. And do you know who the supplier of the asbestos was?

A. No, I don't.

Q. Do you know whether it was from Hedman?

A. I know it would depend on the particular recipe that was being conducted on that day.

Q. Was Hedman one of the suppliers?

A. I believe so.

Q. And that was when?

A. I'm sorry?

Q. What years was that?

A. I don't know the years of their supply position.

Q. The year that -- the years that you were there in that facility under those conditions.

A. I don't know if they were supplying in that time frame, sir.

Q. Well, was Hedman supplying in 1980 when you were on the friction particle project?

A. No.

Q. They were not?

A. In 1980? No.

Q. Who supplied the asbestos that you say you were using in the blending of the friction particle project materials?

MR. VONA: Judge, objection. Asked and answered. This was asked and answered on Friday.

THE COURT: Well, I'm going to allow the counselor to procedure. The jurors may have forgotten some of it over the weekend. Frankly I have.

MR. VONA: Sure. Just making my objection,

judge.

THE WITNESS: I'm not sure of the supplier then. I know the coated material was code 761.

BY MR. CROSBY:

Q. In 1979 was code 761 Hedman?

A. I don't know for sure. We weren't using asbestos at Durez Manufacturing in 1979 or 1980.

Q. How about 1977 to 1979?

A. My understanding was that Durez was using asbestos in manufacturing in those years.

Q. And who was supplying it?

A. Sorry, I don't know. I wasn't a member of Durez at that time.

Q. So when you would go to observe the processes, would you see asbestos in its raw form in bags or cans or containers?

A. Not to my recollection, no. I think it might have come from Asilo but I'm not certain about that either.

Q. Now, on any of these occasions when you were posted with Occidental and would go over to Durez and be in this dusty environment that we just described, did you ever wear a mask or respirator?

A. On occasion I wore a mask but not a respirator.

Q. What do you mean by occasion?

A. Well, on occasion if I was in a particularly dusty

environment, I'd consider wearing a mask.

Q. Did you wear a mask?

A. On occasion, yes.

Q. How many times?

A. I don't recall.

Q. Did you have a mask that was given to you?

A. If I asked for one.

Q. So they were available?

A. If I asked for one they were available. They were given depending on the process that was being conducted in the building at the time. Not every step of the process was as dusty as others. I think I mentioned that.

Q. Sir, let me ask you, in your deposition, were you asked whether or not you ever wore a mask on your visits and did you respond that you never wore a mask or respirator?

A. I know I never wore a respirator because they were particular to the fit, your particular face. We did get fitted for respirators some years later to mid to late '80s.

Q. Again, going to Exhibit 3, I'm sorry, Exhibit C your deposition Page 179, were you asked the following question and did you give the following answer: Starting at Line 13, were you wearing or did you ever wear a mask or respirator or any other type of facial protection when you observed this work being done at the Walck Road Durez facility. Answer no.

A. I see.
Q. Have I read it correctly?
A. Yes, sir, you have.
Q. Was that your testimony?
A. It was.
Q. So even though masks were available, you chose on the visits to that facility not to utilize them?
A. I seem to recall on certain occasions I did.
Q. That's different than your recollection a year ago?
A. Yes, sir.
Q. You then were transferred to Durez, correct, in 1979?
A. Yes.
Q. And you indicate that in 1979 Durez and Occidental were not utilizing any asbestos in their manufacturing, is that correct?
A. That's what my understanding is, yes.
Q. You were in a laboratory though, were you not, laboratory and kind of a mini production facility?
A. For a portion of that time beginning in about 1981 perhaps plus or minus a little bit. I was in a -- I was splitting my time between phenolic resins which was -- which I started at my principle work and phenolic molding compound as a trainee.
Q. Let's go back to 1979 when you first transferred over there. Your desk was in building 22, was it not?

A. Yes.

Q. You were in the industrial resins laboratory --

A. That's right.

Q. -- correct? And your project was to work on a resin? A resin is a bonding agent?

A. It's a glue. It's a bonding agent, yes.

Q. For a wafer board.

A. Wafer board, yes.

Q. But you're testing, your laboratory was in the same laboratory as the molding compound testing was going on, correct?

A. No.

Q. No? Your wafer board testing was not in the same building as the molding testing?

A. The products that I made wafer board were tested in an area and also tested for phenolic molding compound. But my laboratory was not in that area, sir.

Q. I don't mean to interrupt you.

A. Okay.

Q. Your testing was done in the same place as molding compound testing was being done, correct?

A. Yes.

Q. And it's your belief or your claim that you were exposed to asbestos during this testing, is that correct?

A. If I would be in the laboratory to observe the

testing of my wafer board, then I was in the same laboratory that was testing phenolic molding compounds.

Q. And what in the testing of the molding compounds would cause you to be exposed for asbestos?

A. If the molding compound laboratory was testing a competitive material, there was a chance that that competitive material contained asbestos. And therefore if I were in the laboratory at the time that that particular material was being evaluated, I would have had some exposure to it simply by being in the same room.

Q. Well, the competitors' testing was going on right next to where you were doing your testing, right?

A. If they were testing it at the time and I was in there. I had many, many wafer board samples tested than competitive molding compound containing asbestos, I can assure you of that.

Q. You were there on a number of occasions where the competitive molding compounds containing asbestos were being tested?

A. At the time while I was testing wafer board I had no knowledge of what was being tested alongside of my wafer board. All I know is if they were testing competitive materials and if the competitive materials contained asbestos, and not all of them did, then I was in proximity to that material as they were testing my wafer board

samples.

Q. Which of those competitors' products that were being tested do you claim contained asbestos?

A. Well, at the time my understanding was --

Q. I'm talking about now, sir.

A. Now?

Q. What do you claim today which of those products contained asbestos?

A. Well, again, at the time those products that were reported to contain asbestos or found that contained asbestos came from Rogers Corporation and Plenco Corporation and Reichhold Corporation.

Q. How about General Electric?

A. Not to anything I ever heard at that time. They might have been making the asbestos containing compound prior to that time, but not during that time, no.

Q. Okay. So the compounds came from Rogers, Reichhold and Plenco, correct?

A. To my knowledge.

Q. And that testing that was going on alongside of your testing when you were there kicked up a lot of dust, didn't it?

A. The testing kicked up some dust.

Q. Didn't you say it would kick up a lot of dust?

A. If -- depending on whatever they were doing because

if they were grinding a sample it produced more dust then if they broke a sample in half and measured how much strength it took to break the sample. Depended on the tests they were running.

Q. Didn't you say that every time a sample was tested, it was broken, abraded, cut to size and kicked up dust? If the material contained asbestos the asbestos was in the atmosphere in that laboratory. Isn't that what you testified to?

A. All are all separate steps and, yes, at each step kicked up a quantity of dust. Some small, some larger.

Q. Were you also exposed in the testing lab to bars, molded products?

A. Several varieties of bar, of molded bars, yes.

Q. And have you claimed that those contained asbestos?

A. I don't know what they contained at the time. They were testing competitive materials during the period that I was testing wafer board samples and if they happened to have a competitive material in there which might have been once or twice a month, it might have been more than that. If I was testing, if they were testing those products while I was there, then the dust that was kicked up contained asbestos.

Q. When you were testing the bars, is it your understanding, is it your claim that you were exposed to asbestos?

A. If that coincided with the testing of the competitive raw materials, yes.

Q. Sir, were you asked whether or not -- strike that. Were you asked whether in the testing lab how you felt you were exposed to asbestos and you said when they test the bars they would test various molded articles and break them? Do you recall saying that?

A. Yes.

Q. And when they broke them, there would be a little bit of dust, correct?

A. Yes.

Q. Every time you broke a bar there would be particles in the air from the testing, correct?

A. Yes.

Q. And then they'd have to blow off all the equipment and there would be dust on that?

A. I don't believe they blew off the equipment in the test lab.

Q. Where were the bars tested and broke?

A. In the physical test laboratory.

Q. Is that different than the press area?

A. Oh, yes.

Q. And you also had dust in the press area, wouldn't you?

A. The press room would have dust that had to be cleaned

up.

Q. Sir, it was not just competitors products that contained asbestos, there were Durez projects being tested there that contained asbestos, were there not?

A. During what time frame, sir?

Q. During the time you were an associate chemist.

A. That's not correct. During the time I was associate chemist Durez had ceased using asbestos in their product.

Q. These were test lab products, were they not?

A. The test lab didn't generate any products of their own. They tested only those products that came from manufacturing via the press room.

Q. Well, sir --

A. And products that came from the color lab, again, via the press room.

Q. So you're saying that in 1979 Durez was doing no testing for products or potential products that contained asbestos?

A. None created by them.

Q. The other products were being evaluated but they were not competitors products?

A. If they were able to obtain a competitive sample they would test it. Sometimes those competitive samples contained asbestos and they were tested. They were molded in the press room and they were tested in the physical test

lab and elsewhere.

Q. Okay. But if Durez was not testing potential products of its own with asbestos as of 1979, how is it in 1980 your lab was testing for a potential product with asbestos?

A. Because we were functioning and proceeding according to the guidelines as dictated by our friction resin customers, particular people like Bendex and Borg-Warner, and Abex. And those people were using asbestos in their operations at their factories and they would want to have information generated on samples that made sense to them. Those samples contained asbestos and that was part of what I already testified to under the friction particle program. It had nothing to do with Durez molding compound. Certainly had nothing to do with Durez Manufacturing. And it was a project that was instituted by the phenolic resins business area as -- so we could supply the friction industry with friction particle.

Q. Well, I wanted to move to that friction particle project.

MR. CROSBY: Your Honor, we've been going for an hour and fifteen minutes.

THE COURT: Let's take a break for fifteen minutes or so.

(Whereupon a recess was taken)

(Whereupon the reporter marked the Raw Material Purchase Record as Defendant's Exhibit D for identification.)

THE COURT: Bring the jury in.

COURT CLERK: All jurors present, all counsel present.

THE COURT: Mr. Ginter, would you resume the witness chair, please.

(Whereupon the reporter marked the Answers to Interrogatories as Defendant's Exhibit E for identification.)

BY MR. CROSBY:

Q. Mr. Ginter, let me just back up very quickly. I want to show you what has been marked Defendant's Exhibit E for identification which are the Answers to Interrogatories, questions.

THE COURT: What was that exhibit letter?

MR. CROSBY: E as in Edward.

THE COURT: All right.

BY MR. CROSBY:

Q. Answers to questions, interrogatories we call them that were given on your behalf in response to questions by Ford. And I want to turn your attention to Page 11. And counsel, if you don't have any objection, I'll work with one that's highlighted to abbreviate it.

MR. VONA: That's fine. Go ahead, Brian.

THE COURT: Is that marked?

MR. CROSBY: It's a copy of this, Your Honor.

THE COURT: All right.

MR. CROSBY: It's in there.

BY MR. CROSBY:

Q. In which a statement is given on your behalf, the plaintiff was exposed to asbestos in the following manner, do you see that?

A. I see that line, yes.

Q. Okay. And it goes through Allied Chemical, it goes through the various entities we've been talking about today?

A. Okay.

Q. Okay. I'm going to draw your attention down to the third full paragraph, counsel, and ask if you would read that response.

A. From 1976 through 1979, plaintiff worked for Occidental Chemical at the Grand Island research facility. During this time plaintiff worked on a large research project for Durez Plastics and required to enter production areas of the Durez Plastics facility on Walck Road where he was exposed to raw asbestos fiber manufactured, sold and distributed by Hedman Mines and Asbestos Corporation Limited.

Q. Hedman Mines, correct?

A. That's what it says here.

Q. And that's the response that was given on your behalf to Ford's question?

A. Somebody made that statement other than myself, but, yes.

Q. Okay. Now let me show you what I marked as Defendant's Exhibit D for identification which appears to be a Raw Material Purchase Record for asbestos floats type W6.

THE COURT: What's that lettered?

MR. CROSBY: D as in David, Your Honor.

BY MR. CROSBY:

Q. Do you see this headline up there?

A. I see that, asbestos floats type W6.

Q. Palletized per Durez specs?

A. Yes.

Q. And at the top we have what number?

A. C761.

Q. And is that the same number as the asbestos or what you claim was the asbestos material that you were working with in the brake particle project, same number?

A. Well, the number is the same.

Q. Okay. And sir, I would ask, have you ever seen one of these before?

A. No, I don't believe so.

Q. I would ask, sir, if you would just tell us the date,

the first date on this record?

A. 11-20-70.

Q. And it seems to go chronologically, does it not?

A. Yes.

Q. Okay. If we go to the last page, what's the date of the last entry for asbestos floats type W6 palletized per Durez specs?

A. Well, I don't know. This is -- this one says Hedman Mines. It doesn't say W6, does it?

Q. Well, if we go back to the first page, sir, does it say vendor Hedman Mines?

A. Yes, but here it says Hedman cationic fiber.

Q. I appreciate that.

A. It doesn't say --

Q. What's the last date? I'll come back to that in a second.

A. Well, for this product that was ordered, it's 7-25. I think it's '78.

Q. And the initial entry is asbestos floats type W6, correct?

A. Ordered in 1970?

Q. Right.

A. Yes.

Q. And then there comes a point in time that it is changed to Hedman cationic fiber, correct?

A. That's what it says on the last sheet.
Q. It still bears the number 761, does it not?
A. Yes.
Q. Again the third page Hedman cationic fiber commencing in 1974?
A. On that sheet?
Q. Yes.
A. I don't know when it commenced.
Q. The first date there.
A. The first date on that sheet is --
Q. '74.
A. Yes, sir.
Q. Okay. And again, at the top it says palletized per Durez specs, correct?
A. It says at the very top Hedman cationic fiber palletized per Durez specs.
Q. And then the last page, sir, the latest also says Hedman cationic fiber, correct?
A. Yes, it does.
Q. Palletized per Durez specs?
A. Yes.
Q. Vendor Hedman Mines?
A. Yes.
Q. Okay. And again it's for Hedman cationic fiber is what it says?

A. Yes.
Q. Do you know what cationic fiber is?
A. No.
Q. Do you know whether it contains any asbestos?
A. No.
Q. Do you know whether when Durez stopped using asbestos in their production they went to a non-asbestos product as a substitute?
A. I believe they would have done that, yes.
Q. Do you know whether it was cationic fiber?
A. No, I don't.
Q. Do you know for a fact, sir, if item 761 that you used in your brake project in fact contained asbestos?
A. Yes.
Q. How do you know that? Did you do any testing?
A. That was my understanding of code 761.
Q. But if --
A. In my code book, code 761 was asbestos.
Q. But if in fact the delivery was for something other than asbestos at about the time Durez stopped using asbestos, do you know whether your code book was updated?
A. I believe my code book was updated, yes.
Q. Well, by the way, this morning when I asked you a series of questions about the various companies against whom you make a claim, you're making claim for mesothelioma being

caused, are you not? Not asbestosis? I think I misspoke.

A. That's correct.

Q. You understood that, didn't you?

A. That was my understanding. I don't think you clarified that, but I took that to mean mesothelioma.

Q. Thank you. I did in my mind too.

Now, your position changed in 1980, did it not?

A. In 1980, I think I might have gotten a promotion to chemist.

Q. And at that time as I understand it you spent about fifty percent of your time as a molding compound trainee and about fifty percent of your time on this brake particle project?

A. It was about in that time frame. Maybe 1981. I'm not sure of the exact time of the cross training program.

Q. Was it when you joined the molding compound group?

A. Was what when I joined the molding compound group?

Q. That you were assigned to spend fifty percent of your time as a molding --

A. Molding compound trainee?

Q. Trainee.

A. When I -- when they started that program I spent on average fifty percent of my time as a molding compound trainee and also as a -- what I had been doing as an associate chemist in a phenolic resins group. So I

continued that as well as beginning a training program in molding compounds.

Q. Okay. And you were in that training program for about a year?

A. I think it was designed to run for a year, but it ran for less.

Q. Was that because of financial cut backs?

A. I'm not sure why. They just stopped the training program.

Q. You were never told why?

A. No.

Q. Now, is it your claim that you were exposed to asbestos through the evaluation of competitive molding compounds that you were involved in?

A. Yes.

Q. Okay. And it was during that training period, was it not?

A. Yes, it was.

Q. And you were exposed from a five step process, charging, blending, rolling, grinding and packing?

A. No.

Q. No?

A. No.

Q. Maybe I misunderstood, sir, but could we just take a look at your deposition, Page 198 and 199. And we're

referring to this same time period when you were at the molding trainee.

A. So I was at Durez?

Q. Yes, at Durez, in 1980 or '81, thereabouts.

A. Okay.

Q. Fair enough?

A. Sure.

Q. 198 Line 13, do you believe that you were exposed to asbestos during this time frame then both observing the manufacturing of the molding compound as well testing of competitors molding compounds? Well, in particular -- there's an objection -- I was exposed to molding compound dust in production certainly. Question, so the material being manufactured by Durez molding compounds. The material being manufactured by Durez, question mark. And your answer was by Durez, Durez molding compounds. Question, and that would be in the fashion that you described previously which was a five step manufacturing process, the charging, blending, dropping onto rolls, grinding and packing out. Answer yes. And the color lab. Mostly the color lab because I would be formulating and when you formulate you can't really afford to run ten thousand pound trials every time you want to. You have an idea so that you do it in the color lab which is a fraction of that?

A. Right.

Q. Question, would it be the same process. Answer, same process, yes. Question, same steps. Answer, same steps. So during the five step process in the color lab you were exposed in the same fashion to dust as you were -- as you described earlier in the prior position you held?

A. No. When I was there as a molding compound or a chemist in any fashion, beginning in 1979 and beyond, there was no use of asbestos by Durez. At no time was asbestos used in manufacturing by Durez after 1970 -- beginning in 1979. So I didn't -- no.

Q. 1980, however, you claim you were exposed to asbestos in the color lab?

A. That's not possible. They didn't make asbestos molding compounds in the color lab or in production at Durez. If that's what's indicated, then that's a misunderstanding of the question somehow.

Q. Sir, didn't you just testify or read your testimony in which you indicated that you were exposed to asbestos in the 1980-81 time period in the color lab?

A. That's in testing. In testing of products in the process, in a physical test lab I was exposed to asbestos by virtue of the fact that they were testing competitive materials. The competitors had not stopped using asbestos in their products and if we would obtain a sample, we would test it alongside of our samples and by virtue of the

testing and the expulsion of dust from the samples during the testing process, I was likely exposed to asbestos during those periods of time.

Q. Let me go back again, sir, ask you, did you not say, do you believe you were exposed to asbestos during this time frame, then by both observing the manufacturer of molding compounds, manufactured as well as the testing of competitors molding compounds.

A. I started answering.

Q. Your answer --

A. I started answering, sir, and I was interrupted by an objection.

Q. And then you finished your answer?

A. Much -- I am sure a while later. By then we were off onto what I thought was a different topic which was testing of the samples in the physical test lab. So that's a misunderstanding of the question --

Q. Sir --

A. -- flow.

Q. The question is clear though, is it not, as you sit here today?

A. As I sit here today I said the question and the answer followed immediately but as I sat there last year I'm sure it did not.

Q. The total objection is three words, is it not, object

to form and then you answered?

A. I think they had some discussion of that, sir.

Q. Does it indicate --

A. Maybe not.

Q. -- discussion off the record?

A. Not on that.

Q. And there was a court reporter there who took everything down, right?

A. Yes.

Q. So it was -- well, your answer was, well, in particular, and then there was objection to the form.

A. Yes.

Q. And you continued, I was exposed to molding compound dust in production certainly. Is that your answer?

A. I was exposed to molding compound dust in production.

Q. And then the next question is, so material being manufactured by Durez question mark. Your answer, by Durez. Durez molding compounds, is that your answer?

A. Molding compound dust is fundamental to Durez manufacturer of phenolic molding compounds. Whether or not it contains asbestos is really a separate question, sir. It is a dusty process. If you're making phenolic molding compound it's generating dust. It could be wood flour. It could be fiberglass. It could be any number of fillers. Prior to 1979 in building 88 it was asbestos.

Q. Sir, the question was quite clear, was it not? Do you believe you were exposed to asbestos during this time frame. I was exposed to molding compound dust in production certainly. So the material being manufactured by Durez. Answer, by Durez molding compound --

MR. VONA: Judge, objection.

THE WITNESS: I was exposed to molding compound dust, that's correct.

THE COURT: Objection is overruled. The witness has answered the question.

BY MR. CROSBY:

Q. And the competitors compound that you were testing that had asbestos in them that you were testing were manufactured by whom?

A. They were manufactured by the competitor. It could have been Plenco or Rogers. Could have been Reichhold.

Q. You recall saying you recall testing Rogers, Reichhold, GE and Plenco?

A. I think so. Yes, I did. And occasionally Union Carbide.

Q. And you believe that as a result of that testing you were exposed to asbestos?

A. Via the testing of certain samples that were received from our competitors.

Q. How much of your time was being spent in that

position as opposed to being in the brake particle?

A. Well, for that time period, I guess I would spend -- the intention was to spend about fifty percent of my time in phenolic resins and about fifty percent of my time in phenolic molding compounds. And that ran for about a -- maybe a nine or ten month period and then I went back to full-time in phenolic resins.

Q. And the brake particle project was in phenolic resins, right?

A. Yes, it was.

Q. And was that project already under way when you were transferred into that department?

A. Yes.

Q. And if I recall your testimony yesterday, there was another gentleman who was handling it who was transferred out and then you took over, is that --

A. Not exactly. He retired.

Q. He retired and then you took over?

A. Yes.

Q. And that would have been some time, what month in 1980?

A. Actually it was in 1979.

Q. What month did you take over that project?

A. It was late in the year. Maybe October. September, October time frame perhaps.

Q. Didn't you tell us yesterday it was 1980?
A. It was about 1980. It was late in the year of 1979.
Q. Now, tell me when you got involved in the brake particle project, was there a protocol that was written up?
A. For what part of it, sir?
Q. For the project.
A. Well, we had an overall project directive.
Q. And what --
A. Nothing written in terms of a plan you mean?
Q. Um-hum.
A. I generated my own milestones with the aid of my supervisor.
Q. What were your milestones?
A. I really don't recall them in detail right now. I know one had to do with matching a frictional characteristic of the current product being used by the customers, Bendex and Borg-Warner were using a product made from cashew oil. And we were to match the performance characteristic of that while maintaining a low cost profile. So that was part of it.
Q. Okay. And the reason -- what was the basic reason for this project?
A. The current product, cashew oil particle that was being used in the industry at the time was coming in short supply and the price was going up. So Durez management

thought to fund a project that could compete in that market.

Q. And when was that funding put in place?

A. I don't know.

Q. When you moved in to take over that project, what information were you given?

A. I was given some information about how to prepare a friction particle and some background on the current physical properties of the current product, particle size and such.

Q. Was Durez manufacturing friction products at that time?

A. They were manufacturing resins that were sold to the friction customers such as Bondex or Borg-Warner and they would take our resin and mix it with a host of ingredients, asbestos among them certainly and they would make brake linings and clutch facings from those mixtures.

Q. So that at that point in time Durez was not in the business of manufacturing their own friction products?

A. Well, that's correct. Durez had no time manufactured a finished friction compound.

Q. By friction compound we're talking about essentially a brake shoe for example?

A. A brake shoe or the component mixture that would become a brake shoe.

Q. So your -- Durez participation in that industry was

as a supplier or a potential supplier of resins?

A. Initially. And we had been a long time supplier to that industry. We wanted to expand our contribution by now supplying that market with a friction particle that would supplant or augment their current supply which was based on cashew oil.

Q. So was it your goal to ultimately get into the -- an expanded role in the market?

A. Expanded role as a supplier to their product mix, yes.

Q. And what you intended to do was not only supply the bonding material or the glue but to add an ingredient?

A. Yes.

Q. And that would go to the friction manufacturer or common terms the brake manufacturer?

A. Correct.

Q. They would then add other compounds to it and formulate the brake pad or brake shoe?

A. That's right.

Q. Just so we're clear, it was not your intention nor was it the business of Durez at that point in time to supply completed compounds that included the remaining friction materials?

A. That's my understanding.

Q. Okay. And that was your understanding of your

project, correct?

A. My project was to formulate and prepare a friction particle as a component for our customers to use as a component to their friction compound, yes.

Q. What you wanted to do is see if you could come up with something to replace cashew oil?

A. Yes.

Q. Now, before you started mixing compounds, did you take some time to develop potential mixes that could be tested?

A. No.

Q. So you immediately started testing?

A. Well, we received recipes from our customers, so they guided us. They were encouraging us because they were in a spot. They had to pay a lot of money for their cashew oil particle. Supply was becoming tight and they welcomed the opportunity to test a product that would perform just as well and cost less. So they had provided recipes to us.

Q. You said they provided recipes. Recipes for the compound that they used to manufacture brakes?

A. I doubt if any of them were the actual production compounds. They have a whole host of items that go into a brake lining pad, most of which they undoubtedly keep secret. And there was no need to have every bit of minutia. What they gave us was a test relation that we should use and

screen our friction particle in that test compound and then test many and see which ones performed best by virtue of its and among other things FAST machine results.

Q. So before you started testing anything, you knew you wanted to replace cashew oil, correct?

A. Yes.

Q. What were the various substitutes that you considered utilizing?

A. Well, much of that work was done by my predecessor, so we did not -- I did not have a broad range of powerful materials. They were phenolics certainly, but I didn't go outside the realm of phenolics. So I didn't look at acrylic and I didn't look at polyacrylates or anything like that. I simply looked at phenolics.

Q. Now, you said you got recipes from customers?

A. Yes.

Q. Who were your customers?

A. At the time they were Borg-Warner and Bendex and Abex. All brake lining manufacturers.

Q. You didn't get a recipe from Ford, did you?

A. No.

Q. Ford wasn't a customer?

A. No. Not to my knowledge.

Q. So did you get the recipes? Did you meet with people from Bendex and Borg-Warner and Abex?

A. Usually it was someone else. It could have been a salesman that had a meeting.

Q. You don't know who it was?

A. I don't know who it was.

Q. So the answer is --

A. At one -- at one meeting I was present at and we talked about it. We panted some ideas back and forth. But the actual formulas came to me through other means other than direct contact.

Q. Who was it at that meeting?

A. I forget the particulars of that. It was early on in my participation.

Q. So -- who was outside of Durez at that meeting? What company was represented, do you remember?

A. No, I don't.

Q. Do you know if it was any of the outside companies?

A. Oh, it was likely one of the customers that I mentioned, yes.

Q. You say likely. Do you know?

A. I don't know which one, but it would wouldn't have been somebody that didn't have an interest in friction particle.

Q. So you get the recipes and how were they presented to you?

A. On paper.

Q. A sheet of paper, more than one sheet of paper?
A. Usually one sheet of paper.
Q. Were the recipes all the same?
A. No. They varied.
Q. How many recipes did you have?
A. I had three recipes.
Q. From whom?
A. Well, they would have been from Abex and Borg-Warner and Bendex.
Q. Were they marked, Bendex Borg-Warner, Abex?
A. I believe they were.
Q. And tell me now once you had the recipes, what did you do in order to go on with your project? How did you evaluate those recipes and come up with a test sample?
A. Well, I would follow the recipe instructions. If it required a -- typically an assemblage of the raw materials and a process to blend them, mix them intimately, then they would need to be molded, a sample removed appropriately sized for testing and then tested.
Q. Those were the steps that you would follow?
A. Those are the overall steps.
Q. But the recipes didn't contain those steps, did they?
A. Sure they did.
Q. Let's start with the raw materials. Tell me about the raw materials that you utilized to formulate these test

samples.

A. Well, it varied. Some -- all of them had asbestos and of course they had resin and of course they had a friction particle candidate.

Q. What do you mean by a friction particle candidate?

A. Well, I would make a friction particle according to a plan of mine to check the validity of its performance. In other words I would change some factor in making the friction particle. It could be a component of making the product, curing the product or the particle size of the product. Many variables go into an experiment and I would out of that would become a friction particle. Not all the friction particles were alike.

Q. Friction particle is the end sample, is it not? Is that --

A. It's the end sample that we call friction particle. But it's a small component of the overall mixture.

Q. And just so the jury understands what we're talking about, what do you mean by a friction product?

A. Friction product is a -- in my case, it was a molded article made from a composition, a mixture of ingredients that customers, our customers deemed suitable for use as a friction composition, a friction article, friction brake pad.

Q. Let me see if I can simplify it. By a friction

product you mean something that applies friction against another surface in order to cause that other surface to decelerate or slow down?

A. Sure. That's the intent of a friction article. Thank you for that.

Q. So we're talking a brake pad or brake shoe roughly?

A. Yes.

Q. In the final --

A. In the final object that I was intending to test, yes. It's a brake pad.

Q. And the brake pad works in what fashion?

A. By applying a force to a rotating wheel in your car on the wheel.

Q. And it has to have certain properties, does it not?

A. Yes, it does.

Q. It has to have a certain longevity?

A. Yes, I would expect that that's longer is better.

Q. It has to have a certain wear rate so you don't wear the brake out the first time?

A. That's the objective of the composition.

Q. It has to have a certain hardness to it?

A. I expect so. That was not one of the things that I took interest in.

Q. Does it have to be able to withstand heat?

A. Yes.

Q. And why is that?

A. Because there's a good deal of heat generated during the course of frictional force that's applied to the rotating wheel, the disc in your brake system.

Q. And the heat is generated by the contact between the brake and the friction surface, the wheel?

A. The rotating disk, yes, or a brake drum if it's a drum.

Q. And that friction brake shoe has to be able to absorb and withstand that heat, correct?

A. I imagine in the end analysis it does, yes.

Q. Well, you're testing -- ultimately tested to certain heat levels, didn't it, measured certain heat levels?

A. We measured it. We didn't control for it.

Q. Give the jury an example of the heat levels that you were testing that your testing disclosed your materials of being subjected to.

A. Going to several hundred degrees centigrade.

Q. Would that go up to 6 or 7 hundred degrees centigrade?

A. It would go to the five to six hundred range at times.

Q. So now you have your recipe. And you intended to make samples, correct?

A. Yes.

Q. And after you made the samples, completed the samples, you then intended to test them, is that correct?

A. Yes.

Q. Okay. And we've heard the term FAST machine. The FAST machine was a device that you choose to use to test?

A. Among other things, yes.

Q. Now, let's go to the beginning of the process. You have the recipe but you ultimately want to end up with a sample that you can test. What's the first thing you do?

A. Well, obviously round up the materials and weigh them out accurately into a container. The container I chose was a gallon paint can.

Q. So you took the materials which included asbestos?

A. Asbestos.

Q. And what else?

A. Resin.

Q. Okay.

A. Friction particle.

Q. Okay.

A. And it would vary. I don't recall all the ingredients. I think some formulations had a little graphite in it and some might have a little barium in it.

Q. Now when you went to obtain the asbestos, where did you go?

A. I went to our laboratory stores.

Q. Were they still stocking asbestos even though you weren't using it in production?

A. They did in my laboratory, yes.

Q. When you went to your laboratory stores, what did the container that contained asbestos look like?

A. There was a fiber drum.

Q. What did it say on it?

A. C-761.

Q. Say anything else?

A. Not that I can recall.

Q. And how would you get that asbestos into your paint can?

A. Well, I'd scoop it out. Take the cover off, it was a cardboard fiber cover and remove that and -- by means of a scoop. I would take some out, put it into an appropriate container and weigh it to the required amount.

Q. So you scooped raw asbestos up out of the can?

A. Out of the drum.

Q. And put it into a can?

A. Put it into a can, correct.

Q. Did that generate dust?

A. Yes.

Q. And you weren't wearing any protective gear at that point?

A. No.

Q. And then you took that raw asbestos and you mixed it with other or put other ingredients into the can, right?

A. Yes.

Q. And then you weighed the whole thing?

A. No. I weighed them as I went along.

Q. How would you weigh the asbestos? Put it in another container or leave it in the scooper?

A. Oftentimes I put the can on the scale, tear the scale to zero. That's the process where you eliminate the weight of the container and the scale reads zero. So if you need one hundred grams of something, you'd weighed it. You add material till one hundred grams was achieved and you're done with that.

Q. Then you add another material?

A. Add another material.

Q. What happens if you put a little bit too much of the other material in, do you have to go back and odd more asbestos?

A. I wouldn't do that. I would be careful and add the correct amount.

Q. So you've got all these raw materials that you've scooped out of different materials I take it?

A. Different containers, sure.

Q. You put them in a paint can. What did you do with the paint can?

A. Well, I additionally added some mixers in the form of ceramic balls and I put few of these, five or six at most into the can. I'd put the cover on the can and then take it over to a roller mill which was simply a set of rollers that would turn slowly and the balls inside would cascade as the can turned and it would intimately mix the ingredients.

Q. And as you poured the materials from the paint can into the mixture, was it dusty?

A. No, I didn't pour the material from the paint can into the mixer. The paint can was the mixer.

Q. And you put the ceramic balls inside the paint can?

A. Sure.

Q. Was that part of a mixing machine?

A. It was a roller mill. It was a set of rolls that turned that turned the can slowly. One roller would turn and the can would rotate and as the can rotated, the balls inside would roll around and intimately dry the dry ingredients together.

Q. And they're still in raw form, are they not?

A. Yes, they're all dry and raw form.

Q. And you would then open the can up and take the ceramic balls out, correct?

A. Yes.

Q. And scoop out the friction composition?

A. Yes.

Q. And that created dust, didn't it?
A. Some dust, yes.
Q. Now, the rolling machine that you used for mixing this asbestos material, who made that?
A. I don't know.
Q. Did that have any warnings on it not to use with asbestos?
A. I don't know.
Q. And then after you scooped out the materials, you loaded the friction composition into a mold, right?
A. Yes.
Q. And that created dust?
A. It did.
Q. Okay. And tell me about the mold, how did you decide on the size mold you wanted to make?
A. The mold was predetermined. It was there in place before I started.
Q. What do you mean it was predetermined? Did you have various molds you were going to use?
A. No. Not a wide range. This was the mold that we used to make the brake lining.
Q. I thought you didn't make brake linings.
A. In the laboratories we did. We used a compression mold to make a -- what essentially is a brake line. This is not a production item. It's a laboratory sample. So we had

a mold that was shaped in the shape of a brake lining.

Q. I guess I misunderstood. I thought you told us earlier that Durez didn't make brake linings, that you had to go get a recipe from three different companies in order to learn how to make the brake lining?

A. We got the recipe from brake lining customers. They told us how to make a friction composition. Took that composition, put that together like a recipe and we baked it. We baked it in a mold, in a hot mold with a press.

Q. My question is: Who chose that mold?

A. I don't know. It was chosen before I started on the project.

Q. Did you have other molds available to you in your laboratory?

A. No.

Q. Any other testing that you were doing?

A. That was the only item that I ever molded.

Q. Okay. So after you loaded the friction composition into the mold and dust came off of it, again, you were still not wearing any mask of any kind, correct?

A. Right.

Q. You would then clean the area, would you not?

A. Yes.

Q. How would you do that?

A. Well, by brushing it down and blowing out the mold

area with an air hose.

Q. Was that a commercial air hose.

A. I don't know what you mean by that.

Q. Was it made by somebody other than Durez?

A. Durez didn't make our hoses.

Q. So did the air hose have on it any warnings not to blow dust that was latent with asbestos?

A. Air hoses are intended to blow things around.

Q. So there was no warning about asbestos with the air hose?

A. None that I saw.

Q. And then what did you do with the mold after it was mixed and filled?

A. I closed the press.

Q. And what happened then?

A. The materials started to bake and get hot. The resin melts. It flows over the other ingredients and it thermally cures. It sets to a hard plastic state.

Q. Okay.

A. And after a quantity of time, the mold is opened, the part is retrieved and as I said the mold and molding area is cleaned.

Q. Now, is that the final stage before you went out to test it?

A. We let the part cool, yes.

Q. Now, do you believe that you were caused to be exposed to asbestos at each stage of this operation?

A. Yes.

Q. Okay. You agree it was a dusty process from the loading of the ingredients into the mill till the final removal?

A. Yes, it was a dusty process.

Q. After opening the mill, you had even more dust than you started out with, correct, at the end of the first mixing cycle?

A. What stage?

Q. Let's go back. From the loading of the ingredients into the mill, that generated a fair --

A. Into the can?

Q. Into the can.

A. Okay.

MR. VONA: Judge, just note my objection to the repetitiveness.

THE COURT: I think this is the last time counsel will go through the process because I'm going to ask him to go onto something else.

BY MR. CROSBY:

Q. So you load the ingredients into the mill which generates a fair amount of dust?

A. Yes.

Q. And you were in close proximity to that?
A. Yes.
Q. And after opening the mill or the mix, right?
A. The can, yes.
Q. The can, that generated even more dust?
A. Yes.
Q. And that dust was finer than before?
A. It seemed to be.
Q. And then you removed the balls and cleaned them with an air hose and that blew dust in the air?
A. Yes.
Q. And then you removed the sample from the mill and put it in another container and cleaned out the mill?
A. Yes, the can.
Q. Again using an air hose?
A. Well, yes.
Q. And that generated a great deal of dust, isn't that what you told us?
A. It generated a great deal of dust, yes.
Q. And then you baked it?
A. Baked it in a mold.
Q. And after you molded it, you had a finished compound?
A. Yes.
Q. But before you went onto test it, you had to clean the area, right?

A. Yes.

Q. And you blew all the items down, all the apparatus down, right?

A. Brushed it down and blew out what I couldn't brush.

Q. And that created more dust in the air?

A. Similar, yes.

Q. Now you've got a finished piece. By the way, Ford had no input into that process, did they?

MR. VONA: Object to form.

THE COURT: Overruled.

THE WITNESS: I don't know what input they had into that process.

BY MR. CROSBY:

Q. Do you know of any input that Ford had into that process that you just went through?

A. I received the process from our customers. Ford may well have had a good deal of influence at our customers concerning the process. So I don't know what influence Ford had.

Q. Do you know of any input that Ford had into that process? Do you know of any?

A. No.

Q. All you know is that process was generated by three customers and Durez?

A. It was generated by our customers and carried out by

Durez.

Q. And that process carried out by Durez was similar to the process you followed in other formulations, wasn't it?

A. What other formula?

Q. The five step process.

A. No. What five -- the five step process or four step process that you seem to be referring to is a production process, right, where materials are charged in building 88? Is that what you're referring to?

Q. Uh-huh.

A. No, those two processes don't have anything in common.

Q. Okay. After --

A. Other than the mixing of the ingredients. I mean there's no hot, heated rollers as there is in production. There's no pack out station. There's no, you know, none of that.

Q. After you finished with the actual molding of the product, what was the next thing you did?

A. Well, we cooled the item and then I cut a piece out of it that would fit into a sample cell on the FAST machine.

Q. Okay. Let's go back -- how big a piece did you have when you completed your molding process? How big was the total sample?

A. I don't know that I actually measured it. It was

probably four to six inches across. Maybe four, five inches across. And maybe two or three inches high. I don't know. It was a pretty big piece compared to what I needed to test.

Q. And then you were going to perform a test as to whether or not that material had appropriate friction characteristic, right?

A. Yes.

Q. And what did you perform that test on?

A. You mean the machine? I used a FAST machine.

Q. What does FAST stand for, do you know?

A. Fast stands for Friction Assessment Screening Test.

Q. And that's a test protocol, is it not?

A. Well, it's -- it's a procedure by which materials are tested for their frictional characteristics.

Q. By the way, did any of your suppliers that you were making these compounds for or hoping to sell to, did they dictate that you use the FAST machine?

A. I think in discussions -- I don't know how it was set up but again it was before my time. But I think they were willing to accept information from our FAST machine because I was told they had FAST machines as well as many other machines that went way beyond the FAST machine.

Q. My question is: Do you personally know whether any of Abex, Bendex or Borg-Warner said we want you to test this product on the FAST machine before you come back to us?

A. I had no direct knowledge of that.

Q. Okay. So you don't know?

A. Project was orchestrated before my contribution started.

Q. Okay. Now, you were going to test a sample, right?

A. Yes.

Q. Correct? And you were going to test it on the FAST machine?

A. Yes.

Q. Who told you to use the FAST machine?

A. It would have been part of my discussions with my supervisor and a prior investigator on the project.

Q. What did your supervisor say?

A. He agreed that we should continue testing the FAST machine.

Q. Had you ever used the FAST machine at any time before you went on that project?

A. No.

Q. Do you know where the FAST machine came from, where Durez got it, do you know?

A. I don't know exactly where they got it from.

Q. Do you know when they got it?

A. Nope.

Q. Did anyone instruct you, any individual instruct you on how to use the machine?

A. I think I had a run through with that machine early on when I assumed the program from the original investigator.

Q. By the way, how many FAST machines did Durez have?

A. I knew of just one.

Q. And one was in that laboratory?

A. It was in an area called the analytical laboratory. It was separate from the physical test laboratory and separate my laboratory.

Q. And the analytical laboratory, do you know how long it had been there.

A. No, I don't know.

Q. What's meant by analytical laboratory?

A. Well, it can mean a lot of things. In our case it was designation for an area that held instrumentation. Complex electronics, liquid chromatograph, gas chromatograph. It wasn't a wet chemistry laboratory. It was an analysis laboratory that used interim instruments to measure purities and so forth.

Q. And would that laboratory been utilized to investigate or analyze other friction materials over the years?

A. Not to my knowledge.

Q. So before 1979?

A. Excuse me. Other than phenolic resin which may well

have been sold to the friction compounders.

Q. So phenolic resin, I think you told us from 1977 to 1979 you were aware of phenolic resins being manufactured in production with asbestos?

A. Phenolic resin never contained asbestos whether in production or in the laboratory.

Q. Were they mixed with asbestos?

A. Not at Durez, other than my project.

Q. On any of the instruments in that laboratory, did you see any warnings with regard to asbestos?

A. No.

Q. In that laboratory, did you see any warnings posted by Durez with regard to testing asbestos products or other products that may or may not be harmful to an individual?

A. No.

Q. In that laboratory, did you have access to a mask?

A. No.

Q. In 1980?

A. I have no recollection of that.

Q. In 1980, did you have access to a mask if you chose to have one prior to performing any task on the premises?

A. I don't recall seeing any masks around, no.

Q. Now, you indicated that this machine, you don't know when this machine was acquired?

A. No.

Q. Do you know if it had been there for a number of years?

A. I don't know.

Q. Have you ever seen any documentation as to when Durez acquired the machine?

A. I don't know. I don't have any recollection of when we would have received the machine.

Q. Do you agree with me, sir, that prior to 1979, Durez management was aware of asbestos health issues at their facility?

MR. VONA: Object. Your Honor, may we approach?

THE COURT: Step up.

(Whereupon a bench conference was held).

THE COURT: The objection is overruled. Read the question back, please.

(Whereupon the reporter read back the requested question)

THE WITNESS: I wasn't an employee of Durez prior to 1979, and therefore I have no knowledge of when they acquired knowledge of asbestos health hazards.

BY MR. CROSBY:

Q. Well, at any time did you learn that they stopped utilizing asbestos in production because they were aware of

potential health hazards?

A. I know they stopped using asbestos -- I learned they stopped using asbestos in 1979 during the health monitoring program that was announced in the mid '80s, mid to late '80s. That's when I learned that they had -- I'm trying to think back. I guess I didn't know the specificity of the date of when they stopped using asbestos. I learned in the mid '80s that they stopped using it in 1980 -- before 1979 or by 1979. I knew they weren't using asbestos in production but I didn't know when they stopped until the mid '80s.

Q. And when you learned when they stopped, did you also learn that the reason they stopped was because of potential health issues with regard to asbestos ingestion by employees?

A. Again, that would have been the mid to late '80s.

Q. You learned that?

A. I learned that in our health monitoring program meetings.

Q. As the reason why back in the '70s they stopped using it?

A. Yes.

Q. Okay. So before you used this machine, you would agree with me that if the machines were to be utilized with asbestos products that Durez was aware of potential health

hazards associated with it?

A. I have no knowledge of that. I just explained, I wasn't aware of -- I don't know when they became aware of it. I wasn't aware of it until the mid to late '80s.

Q. I appreciate you didn't learn about it till the '80s.

A. Right.

Q. When you did learn about it, you learned that they had stopped using it because of potential health problems?

A. I don't know why they stopped. Before 19 -- mid 80 I had no reason -- I had no knowledge why they stopped. They may well have known. I don't know that for sure. I wasn't even an employee then.

Q. When you went into the health monitoring program, did you learn that you were in the health monitoring program because Durez was concerned that you had been exposed to asbestos?

A. Yes.

Q. And that Durez was aware that asbestos in one form or another could potentially cause mesothelioma?

A. I don't know what their awareness level was, sir.

Q. What were you told?

A. We were told that there was some potential health hazards if you were exposed to asbestos. I don't know if they got specific as to diseases or not. I can't recall the specifics of that. I knew that they started a health

monitoring program. They spoke of many issues concerning lung ailments. I don't know if mesothelioma was among them. It may have been.

Q. But it had to do with exposure to asbestos?

A. It did.

Q. Now, tell me what you did in order to obtain a sample to use on the FAST machine.

A. I -- the friction pad, brake pad into a vice and I cut a sample from it using a hacksaw approximately a half inch by half inch, actually a little bit larger. And after retrieving that small sample, I would take it over to another device. If I cut it a little bit too big, I would have to grind it. Sometimes I'd use a grinder to do that. But once I got it to a certain size, I put it into a jig that was made especially to shape a sample to a specific size.

Q. Let me stop you at that point. The sample that you're cutting is from a bonded finished material, right?

A. Yes.

Q. We no longer have raw asbestos, we have asbestos that has been mixed with resins and other materials and baked?

A. Well, it's still raw asbestos in my opinion. It's not been changed chemically in any way. It's been mixed with a resin and other fillers and it's been baked into a shape so that the resin can harden. Now the resin has

undergone significant changes because it has to harden substantively to bond all the ingredients.

Q. Well, you're a chemist, sir. Did you ever test any of the asbestos fibers after they had been bonded and baked to see whether there was any chemical composition change to them?

A. No.

Q. Would it surprise you if there was?

A. I would think I would be a bit surprised if there was a substantial change.

Q. But you don't know one way or another?

A. You asked me if I would be surprised and I told you yes.

Q. You said you would be surprised but you have no knowledge one way or another whether there was?

A. No, because I didn't test it.

MR. VONA: That's not asbestos, is it?

MR. CROSBY: Would you mark that, please.

(Whereupon the reporter marked the Brake Shoe as Defendant's Exhibit F for identification.)

BY MR. CROSBY:

Q. Let me show you, sir, what's been marked as Defendant's Exhibit F. Do you recognize generally what that is on top?

A. Yes. It's a friction lining.

Q. And I represent to you that it is not the same composition as the one you were making. But is that generally the type of surface that you would have been working with after you had completed the molding process?

A. Generally, yes.

Q. So it's a hardened surface, right?

A. Yes.

Q. It's -- there is no floating asbestos in the air, correct?

MR. VONA: Objection, Your Honor.

THE WITNESS: I don't know --

THE COURT: Wait a minute. Wait a minute. What's your objection?

MR. VONA: Objection to form and foundation.

THE COURT: Sustained. Rephrase that question.

BY MR. CROSBY:

Q. The sample that you took out, was it generally in that size and shape?

A. I think it was not as long and it was wider.

Q. Okay. And after you got your sample out of the mold and you cut it with a hacksaw, how large a sample were you cutting?

A. I would target a half by half -- one half inch by one

half inch or slightly a bit larger.

Q. Actually half inch by half inch by 8th of an inch?

A. Approximately an inch 8th of an inch, yes.

MR. CROSBY: Would you mark this, please.

(Whereupon the reporter marked the Piece of Paper as Defendant's Exhibit G for identification.)

BY MR. CROSBY:

Q. Let me show if you, sir, understanding that this is not the same material but just for dimensional purposes, would you agree that is approximately the size of the sample that you cut?

A. No. The size that I cut was again half inch by half inch or little larger. And it was thicker than that.

Q. Okay. How much thicker? I would represent to you that that's an 8th of an inch.

A. The mold, the mold that I used produced a sample that was thicker than that, so I would have to remove that material before testing it. But that's the size of the sample that I eventually tested.

Q. Okay. So this is the size of the sample piece that you were going to test, correct?

A. After grinding and filing and shaping, yes.

MR. CROSBY: I move this into evidence.

MR. VONA: Okay. No objection.

MR. CROSBY: May we show that to the jury? He has no objection.

THE COURT: The officer will take care of that.

(Whereupon Defendant's Exhibit G was entered into evidence)

THE COURT: Officer, I would like to see it.

BY MR. CROSBY:

Q. Now, in order to get that, you indicated you had to cut from the larger sheet a piece that was half inch by half inch, right?

A. Approximately.

Q. Did you do that on the corner I assume?

A. I did a little on the side.

Q. So you would have to make two cuts?

A. Yes.

Q. And those were -- what kind of blade was on that hacksaw?

A. I don't recall. Typical hacksaw blade I guess.

Q. And it would go through that material?

A. Quite easily.

Q. So easily going through that material, that material remain bonded, did it not?

A. Not the part that I cut, no.

Q. The part that you cut ended up as a solid piece,

didn't it?

A. That's the part I cut out. But the cut line did not remain bonded, no.

Q. I guess I don't understand what you're saying. The remainder of the piece remained bonded, didn't it?

A. Oh, the remainder of the brake shoe?

Q. Yeah.

A. The brake lining. Yeah, that remained bonded, yeah.

Q. And the small piece you were going to use remained bonded?

A. Right, and the cut line between the two was not bonded. It was dusty. It was cuttings. It was a cutting from the material.

Q. So you're saying --

A. Just like you saw a piece of wood you will see sawdust.

Q. So you would get little bit of material from each of those cuts?

A. Sure.

Q. But that material was not or again it was still bonded material that had been cut?

A. It was cut from the larger sample, yes. I don't know what it was on microscopic sense, but it had particles. Some were lighter than others. Some fell down. Some kicked up.

Q. And the materials -- by the way, did that saw have a warning on it, don't cut into a material that has asbestos?

A. No.

Q. Now, when you took that small piece, you indicated you might have to fashion it down a little bit to fit into the mold, correct?

A. Yes.

Q. After you put it into the mold?

A. Well, not the mold. The sample cell. But it's a sample holder.

Q. Sample holder. You put it into the sample holder and what did you do with it?

A. After I put it in the sample holder?

Q. Yeah.

A. I moved -- well, it's on the arm. The sample holder is on the arm and the arm moves against an abrasive wheel on the FAST machine.

Q. Okay. And where are you standing when you do that?

A. I'm standing in immediate proximity to the machine.

Q. Behind it?

A. In front of it working.

Q. Like you said, front from back. Is the piece coming towards you or going away from you as you move it from its off position to its engaged position?

A. Piece is coming away from me.

Q. So then would you agree with me you're standing behind the sample piece that you're testing?

A. Oh, I see what you're saying. I was standing in front of the machine but behind the sample if you will.

Q. By the way, where that machine was located in that analytical laboratory, was that essentially a clean room?

A. No.

Q. Was there an exhaust duct for the machinery that was in there, test machinery? Was there an exhaust duct for the FAST machine?

A. There was a -- what we call an elephant trunk. An elephant trunk came down, it was maybe about four inches in diameter. It came down from an overhead duct that had a vacuum system incorporated, a rather weak one. Elephant trunk came down and ended at a fabricated piece of aluminum that sat behind the machine, right behind the machine and the intention was to draw air towards that fabrication.

Q. In other words --

A. But it didn't work very well.

Q. There was a device in that laboratory that would suck air or dust coming off of the machine by design?

A. By design. Not by fact, in my opinion.

Q. Did you ever make a complaint to anybody at Durez that it wasn't working right or wasn't adequate?

A. I think I mentioned it to the person that was in the

analytical lab at the time. That was his area principally. He ran the machines. He ran the instruments. He had general authority over the area and I mentioned it to him but I got no response that changed anything.

Q. But in any event was that particular air handling device, that vacuum system on when you were using the FAST machine?

A. My understanding is it was on twenty-four hours a day.

Q. So when you turned the FAST machine on, what's the next thing you did in order to test the sample?

A. Well, I would let -- I would turn the machine on first. There were pressures I think that had to be normalized and stabilized, settings that the machine were set at or preset at I should say and then I put the sample in place and let that run. And it would run for a period of time. Typically ninety minutes. And during the course of that running, the results would be displayed on a chart.

Q. So what you've done is -- let's back up. When you turned it onto run, was there an arm that went forward?

A. The arm was in place with the sample.

Q. And how would it come in contact with whatever it was to come in contact with?

A. There's an arm that pushed up against it with a certain force I believe. It was part of the mechanical

design of the instrument. And I'm not terribly sure the exact mechanics of it, but there was an arm that pushed up against the sample and I think it kept a certain force on the sample against the wheel.

Q. And the sample was being pushed against a rotating wheel, wasn't it?

A. Yeah. It was a being abraded by the wheel, yes.

Q. That's to simulate a brake being in contact with a wheel on a car or a truck?

A. Yes.

Q. And then to measure how it is reacting to that?

A. Yes.

Q. And when it was in place against that wheel and the wheel was turning, were there any shields or sides to the machine?

A. Shields or sides?

Q. Alongside of where the test piece was and the wheel.

A. None that I recall.

Q. Do you know whether there ever had those?

A. No, I don't know.

Q. You don't know?

A. I don't know.

Q. And as this wheel is turning and the brake is in contact with it --

A. There's a shield around the wheel. But if you're

talking about -- you said the samples and such, along the sides of the machine, no.

Q. There were shields around the wheel?

A. There was a shield around the wheel.

Q. How close was that shield to where the sample came in contact with the wheel?

A. I don't know. Probably within six inches.

Q. And as the wheel was turning and the sample is in contact and you're taking measurements, are you not?

A. No, I'm not. The recorder is.

Q. The recorder is part of the machine?

A. Well, it's an appendage to the machine. It takes the signals that the machine is generating and it turns them into a line on a chart. So then you can have a recording of what took place over a period of time.

Q. All right. And this test would go on for about ninety minutes?

A. That's right.

Q. And during that ninety minutes, this air vacuum system is engaged?

A. Such as it was.

Q. And over that ninety minutes, was there any reason for you to stop the machine for any reason?

A. Well, if the sample wore out prematurely it would risk running the arm into the wheel. The fear was it failed

from an excessively high wear rate, so we didn't want that to happen.

Q. My question is --

A. Oh, I would stop it early, of course.

Q. How many times did you stop it early?

A. Oh, I don't recall. It was once or twice early on in the program. That's why I stayed with the machine rather than walk away from it.

Q. And once the test was started, was there a timer that it went for ninety minutes?

A. I would stop it at the end of the 90 minute period. I would stop it myself.

Q. So you would start it and you would stop it?

A. Yes.

Q. And if the piece didn't wear out in between, you had no other duties while the test was going on?

A. I might have been doing some notebook work or sitting in the chair writing up formulations or something. I would do something important hopefully.

Q. You say --

A. At that time while watching the machine.

Q. I'm sorry. When you said you were -- you do notebook work or write up formulations. Where would you do that?

A. That would be in the immediate proximity of the machine in front of the machine.

Q. Was it at a desk?

A. No. It would be on a stool. I would be sitting on a bench and the machine was on that bench and I would be sitting typically on a stool in front of it.

Q. In front of the machine?

A. Yes.

Q. And the machine would do the test and then you'd shut it off and take readings and observations?

A. The readings were already recorded on the chart. I would read the results certainly and start to clean up the air. The wheel was hot, so I didn't go near that. I let it cool down.

Q. Would you remove the piece?

A. Eventually.

Q. Would you save the piece?

A. No.

Q. You just discard it?

A. I would discard that piece. Whatever was left of it.

Q. I'm sorry?

A. Whatever was left of it.

Q. Now, in the course of a test --

A. Let correct that.

Q. I'm sorry.

A. Early on I would tape the piece or take the piece and tape it to the chart with a piece of tape, but I stop doing

that after a short fashion.

Q. Similar to what I've done?

A. Not too different from that. I'd tape it up into the corner. But I stopped doing that after awhile. It didn't seem to serve any useful for my purposes.

Q. So then your contact with the sample or whatever was generated by the sample took place after the machine cooled down?

A. Well, whatever was being abraded was in the atmosphere or of the room and the proximity to that machine.

Q. When you say whatever was being abraded, in the course of this test, was certain materials in the various mixtures that you made worn out or abraded?

A. Were they worn out or abraded? Yes. That's the intention of that test.

Q. That was the intention?

A. Yes. Yes.

Q. And when material with the resin you were using and what you say was asbestos in that half inch by half inch piece wore out, do you know whether it wore out as a result of a shearing force?

A. I don't know exactly if there was. I'm sure it was a shearing force of some degree. It was certainly a friction force that was overcome as the wheel turned against the sample.

Q. And to the extent that it was as a result of a shearing force, do you know whether that shearing force altered the composition of the asbestos fibers that were in the product?

A. I don't know that.

Q. And as to the material that was left, you agree with me it appeared as though it was burned off?

MR. VONA: Object to form.

BY MR. CROSBY:

Q. How would you characterize it?

A. It was dusty.

Q. Okay. And are you aware of whether that dust was created as a result of the heat and the friction?

A. I know it was created as a result of the friction.

Q. And the friction occurred as a result of the pressure under heat?

A. The friction occurred as a result of an arm pushing against the sample with a certain hydraulic force. They had an oil pump and that would pump to a certain pressure that I forgot which pushes against that arm which pushes against a sample against the wheel. So that frictional force is what caused the dust in my opinion.

Q. And that frictional force generated a substantial amount of heat in the sample?

A. Yes, it did.

MR. VONA: Judge, I hate to interrupt Mr. Crosby. May we approach just briefly?

THE COURT: Yes.

(Whereupon a bench conference was held).

THE COURT: We'll be about ten minutes and then we're going to break for lunch.

MR. CROSBY: Can I have the last question and answer read.

(Whereupon the reporter read back the requested testimony)

BY MR. CROSBY:

Q. Do you know whether that heat changed the composition of whatever material was being generated off of the sample?

A. I know it changed the composition of the resin.

Q. And changing the composition of the resin, as a chemist do you also know it changed the composition of the asbestos?

A. I don't know if it changes the composition of the asbestos.

Q. Do you agree -- are you familiar with the term forsterite?

MR. VONA: Judge, again, this was asked on Friday. Asked and answered.

THE COURT: Let him answer the question.

THE WITNESS: No. As a chemist I didn't. I

didn't learn about minerals. They're not very interesting to a chemist, truth be told. So I don't know that the heat changed the asbestos.

BY MR. CROSBY:

Q. You're not aware the heat changing the asbestos into it forsterite?

A. No.

Q. And you indicated that it did change the composition of the resin. That's something you are familiar with?

A. I have some familiarity with that.

Q. And the asbestos would still be embedded or attached to or mixed in with the resin, was it not?

A. It was bonded by the resin.

Q. Bonded?

A. Bonded. It was bonded by the resin.

Q. So the residue was not free floating asbestos, it was bonded material that had been abraded?

MR. VONA: Object to form.

THE WITNESS: I don't know if it was free floating. It was all around the area, so it must have flowed somehow.

BY MR. CROSBY:

Q. Tell me how much did that half inch by half inch weigh?

A. I don't recall the weight. It was light.

Q. Did you ever measure how much dust came off that?
A. It varied. Some went down all the way to the sample holder and some didn't.
Q. Can you give me a quantification how much dust or residue came off of that sample?
A. I have not quantified it. It varied. It varied sometimes from sample to sample.
Q. What would be the lowest to highest if you can tell?
A. Zero to one hundred percent.
Q. A hundred percent of what?
A. One hundred percent of what the sample weighed. If the sample weighed two grams, then it could be approaching that.
Q. What did the samples weigh?
A. I don't know. I can't remember.
Q. So you can't give us any estimate as to how much residue?
THE COURT: That's what he said.
THE WITNESS: I just --
THE COURT: He answered your question. Go on with your next question.
THE WITNESS: I'm sorry.
BY MR. CROSBY:
Q. Just one or two other quick things. Do you recall yesterday we talked about your performance evaluation for

the year 1981?

A. Yes.

Q. And --

MR. CROSBY: We will move that into evidence.

MR. VONA: That's fine. No objection, Your Honor.

THE COURT: Is it marked?

MR. CROSBY: It is marked as Exhibit A, Your Honor.

THE COURT: Exhibit A is received.

(The document referred to as Defendant's Exhibit A was received in evidence.)

(Whereupon the reporter marked the Performance Evaluation as Defendant's Exhibit H for identification.)

(Whereupon the reporter marked the Performance Evaluation as Defendant's Exhibit I for identification.)

BY MR. CROSBY:

Q. Let me show you, Mr. Ginter, two additional performance reports. The first covering the period January '82 to January '83.

THE COURT: January when?

MR. CROSBY: '82 to January '83. And, Your

Honor, that is Defendant's H as in Henry for identification.

BY MR. CROSBY:

Q. You see that, sir?

A. I see the dates, yes.

Q. Previously when we looked at January '81 to January '82 it indicated that your project friction particle project ended as of October, '81. You recall that?

A. Yes.

Q. Okay. Consistent with that there is no mention on your performance evaluation for 1982 of the friction particle project, is there?

A. That was changed from -- I think what you're referring to there is we what he called friction particle and oil project, is it not?

Q. No. It says friction particle project, sir.

MR. VONA: Would you show the witness the exhibit.

MR. CROSBY: Sure. Defendant's Exhibit A, the highlighted --

THE WITNESS: What is the last line?

Additionally a patent was obtained on the oil process.

BY MR. CROSBY:

Q. Is that the -- not the cashew oil issue?

A. No. No, that's a medium that we used in one of

the -- one portion of the program to actually make the friction particle. It was made in a lubricating oil as the medium. And that was one portion of the friction particle program.

Q. Let me just ask you, sir, didn't you tell us fifty percent of your job in 1981 was this friction particle program?

A. Approximately, yes.

Q. Okay. Would you expect that the friction particle project would be a substantial portion of your annual evaluation? Comprise of fifty percent of your job?

A. It was one of the major programs for me.

Q. And the first entry on Exhibit A says friction particle project colon, correct?

A. Yes.

Q. Jim completed the milestones on this project up to its termination as of October, '81?

A. That was --

Q. Correct?

A. That was a particle and oil project, sir.

Q. Doesn't say particle and oil, does it?

A. That's what it was.

Q. It says additionally a patent was obtained on an oil process?

A. That's the process we worked on in that time frame.

Q. There's no other mention anywhere in this evaluation of that project, is there?

A. There wouldn't be any need to. The rest of the evaluation concerns other duties and responsibilities.

Q. Okay. If the project was not terminated in October of 1981, as this document would appear to indicate, can you show me any mention of it in your 1982 or 1983 annual reviews that are marked as Defendant's H and Defendant's I?

A. Let me look. It would have been in item three here on this document performance period 1-82 to 1-83. And it would have been in the third item where it says, resolved five projects or seventy-five percent of those assigned by technical manager. So it was likely right in there as one of my objectives for 1982.

Q. Does the word friction particle project appear in any evaluation in 1982 or '83?

A. No.

Q. Okay. By the way, you signed these, did you not?

A. I believe so, after they were discussed. There may have been changes to them after I had discussions with my supervisor and then I would have signed the final copy.

Q. Well, let's look at Defendant's Exhibit I. Is that your signature?

A. Yes, it is.

Q. Defendant's Exhibit A -- or Defendant's Exhibit H, is

that your signature?

A. Yes.

Q. So those would be the final documents, would they not?

A. Yes.

MR. CROSBY: We will move into evidence Defendant's Exhibit H and I.

MR. VONA: No objection.

THE COURT: Received.

(Whereupon Defendant's Exhibit H and I were entered into evidence)

MR. CROSBY: I believe, Your Honor, those are all the questions I have of this witness.

THE COURT: All right. A sigh of relief. We'll adjourn for an hour. Let's say 1:50.

(Whereupon a luncheon recess was taken).

THE COURT: Bring the jury in.

COURT CLERK: All jurors present, all counsel present.

THE COURT: All right. Members of the jury, I understand that you had a couple of questions about scheduling and I've spoken with the attorneys. Friday will be what we call a down day. It's a day when

there's no witnesses available. So you won't come in at all on Friday. Monday is a national holiday, so you won't come in on Monday. So when you leave Thursday, you will come back Tuesday. Now, tomorrow 1:30. We don't have any evidence to present in the morning, so if you report here at 1:30 in the afternoon. We'll have one witness tomorrow, what do you think?

MR. VONA: It's going to depend on -- we can't judge based on cross-examine, judge, but we intend to present Dr. Utell tomorrow afternoon.

THE COURT: At least a doctor will be testifying.

MR. VONA: Provided Dr. Abraham finishes this afternoon.

THE COURT: Well, that will happen, would be it?

MR. VONA: I certainly hope so.

THE COURT: You will move along expeditiously.

MR. VONA: Do my best.

THE COURT: Did that answer your questions? Now in terms of anybody who needs to use the rest room facilities, all you have to do is put up your hand where if there's anything else that you're having a problem about, put up your hand and we'll take care of

whatever you need immediately. Okay? Thank you.

MR. VONA: Thank you, judge.

COURT CLERK: Mr. Ginter, you're reminded you remain under oath.

THE WITNESS: Thank you.

MR. VONA: May I judge?

THE COURT: Yes.

MR. VONA: Thank you.

REDIRECT EXAMINATION

BY MR. VONA:

Q. Mr. Ginter, I want to thank you for your patience. I know it's been a long day. I'm going to be very brief. You've told this jury on Friday and also again today that you worked at Allied Chemical between September 1968 and December of 1968, correct?

A. That's correct.

Q. And also that you worked at Spaulding Fibre from I believe it was June of '69 till September of '69, correct?

A. That's right.

Q. Pretty good with dates, aren't you?

A. I'm pretty good with them, yes.

Q. Sir, to the best of your recollection, when did you work on the friction particle project at Durez?

A. I worked on it from late in 1979 into 1982, through 1982.

Q. About how long was that roughly?

A. It was approximately a three year program to my recollection.

Q. Okay. I'm going to show you briefly Defendant's Exhibit G in evidence. Do you remember getting questioned about this, sir?

A. Yes.

Q. This is pretty much representative of the sample that you used on the Ford FAST machine?

A. Size wise, yes.

Q. And true this would contain forty to sixty percent asbestos?

A. Yes.

Q. Based on the formulations?

A. Based on the formulations.

Q. Do you have any idea how many millions or trillions of asbestos fibers would be in here?

A. No.

Q. Now, you were asked a little bit about some of your insulation exposure at Allied Chemical. I just want to shift gears briefly. I'm going to show you Plaintiff's Exhibit 3 in evidence, the Ford FAST instruction manual. May I approach?

THE COURT: Go right ahead.

BY MR. VONA:

Q. If you can briefly go to the back of the instruction manual for figure four. Got it, Jim?

A. Yes.

Q. What is that essentially, sir? What's depicted there?

A. Well, it's a horizontal cross section of the machine.

Q. Of the FAST machine?

A. Of the FAST, yes.

Q. Say anything about insulation in there?

A. Well, it says something about an insulation washer.

Q. Right here, sir.

A. Here it says, on this side it says asbestos insulation.

Q. It says -- it actually says asbestos insulation?

A. Yes, it does.

Q. Okay. And sir, how close -- by looking at that diagram how close is that asbestos insulation to the friction disc?

A. It looks to be within a fraction of an inch.

Q. Sir, turn to Page 25 of the manual, please, under maintenance of the machine.

A. Yes.

Q. Okay. And if you could under number two, could you read the first sentence there, sir?

A. After exceptionally long use, the asbestos insulating

layer around the periphery of the friction disc tends to darken and indicates flaking off at the front edge.

Q. Flaking off. Friable, correct?

A. Yes.

Q. Jim, do you believe that you may have been exposed to asbestos from that insulation from working on the FAST machine while you were at Durez?

MR. CROSBY: Objection. Beyond the scope of direct.

THE COURT: Pardon?

MR. CROSBY: Beyond the copy of direct.

THE COURT: Sustained.

MR. VONA: I'll move on.

BY MR. VONA:

Q. During your cross-examination, sir, you talked about a jig. Do you recall that?

A. Yes.

Q. I could direct your attention to -- so I can speed this along, try to any way. Figure ten in the Ford instruction manual. Do you see that?

A. Yes.

Q. What's that picture of?

A. That's a picture of a what I call a jig. It's a device used to precisely shape the sample so that it fits properly into the sample holder of the FAST machine.

Q. Okay. And I don't mean to belabor it, but how do you shape that?

A. I shaped it with a file.

Q. And what's depicted in Exhibit No -- or, I'm sorry, figure number ten of Plaintiff's Exhibit No. 3, is that substantially similar to the jig you used at your time at Durez?

A. Yes, it is.

Q. You can put that down, sir. Also you were asked a series of questions about warnings on air hoses and other equipment that was at the Durez facility. You recall that?

A. Yes.

Q. Were any of those pieces of equipment that you were asked warnings about, were any of them used to specifically use to abrade friction material?

A. No.

Q. More specifically, were any of them used to abrade asbestos containing friction material?

A. No.

Q. Lastly, you were asked some questions on Friday about smoking and warnings, you recall that?

A. Yes.

Q. Okay. Sir, would it be a fair statement that during the time you smoked you were addicted to nicotine?

A. I would say I was addicted to nicotine.

Q. Jim, to your knowledge have you ever been addicted to asbestos fibers?

A. No.

MR. VONA: I don't have anything else, judge.

THE COURT: Recross?

MR. CROSBY: Nothing. Thank you, judge.

THE COURT: During the course of these trials, this is the first time this has come up. I'm going to allow jurors to suggest questions that the jurors think they might want to know the answers to. The way we do that is if you've got some question you want put to a witness before the witness is allowed to leave the witness stand, you write it out on a sheet of paper, I look it over, I review it with the attorneys and we determine whether or not it's a question that can be properly asked. If it's going to be asked I ask the question and then we get the answer. Sometimes that prompts follow-up questions, question, but usually not. If there's any member of the jury who would like to think he or she would like to hear an answer to a question from this witness, please write it out at this time. Is there anybody that has a question in their mind? If so, put up your hand. Nobody.

Sir, you may step down.

MR. PONTERIO: At this time plaintiff would

like to call Dr. Jerrold Abraham to the stand.

COURT OFFICER: Place your left hand on the Bible, raise your right hand.

JERROLD ABRAHAM, after having been first duly sworn, was examined and testified as follows:

COURT CLERK: Please state your name spell your last name for the record.

THE WITNESS: Jerrold Abraham, A-b-r-a-h-a-m.

THE COURT: City, town or village in which you live?

THE WITNESS: Fayetteville, New York.

COURT CLERK: Thank you. You may be seated.

THE WITNESS: Thank you.

DIRECT EXAMINATION

BY MR. PONTERIO:

Q. Good afternoon, Dr. Abraham.

A. Good afternoon.

Q. Could you please tell the jury what your profession is?

A. Yes. I'm a medical doctor specializing in pathology.

Q. And what is pathology?

A. Pathology is a science studying disease. So in medicine, pathologists are doctors who are trained to understand about the way diseases affect the person and especially day-to-day pathologists are the ones involved in

making the diagnosis when someone has anything removed from their body whether it's blood sample or a biopsy or a scraping like a Pap smear or an autopsy in some cases.

Q. Dr. Abraham, are you licensed to practice medicine in New York?

A. Yes, I am.

Q. And can you tell the jury how long have you been licensed to practice medicine in the state of New York?

A. Yes. Since 1983.

Q. And where are you presently employed?

A. I'm employed at the State University of New York at Upstate Medical University in Syracuse.

Q. And how long have you been employed there?

A. Since 1983.

Q. And what is your present position at the Health Science Center in Syracuse?

A. Well, in my department I'm professor of pathology in the pathology department and within that there's a small division that I run, it's called environmental and occupational pathology.

Q. And doctor, can you tell the jury what is environmental and occupational pathology?

A. Yes. It just refers to the area of interest of me in that case since I've been interested in diseases related to exposures people have through their occupation or somewhere

in the environment. So environmental and occupational just refers to my main area of interest over the last 30 something years. Diseases that are caused by people's exposures.

Q. And very briefly, what do your duties as director of environmental and occupational pathology at the Health Science Center involve?

A. Well, basically it means any cases from people where there's a question of or a known exposure to one or more different materials that might be related to their medical problem will come to my tension usually for review and sometimes further analysis.

Q. Doctor, do pathologists treat patients?

A. Only indirectly. Pathologists are more consultants to the practicing surgeon or internist.

MR. PONTERIO: I would like to have this marked for identification, please.

(Whereupon the reporter marked the CV as Plaintiff's Exhibit #4 for identification.)

BY MR. PONTERIO:

Q. I'm going to show you, doctor, what's been marked Plaintiff's Exhibit 4 and could you identify for us what this document is?

A. Yes. This is a copy of my curriculum vitae or resume.

Q. And doctor, can you very briefly highlight for us your educational background. By that I mean the colleges and universities you attended and the degrees you obtained.

A. Sure. I went to college at MIT or Massachusetts Institute of Technology and received my degree in biology life sciences. That was in 1966. Following that I went to medical school at University of California San Francisco and received my MD degree in 1970.

Q. And after completing your medical degree, did you perform an internship and residency?

A. Yes. So then I moved back to Boston. I did my internship starting my training in pathology at Children's Hospital in Boston and then my residency as Beth Israel Hospital in Boston.

Q. And doctor, in the field of medicine, what is meant by board certification?

A. Well, it's a kind of quality control approval mechanism in which different specialties -- there's a general one in medicine in general but most specialties have their own boards that are set up by the people experienced in that field. For example, in pathology there's a number, I don't know if it's fifteen or twenty pathologists that constitute the board and they set up criteria for training programs, the residency programs in pathology so they have to provide people who want to become pathologists with a

certain amount of experience and guidance from expert pathologists. And the boards also then constructs exams to test a person before they can become board certified. So to become certified you have to take training in an approved residency training program and in that specialty in pathology. And then you have to pass the board exam in that specialty. And if you do both those things, then you can be board certified.

Q. Are you board certified in any particular field of pathology?

A. Yes. I'm board certified in what's called anatomic pathology which is the half of pathology that deals with diagnosis of cells and tissues. The other half is called clinical pathology which deals more with examining blood samples or hematology kind of testing for diseases of the blood or chemical analysis or for drugs and abnormal chemicals in your body, fluids and also for micro biology for studying infections in your body.

Q. Doctor, have you published articles in the medical literature?

A. Yes, I have.

Q. Approximately how many?

A. It's close to 150 now.

Q. Have any of your publications touched upon the subject of asbestos related disease?

A. Yes. A number of them have. Since I became interested in occupational health, that was in 1972, actually when I started working in that area, and asbestos is one of the well-recognized occupational and environmental hazards resulting in disease. So that's been a main area of interest of mine. But it hasn't been the only area of my publications. Probably 10 or 15 deal substantially with asbestos and the others include some which deal with that partially.

Q. Doctor, during the course of your profession as a pathologist, have you been called upon to diagnose people with mesothelioma?

A. Yes, very often.

Q. And have you ever been called upon during the course of your profession to test materials for asbestos content in those products?

A. Yes, I have.

Q. Can you tell the jury just a little bit about that experience?

A. Well, I have to back up slightly because --

Q. Sure.

A. -- the training I had beginning in 1972 was with NIOSH, the National Institute of Occupational Safety and Health and at that lab which was in West Virginia there were a number of specialized electron microscopes available that

I had the chance to learn how to use and they were useful to analyze small dusting particles that can get into people's lung and one of those is asbestos. So over time I learned how to analyze asbestos and other materials in people's tissues. And also sometimes when we get reference materials of a person may have been exposed to, we try to see what matches up with what's in their lung. So looking things for asbestos included my own experience looking at play sand that my son didn't get exposed to but potentially could have been exposed to when he was three. We found some play sand that accidentally was put on the market even though it had some contamination with asbestos. We were able to analyze that and had to work out a method actually to find out how much asbestos was in it the number of asbestos fibers for example, in a certain amount of a gram or pound of the material. And I've also from time to time looked at other samples such as insulation materials to see if they in fact contained asbestos and what kind of asbestos.

Q. Doctor, just give the jury an idea how many individual asbestos fibers are there in one gram of asbestos?

A. Well, a gram is about a cubic centimeter, a volume of water, it would be about a gram. And in that amount of pure asbestos there would be on the order of ten trillion, that's one with 12 or 13 zeros after it fibers of asbestos.

Q. Dr. Abraham, have you been -- previously have you presented testimony to juries such as these seated here before Judge Lane on the subject of asbestos and mesothelioma?

A. I think so.

Q. Doctor, I would like to discuss with you if I may the lungs.

MR. PONTERIO: And if you can please mark this for identification.

(Whereupon the reporter marked the Lung Model as Plaintiff's Exhibit #5 for identification.)

BY MR. PONTERIO:

Q. Doctor Abraham, I'm going to show you what's been marked Plaintiff's Exhibit 5. Can you tell the jury what this is a model of?

A. Yeah. This is a model of the lungs in the chest and the heart and the voice box larynx and wind pipe or trachea and this sort of coral thing is the thyroid glands which sits on top of the trachea.

Q. With the Court's permission, Dr. Abraham, could you step down and I'm going to ask you some questions in front of the jury so everyone can see where you're pointing to. Dr. Abraham, can you tell the jury first off what type of tissue is the lung made up of?

A. Well, it's made up of -- the lung is made up of two main components; one is the airways that start with the trachea through the bronchi area to the ways. And then the functioning part of the lung that has air sacs is called alveoli. So this opens. With that removed I can show you basically the white branches are the airways or bronchi that carry the air into the lungs and then this cut across area, that coral colored represents the area where there's lots of air sacs. The actual air sacs are about a quarter of a millimeter. They're really too little to see without a magnifying glass. And in the lung there's approximately one hundred million or so of these little air sacs and you can think of a how bubble works if you have one big bubble there's not as much surface area, but if you divide it into thousands of them, you increase the area. That's how the lung increases the area that allows the air to get in contact with more blood 'cause in the walls of each of those little air sacs, they're little blood capillaries which carry red cells. So the oxygen comes into the air into the red cell and the carbon dioxide that you breathe out comes from getting out of your blood back into the air spaces, then it works its way back up these tubes to exhale it.

Q. Doctor, is the lung elastin?

A. This one isn't, but yours is. It let's you breathe so when you take a deep breath your lung gets in air and

expands. It has to be elastic to allow it to get bigger and smaller when you breathe.

Q. Can you give a description of what a healthy lung would feel like?

A. Well, it would feel like a very light sponge. Very easy to distort and it would be thin. If you cut across it the individual tissues are very thin like Cellophane.

Q. Now, thank you. Mr. Ginter has pleura mesothelioma. Can you show the jury where the pleura is located?

A. Yeah. It's actually -- this model shows the lung but it doesn't show the chest wall. Outside the lung is your chest wall, ribs, muscles and the lining. So the pleura is the surface lining of the chest wall. One surface is not shown here. If you figure the chest wall is around here. One lining is called parietal outside the lung pleura and the other is visceral. There's a lining of plural on the lung itself. There's also an area around the heart called the pericardium around the heart. So the pleura is the two surfaces on the chest wall and the lung and normally they're very smooth and that allows your lung to move when it expands when you breathe.

Q. How thick is the pleura?

A. Normally it's as thick as a few cells. Maybe ten microns or maybe one hundred microns at most which is about a tenth of a millimeter.

Q. What is the function of the pleura in our body? What purpose does it serve?

A. Well, normally it provides a surface to allow the -- as I said the lung to move. It has little bit of lubricant chemical that's produced by the cells that line it and it allows it to slide freely when you breathe.

Q. What could you compare the pleura to for the jury?

A. Well, the normal pleura is tapped to the chest wall and tapped to the lung. So you don't see it separate but if you peel it off again, it would be a very thin membrane.

Q. Thank you, doctor. If you could -- doctor, would you please tell us what asbestos is?

A. Asbestos is a name for a small group, actually a small group of mineral fibers that form naturally, geologically in the earth and it's characterized by minerals that grow as elongated fibers meaning they're longer than they are wide. And they grow often in bundles. So the fibers can then be laid part. They can be chopped and the name asbestos itself means that it doesn't burn. So that was discovered a couple thousand years ago at least that there were certain kind of mineral fibers that people could find in the ground in some places or in mines that could be used to weave fabrics even and those could be put into fire and they would lead to a whole industry over centuries of using it for asbestos, insulation material, to reduce fire

and also like straw was used in bricks, it was used to reinforce many things especially things that had to tolerate heat since it didn't burn.

Q. As a fiber, does asbestos have any airborne qualities?

A. Well, when it -- naturally in the ground it stays there, but if it's disturbed by mining or distance for any reason or if it's a product and gets abraded, or handled in some way it can release these fibers and as I mentioned before there's like trillions of fibers in a gram of the material so that tell us each one is very small. It's too small to see without a good microscope. When such things that are that small get into the air, they can stay there. They don't settle out right away. So one of the properties of asbestos fibers that gets into the air is it can remain there for hours or days, sometimes without settling out like some sand from the beach, it would settle out right away.

Q. Doctor, as part of your training and teaching in occupational and environmental medicine, did you come to learn how asbestos was utilized in various products?

A. Yes. I've read a fair amount about the history of that over the centuries, not me but the history over the centuries. And as I mentioned it's been used as an insulating fireproofing material. Reinforcing material. It's been used in thousands of different products around the

world over the last one hundred or more years.

Q. As part of the your profession in occupational and environmental medicine, can you tell us what was asbestos in friction material such as brake linings used for?

A. Well, it was used to provide friction. The rough surface of the brick rubbing over the brake drum helped cars or vehicles slow down or any other moving thing was subject to that friction of one thing moving over another and it was used for that because it was resistant to heat and 'cause it reinforced often it wasn't used just by itself but it was used in other materials as a mixture to help it be more strong and also to be fire resistant.

Q. Dr. Abraham, I would like you to assume that Mr. Ginter has testified that the brake lining friction material that he tested on the FAST machine was about one half inch by one half inch and contained a percentage of asbestos in the range of forty to sixty percent asbestos. My question to you is, as a pathologist in occupational and environmental medicine, are exposures to products containing a percentage of asbestos sufficient to cause mesothelioma?

A. Well, yes. I mean a product that has forty percent or even one percent or less asbestos can still have millions or trillions of fibers of forty or fifty percent in every piece of material of that size you describe. They don't all get released at once, but when they're abraded, some

fraction of them will get released and there's the potential for any asbestos exposure to cause any asbestos related disease.

Q. Dr. Abraham, I would like you to assume that Mr. Ginter testified on Friday and this morning that the Ford instruction manual for the FAST machine indicated he had to prepare a one half inch by one half inch piece of friction specimen in order to test it on the FAST machine. Can you give the jury an idea that substance that size that contains forty to sixty percent asbestos, how many asbestos fibers are we talking about in that sample?

A. Well, I didn't hear how thick it was, but let's say quarter of an inch or something like a brake pad for example. In that size that would probably weigh at least two or three grams or more. So there would probably be trillions of fibers in that one sample.

Q. Can you see an individual asbestos fiber with your eye if we're looking in the air right now?

A. No. I don't know of any that are big enough to see without a microscope.

Q. Why can't we see them?

A. They're just too small.

Q. At what concentrations can you see a person begin to see asbestos fibers in the air?

A. Well, when there's enough in the air to scatter

light. So if there's a bright light source, you've all seen sun coming through the window and showing dust in the air, so it's possible if there's several fibers or dozens of fibers in a very small volume of air that you can see that when bright light goes through it. But the light in this room you would need much more concentration to look dusty.

Q. Doctor, going back to the model of the lungs, can you show the jury, if you can step down, how an asbestos fiber from the air enters a person's lungs and the route that it travels?

A. Did you want me to come over there again?

Q. Yes, please.

A. So when you breathe, you breathe in either through your nose or your mouth and the air ultimately goes through the windpipe. You can see here this would be the vocal cords, the air goes through there. It goes down through the trachea to these bronchi. You can see where the trachea divides so there's one going to the left lung and one going to the right lung. So whenever you breathe in asbestos fibers, it goes in through your nose or mouth, goes down through the trachea or windpipe and then goes through these branches and they keep getting smaller and smaller. These bronchi until they get out to the alveoli which whatever you breathe in can ultimately if it's small enough make its way out to deposit very smallest airways called bronchiales or

actually deposit the alveoli themselves.

Q. Thank you. Doctor, the jury heard this term for the first time in openings called latency. Can you tell us in medicine what does the term latency mean?

A. Yes. It's a very important concept not just with asbestos but with many diseases that are caused by toxic materials. If you pour acid on your hand, you will know right away that's an injury. That's very short latency like a few seconds. But if you breathe in something toxic like asbestos although at the microscopic level inside your lung there could be damage to cells and changes going on, you won't notice a disease probably for many, many years. That's what's the latency that's used medically is from the time you first inhale something such as asbestos to the time a disease would become evident clinically. For example, if you had chest pain as the first sign of your mesothelioma or difficulty breathing, so that might be thirty years after your first exposure or twenty years or forty years. That would be the latency. It's measured as a time from your first exposure to something to asbestos for example and the recognition of a disease.

Q. Can a person be healthy for thirty years and suddenly develop an asbestos disease?

A. Well, they can be apparently healthy. They can be asymptomatic would be a better term because all this time

the injury happened and the reaction to it is progressive. The cancer doesn't happen suddenly. It may show up suddenly but it's been going on for a period of time before it becomes evident.

Q. Does a person have to be exposed to asbestos right up to the time they develop an asbestos disease?

A. You mean until the time they're diagnosed with it?

Q. Correct.

A. No. In fact, usually it's usually -- the disease has been in existence for several years before it becomes evident and the asbestos exposure might occur thirty years earlier and stop and then someone is still at risk of getting the disease from it thirty years later.

Q. Doctor, in this case, I'd like you to assume that between 1968 and 1983 Mr. Ginter was exposed to asbestos. I would like you further assume that Mr. Ginter was diagnosed with mesothelioma in March of 2010. My question, doctor, is that what is meant by latency, the period of time from his exposure to asbestos until the time in 2010 when he actually shows symptoms of the disease?

A. Well, the latency in his case would be from that first date which you said was '68. So '68 to 2010 which is thirty-two years, right? No -- thirty-two years.

Q. 42.

A. 42.

Q. And is latency for mesothelioma, is that generally recognized in the medical community?

A. Yes. I mean mesothelioma is one of the diseases that's recognized to have one of the longest latencies between exposure and development or diagnosis of that disease.

Q. What does the term dose response mean?

A. That refers to a measurement of the dose, amount of material someone is supposed to. That's calculated by taking the concentration for example in the air, times the number of years you're exposed to it at that concentration. So if you're exposed to one fiber per cubic centimeter and you have that same exposure for twenty years assuming it was even, which rarely is, but that would be a dose, cumulative dose called 20 fiber years. So it's fibers per volume of air. In most cases it's per cubic centimeter times the number of years. So that's the dose. It's measured by cumulative exposure. In other words, the sum, adding up all the exposures the person has had and then the response would be the disease, whether they have mesothelioma or some other asbestos related disease and that's measured for a group of people. So you can look at the number of people out of a group of a certain size that developed the disease compared with the dose. There's called a positive dose relationship; as the dose goes up, the disease, chance of getting the

disease or its severity in some cases also goes up.

Q. Doctor, in the example I gave you of Mr. Ginter wherein he was exposed to asbestos between 1968 and 1983, and developed mesothelioma in 2010, is each exposure to an asbestos fiber Mr. Ginter breathed in from 1968 through 1983 substantial in contributing to his mesothelioma in 2010?

A. Yes. I mean that's the whole concept of the cumulative exposure being the sum of each and each incremental increase in exposure increases the chance this a person will get the disease. And someone that actually gets the disease, of course their chance is one hundred percent if they already got it. So it's not a question of what were his chances 'cause he actually got it. So he had a one hundred percent risk for mesothelioma and his cumulative exposures is what's generally used to classify it as its cause.

Q. Doctor, if I took this plastic cup and I took an eye dropper with a drop of water and I put a drop of water in this cup at a drop at a time until the cup overflows with water, can you tell us which drop of water caused the cup to overflow?

A. Well, it was all of them that added up to more than the cup could hold.

Q. And does that analogy, that comparison relate to asbestos exposure at all?

A. It does accept that asbestos didn't evaporate like the water so it's more potent and one of the important things is that even if there's a low exposure there's no recognized safety threshold of exposure. So not only does each exposure add up but if one of them and some had gotten the disease, it would have been enough for the cause because there's no threshold, no safe level.

Q. Doctor, I'm now going to turn to the cancer Mr. Ginter has called pleura mesothelioma. What is pleura mesothelioma?

A. Well, pleura refers to if the pleura that I talked about meaning the location and mesothelioma means a cancer that arises in the cells that normally make up the lining of the pleura. They're called mesothelial cells. When those cells get enough changes in them genetically that they can grow out of control as a cancer, then the kind of cancer that develops in the pleura is called a mesothelioma.

Q. Is there any known cure for pleura mesothelioma?

A. Not at present. It's a disease where there's some rare long term survivals but nobody has yet come up with a good chemotherapy. The surgery such as Mr. Ginter had is an attempt to prolong life if not cure and hopefully it will cure but we just don't know.

Q. What are the ranges of survival for a person who gets pleura mesothelioma?

A. Well --

Q. In the literature?

A. Most people that develop mesothelioma have a survival from the time of diagnosis of somewhere around the order of a half year to year and a half. It's a pretty bad kind of cancer to get.

Q. Doctor, does cigarette smoking play any role whatsoever in causing pleura mesothelioma?

A. No. People have studied that a lot because obviously you would think that cigarette smoking causes lung cancer might also contribute to the development of mesothelioma. But so far despite lots of studies around the world nobody has shown that there's any link between smoking and mesothelioma.

Q. Is your mike on?

A. Yes.

Q. Dr. Abraham, do you have an opinion you can state to a reasonable degree of medical certainty what the main cause of pleura mesothelioma is in the United States?

A. Yes. I mean not just in the United States but around the world the main cause, practically the only cause is asbestos exposure.

Q. What do you base that opinion on?

A. Well, it's based on the knowledge that I've gained by reading about this since 1972. Since studies around the

world have shown mesothelioma is related to asbestos exposure. There was just an article in a leading medical journal Lanson within a few months ago that says where there's mesothelioma there's asbestos. That's pretty clearly the first thing someone thinks about when someone has a mesothelioma as far as the cause. That's recognized by all the leading medical journals that have written about or published articles about mesothelioma and by national or international regulatory agencies all classify asbestos as an agent, toxic material that's known to cause mesothelioma.

Q. What does the term in medicine signature tumor mean?

A. Well, it means something that when you see it it should make you first think of something else. So as I was just saying, when you see a mesothelioma, it should be a question that the doctor would ask the patient, have you had asbestos exposure and then to take a decent and thorough history to find out not only if they've had exposure but when, what kind of exposures have they had.

Q. Is mesothelioma a signature tumor for any specific toxic substance?

A. As we just said, it's a -- having a patient with mesothelioma should make the doctor think about asbestos exposure.

Q. What is the general clinical course of a person who gets pleura mesothelioma? What can they expect?

A. Well, it's usually not pleasant. They can expect the tumor to grow and surround the lung, sometimes making one lung not function at all. And it should sometimes be accumulating fluid in the space between the lung and the chest wall; a pleura effusion could be there. It can go into the chest wall and cause pain. I'm sure these are things Mr. Ginter knows about.

Q. Does mesothelioma stay confined to the lung area?

A. Not always. I mean sometimes it stays confined to the lung as long as the person lives but sometimes it can also show what other cancers do. It can spread to lymph nodes as it did in Mr. Ginter's case and it could spread to other parts of the body occasionally.

Q. Is there a latency period with respect to this cancer, pleura mesothelioma?

A. Well, generally as I said it has very good latency. Most people that get a mesothelioma have a latency of over 20, 30 years from the time -- from their first exposure. Some could be much longer. And a few are a little bit shorter. I think the shorter is maybe ten or fifteen years but that's very unusual.

Q. Doctor, let me ask you this: Do you have to breathe in a lot of asbestos fibers in order to get pleura mesothelioma?

A. No. It's one of the diseases with the most sensitive

indications for exposure because some people with seemingly trivial exposure in childhood, for example, no other exposure the rest of their life may deal a mesothelioma 40, 50, 60 years later. Some people occupationally have just had a very minimum exposure and that's still enough to cause mesothelioma. So there's no lower limit on what's known about a threshold for exposure to asbestos.

Q. As a board certified pathologist with a specialty in occupational medicine, has there ever been any safe level of asbestos exposure established at the work place for the prevention of mesothelioma?

A. None other than zero that I'm aware of.

Q. What does that mean to us in lay person's terms?

A. Well, there is no safe threshold except none.

Q. I'm going to show you --

MR. PONTERIO: I would like to have this marked, please.

(Whereupon the reporter marked the USCA as Plaintiff's Exhibit #6 for identification.)

BY MR. PONTERIO:

Q. Are you familiar with the United States Code Annotated on asbestos?

A. Not something I read everyday.

THE COURT: What is the exhibit?

MR. PONTERIO: 6.

BY MR. PONTERIO:

Q. You've seen this document before?

A. Yeah. I'm not sure it's the exact same volume, but I've seen reference to it and I've seen excerpts from it.

Q. And has it been determined whether -- what does it say about medical science?

MR. CROSBY: Objection.

THE COURT: What's the section?

MR. PONTERIO: It's titled 20 U.S. Code Annotated to Section 3601. And I would like the Court if I can ask the Court to take judicial notice of this federal statue.

THE COURT: 3601 congressional statement of findings and purposes, two pages and this particular volume has been handed to me and that's a judicial -- that's appears to be an adopted statue of the United States Code.

BY MR. PONTERIO:

Q. What is reported in this statue regarding what the safe level of asbestos exposure is?

A. Well, the paragraph that's number three, it says medical science has not established any minimum level of exposure to asbestos fibers which is considered to be safe to individuals exposed to the fibers.

MR. PONTERIO: Your Honor, I would like to move just that section in, just that particular section in.

THE COURT: All right.

MR. PONTERIO: I blacked out the rest.

THE COURT: All right. Why don't you have that marked as Exhibit 6A and I assume you may want to use that for the jury.

MR. PONTERIO: 6A.

MR. CROSBY: I assume we'll have an opportunity --

THE COURT: Wait a minute. She's marking it.

(Whereupon the reporter marked Section 3601 of USCA as Plaintiff's Exhibit #6A for identification.)

MR. PONTERIO: Dr. Abraham --

THE COURT: Now, you had a question?

MR. CROSBY: Yes, Your Honor.

THE COURT: And the question is? Speak up.

MR. CROSBY: The Court has taken judicial notice of the entire section. I assume we'll have an opportunity to put in a section --

THE COURT: If there's other parts of the section that you think are appropriate, you can offer them at the appropriate time.

MR. CROSBY: Thank you.

(The document referred to as Plaintiff's Exhibit 6A was received in evidence.)

BY MR. PONTERIO:

Q. Doctor, in occupational medicine involving asbestos disease, approximately how many different products contained asbestos at one time or another?

A. Well, I don't know exactly but I think as I mentioned it's several thousand.

Q. And with respect to those range of products that contained asbestos, what is the toxic substance in each of those products that causes mesothelioma?

A. It's asbestos.

Q. And doctor, what is epidemiology?

A. Well, epidemiology means the studies of groups or populations.

Q. And do you need to have an epidemiological study on each separate asbestos product before determining whether it causes mesothelioma in human beings?

A. I don't think that would be logical if you know the material that's common to all of the products, whatever their number, if you know that material is asbestos and capable of causes mesothelioma, it doesn't matter if it's one product or another as long as you're assuming that

there's exposure from that product.

Q. With respect to products that contain asbestos, at what point is a worker at risk for asbestos disease?

A. When they inhale asbestos the first time.

Q. And Dr. Abraham, I would like you to assume in this case that Mr. Ginter testified that during a three year period of time from late 1979 to 1982, he tested friction materials that contained forty to sixty percent asbestos on a FAST machine. I would like you to further assume that in preparation of the friction material sample in order for them to fit into this FAST machine Mr. Ginter followed the Ford instruction manual that indicated that he use either a hacksaw to shape the friction material a one half inch by one half inch square, use a file to file down the friction material and sometimes use a power grinder to shape the friction materials. I'd also like you to further assume that the friction material, the brake lining that's one half inch by one half inch square was then put into the loading arm of this FAST machine where it was ground by a motor powered cast iron friction disc for ninety minutes. I would like you to assume that's what Mr. Ginter testified to Friday and today. I would like you further assume that Mr. Ginter testified that he was in the immediate area when recording the results when this FAST machine was running. Do you have an opinion and you can state to a reasonable

degree of medical certainty whetter the filing, hacksawing, grinding of this brake lining friction material released asbestos fibers into the breathing zone of Mr. Ginter?

MR. CROSBY: Objection, Your Honor, calls for speculation.

THE COURT: Pardon?

MR. CROSBY: Calls for speculation.

THE COURT: Objection is overruled.

THE WITNESS: From what you described, that would be a source of releasing asbestos fibers into the air and if there was no respirator or ventilation involved that would prevent the exposure that would have resulted in asbestos exposure.

BY MR. PONTERIO:

Q. What do you base those opinions on?

A. Well, what you told me is that the material contained a high percentage of asbestos and we've already talked about the fact that that high percentage of asbestos or even much lower one can be the source of millions or billions or even trillions of fiber of asbestos. So it doesn't take removal of much of that material into the air such as by cutting or grinding or sawing to result in fibers getting into the air and someone breathing them if they're in that vicinity.

MR. PONTERIO: If you could mark this please.

(Whereupon the reporter marked the

Guidance for Preventing Asbestos as
Plaintiff's Exhibit #7 for identification.)

BY MR. PONTERIO:

Q. I'm going show you Plaintiff's Exhibit 7 and first off, can you tell the jury what is the Environmental Protection Agency, the EPA?

A. Well, it's a federal agency set up to reduce hazards in the environment of all sources and I think it was set up around, late '60s or early '70s under the Nixon administration.

Q. And this document Exhibit 7, have you seen this document before by the EPA?

A. I think I have over the years, yes.

Q. And is this a -- one of the documents, one of several that you rely upon in formulating opinions on whether asbestos materials in brake linings release asbestos fibers?

A. Well, it's one of them, yes. It's a government report summarizing the reasons why the government, why the EPA thought it was important to warn people about it.

Q. What's the name of that document?

A. It's called Guidance for Preventing Asbestos Disease Among Auto Mechanics. It's from 1986.

Q. And does the EPA report on working with friction materials in the same or similar manner that Mr. Ginter did, whether that releases asbestos fibers to the worker?

MR. CROSBY: Objection, Your Honor.

THE COURT: State the extent and nature of the objection on the record in full.

MR. CROSBY: Mr. Ginter is not an auto mechanic.

THE COURT: Sorry?

MR. CROSBY: Mr. Ginter is not an automatic mechanic.

THE COURT: That's true.

MR. CROSBY: The question was does this talk about Mr. Ginter.

THE COURT: I haven't read it. Have you read it?

MR. CROSBY: I have not.

THE COURT: I think we ought to take a minute and see what's in it.

MR. CROSBY: Sure.

THE COURT: Counsel, if you would like to review that.

MR. PONTERIO: Sure.

THE COURT: And you can give it back to me and I'll take a look at it. Would not surprise me if there were generic material in there that would apply to exposures other than through auto mechanics knowing the government.

MR. CROSBY: I have no objection.

THE COURT: All right. Received.

(Whereupon People's Exhibit 7 was entered into evidence).

BY MR. PONTERIO:

Q. My question, sorry doctor, was does the Environmental Protection Agency report on what if any the level of asbestos fibers that are released when a person such as Mr. Ginter works on a brake lining with a grinder or filing, do they report on the levels of asbestos fibers released?

A. I'm trying to see where it has numbers.

THE COURT: Well, we're going to take a break now. Let one of the jurors indicated he or she would like to take a break. So we'll take a ten minute break.

(Whereupon a recess was taken).

(Whereupon the reporter marked the Two Slides as Plaintiff's Exhibits 8 and 9 for identification.)

(Whereupon the reporter marked the Letter as Plaintiff's Exhibit 10 for identification.)

(Whereupon the reporter marked the Four Slides as Plaintiff's Exhibit 11 through 14 for identification.)

THE COURT: Bring the jury in.

BY MR. PONTERIO:

Q. Doctor, when we left off, I asked you what does the Environmental Protection Agency report about the levels of asbestos fibers if any that are released from friction materials, brake linings that contain asbestos when they are manipulated in the way that Mr. Ginter did by grinding or filing.

A. Yeah. Well, what that report says is that millions of asbestos fibers can be released during brake and clutch servicing.

Q. And the next sentence?

A. It says grinding and beveling friction products can cause even higher exposures.

Q. Doctor, have you ever heard the expression that asbestos has no onion properties?

A. I think so. Meaning that it can't burn your eyes by a smell. It doesn't have a gaseous release from it that is irritating like cutting an onion.

Q. Let me ask you this: As you a physician in occupational medicine, how is a worker to know how he or she is exposed to a potentially harmful invisible asbestos fiber that has no offensive qualities to them?

A. Only if someone tells them.

Q. Doctor, in the United States, what are the three

principle commercial forms of asbestos fibers?

A. Well, there's three different names. One is called amosite. One is called crocidolite. And one's called chrysotile. Those are main three types commercially.

Q. First I'm going to show you before I put it up Exhibit 8. Can you identify what that is for us?

A. Yes. It's a photograph or slide showing pictures taken with an electron microscope of three different types of asbestos, the three that I mentioned.

Q. Is that fair and accurate depiction of what the three principle commercial asbestos fibers look like under microscope?

A. Yes.

Q. I'm going to show you this exhibit that we just referenced and let's start with the chrysotile fiber on the left-hand side of this picture. What does a chrysotile fiber look like?

A. Well, as I mentioned earlier they're -- the individual fibers are too small to see without a very powerful microscope. This is taken with an electron microscope so you can see individual fibers. Characteristically for chrysotile it has this curved appearance or bending like a snake.

Q. I think this has a laser if you want to point at it.

A. So the chrysotile is on the left here. The fibers

are actually very flexible and can curve which leads to the name of the mineral family that it comes from called serpentine or snake-like. So that comes from the serpentine family.

Q. And where do the chrysotile asbestos fibers come from, what part of the world?

A. Well, they're -- it's found in different parts the world, but the main source of the chrysotile or of the asbestos used in the U.S. has been from Canada, from the mines up around Tetford, actually a town called Asbestos.

Q. And in the literature, what percentage of the asbestos products that were used in this country contain chrysotile asbestos fiber?

A. I think it's been reported about ninety-five percent. So it's been the predominate type of asbestos fiber used.

Q. Going to the next fiber, amosite. What is an amosite asbestos fiber?

A. Well, amosite as you can see in this picture taken at about the same magnification several thousand times with the electron microscope, these are straighter fibers. They're less flexible than the chrysotile. Their chemical composition is shown on the bottom. So the amosite fibers have a somewhat different chemical composition with iron as well as magnesium and silicone and they're in a group called amphiboles which includes amosite and crocidolite and

others.

Q. Where do amosite asbestos fibers come from, what part of the world?

A. Well, actually it gets its name from -- amosite came from asbestos mines of South Africa, so that comes from South Africa as does most of the crocidolite.

Q. Let's turn to the crocidolite fiber. What is crocidolite fiber?

A. Well, it's another type of asbestos that's been used commercially. Again it's a straight, less flexible fiber and it also comes from South Africa and has a slightly different chemical composition than amosite.

Q. In the medical literature, what percentage of products that contain asbestos that was used in this country actually contain the amosite or the crocidolite fiber?

A. Well, if the crocidolite estimate was ninety-five percent, than it would be on the order of five percent or so that would have had amosite or crocidolite. Maybe a little more where there's a mixed use in some products between crocidolite and some of the others.

Q. Dr. Abraham, do you have an opinion you can state to a reasonable degree of medical certainty whether all of these types of asbestos fibers individually cause pleura mesothelioma in humans?

A. Yes. They're all recognized to be able to do that

and have done that.

Q. And with respect to the chrysotile fiber on the left, I'm going to show you what's been marked Plaintiff's Exhibit 9 and before I put it up on the -- what is this Exhibit 9 show?

A. Exhibit 9 is a slide listing some of the regulatory agencies nationally and internationally that have concluded that chrysotile asbestos causes mesothelioma.

Q. And as an expert in this case in formulating your opinions that the chrysotile asbestos fiber causes mesothelioma in humans, do you rely on some of those regulatory agencies?

A. Well, I refer to them. I rely more on the underlying evidence that they relied on to reach those conclusions, the scientific evidence.

Q. I'm going to show you what are some of the agencies, government bodies and industrial agencies that have been concluded that the chrysotile fiber causes mesothelioma by itself.

A. Well, there's the EPA that we mentioned before. The National Academy of Sciences. The Consumer Product Safety Commission. NIOSH.

Q. What is NIOSH?

A. NIOSH is the National Institute for Occupational Safety and Health. And OSHA, Occupational Safety and Health

Administration. There's the Department of Health and Human Services. American Cancer Society. So forth so forth.

Q. Thank you. Doctor, did there come a time my office forwarded to you pathology materials in the case of James Ginter?

A. Yes.

Q. And did you issue any report based upon your examination of the pathology materials of Mr. Ginter?

A. Yes, I did.

Q. I'm going to show you what's been marked Plaintiff's Exhibit 10 and can you tell the jury what that two page document is?

A. Yes. That's the report that I prepared and sent September 10th, 2010.

Q. And can you first off tell the jury what types of pathology materials of Mr. Ginter's did you review, what parts of the body did they come from?

A. Well, they came from his pleura and his lung. First he had a pleura biopsy, just a sampling of the pleura in March of 2010. That enabled the pathologist to make the diagnosis of mesothelioma. And then he had the further surgery where his entire lung and a lot of the pleura was removed in June of last year.

Q. Dr. Abraham, I would like you to assume in this case that the parties agree that Mr. Ginter has pleura

mesothelioma and that his mesothelioma was caused by asbestos exposure. My question to you, doctor, are there ways that a pathologist can determine if a person's lung tissue contains asbestos fibers?

A. Yes. The lung tissue can actually be analyzed using what's called fiber analysis.

Q. What is that process called? What is the term called?

A. Well, it's sometimes called a digestion study where the lung biological tissue is actually digested with an enzyme or bleach for example to remove the cellular material to leave behind the material asbestos and other materials that aren't soluble and then that's used to determine the concentration, number of asbestos fibers in the lung and the types and sizes of those asbestos fibers.

Q. Now, did my office request that a lung fiber analysis be conducted on a piece of Mr. Ginter's lung tissue?

A. Yes. When he has his lung removed the pathologist had saved some of the lung tissue for examination and portions of that can be used for that lung fiber analysis.

Q. And what type if any of asbestos fiber did you find predominantly in Mr. Ginter's lung tissue?

A. Well, the most frequent type of asbestos fiber would be found was chrysotile.

Q. And is the chrysotile fiber found in brake linings,

is that the material in brake linings?

A. Well, that's the main type of asbestos as far as I'm aware used in most brake linings or was used in brake linings.

Q. Did you take -- have any pictures actually taken of these fibers that were in Mr. Ginter's lung?

A. Yes. There's pictures of fibers as they were examined in the electron microscope that were collected on a filter and so the filter is there with the fiber sitting on top of the filter.

Q. Did you bring those pictures with you today for the jury?

A. Yes.

Q. I'm going to show you what's been marked Plaintiff's Exhibit 11 through 14 and what are these pictures of before I put them on the wall?

A. These are four pictures taken with the electron microscope showing the fibers, some of the fibers that were found on the filter from Mr. Ginter's lung tissue.

Q. I'm showing you what's been marked Plaintiff's Exhibit 11 and what is this a picture of?

A. Well, this is a picture of one fiber. It's probably hard to see in the room with any light on it, but basically what I hoped some of you can see is little holes here. This is the filter material. And it has little pours that allows

liquid to go through and the insoluble material in the fluid after digesting the tissue is trapped on the surface and what you can see here I hope is an elongated structure that's a fiber and the little cross hairs plus signs here that are red show where the chemical, actual chemical information is collected from those fibers. That tells us what kind of fiber it is.

Q. What type of fiber did you find when you examined Mr. Ginter's lung tissue?

A. Well, this particular one is a chrysotile fiber.

Q. If you could click onto the next slide. Showing you what's been marked Plaintiff's Exhibit 12, what does this picture depict?

A. Again, it's probably hard to see with the light on but there's a curved fiber you can see running from here down to about here where there's a piece of dust that's not a fiber. And again that one by chemistry was analyzed with a plus size in it, two different spots. And it showed a composition identifying it as a chrysotile fiber.

Q. Now, turning back to your report on Page 2, Dr. Abraham, can you tell the jury what concentration of chrysotile asbestos fibers were found in Mr. Ginter's lung tissue?

A. Yes. In the particular analysis that was done -- I may need to explain a little bit, but each fiber that we

find represents in this particular analysis eight thousand fibers per gram. So you want me to explain very briefly?

Q. Please. I would like you to explain how, what the concentration you found and how you arrived at that number.

A. Basically a certain weight of tissue is digested and then it's put -- it's digested in bleach and then that's filtered onto the filters. So if the entire filter was examined and you found one filter, that would be one fiber per gram. Since you're looking at this filter in the microscope at very high magnification, it would take days to look at the entire filter. To what's done is an extrapolation. So if we knew let's say there was one gram of tissue but we only looked at one percent of the filter surface area, then finding one fiber would represent ten fibers per -- one hundred fibers per gram. Actually it's a smaller amount because of the magnification of several thousand times. Taking into account the weight of tissue that was digested and the area of the filter is calculated that each one found represents eight thousand per gram of tissue. That's basically what's called a detection limit as well. If it was at a lower concentration than the detection limit, that analysis wouldn't be able to detect it. So each of these two chrysotile fibers that I've shown you represents eight thousand. So the total chrysotile fibers in that analysis was 16 thousand fibers per gram.

Q. And can you tell us what is the significance if any to this jury of the finding of 16 thousand chrysotile asbestos fibers per gram of dry lung tissue in Mr. Ginter's lung?

A. Yeah.

Q. Do you need water?

A. I have water. The one more thing has to be taken into account. Not only there's a fiber there, but the length of the fiber because in the general population if you haven't had any occupational asbestos exposure, nearly all the asbestos fibers found in somebody's lungs are very much shorter than this. They're usually less than a micron in length and studies that have been done on people with no known asbestos exposure find that only about less than one percent of all the chrysotile fibers found are longer than ten microns. Both these fibers were longer than ten microns and the concentration of fibers of that length would be extremely unusual to find in the general background population. So these are evidence that Mr. Ginter did have in fact exposure to chrysotile occupationally.

Q. On the job?

A. Yes.

Q. That leads me to my next question. In the second to last paragraph of your report you discussed a term called background concentration. What does that term background

concentration mean?

A. Well, that refers to the fact that we all have some exposure to dusts of one kind or another in the air we breathe. If we look at the lungs of people that have no history, no knowledge at all and in fact no demonstrative history of asbestos exposure, there's a certain amount of asbestos found in their lung that would be the general population background. So that's what findings in a case such as Mr. Ginter can be compared with.

Q. What is the background number for chrysotile asbestos fibers longer than ten microns, the size of Mr. Ginter's?

A. Right. As I mentioned in the general background it's extremely unusual to find such long fibers of chrysotile and the background has been estimated at no more than ten thousand fibers of that length per gram of tissue.

Q. And you found 16 thousand?

A. Yes.

Q. Of the length of ten micrometers?

A. Actually one of them was 13 and one was 14.

Q. Now, in your report you referenced a term called magnesium depleted chrysotile. Can you tell the jury what does that term mean?

A. Yes. What that means is the standard of chrysotile that we went by a few slids ago showed that it has magnesium and silicone as its main elements other than oxygen and in

the chrysotile that comes out of the ground there's a fairly high ratio, nearly similar size analytical peaks for magnesium and silicone. With time as chrysotile fibers are in the body, some of the magnesium is dissolved out. So sometimes we'll find what are called magnesium depleted chrysotile that don't have the same amount of magnesium as they had when they were fresh minerals. So finding those indicates that they've been in the lung for some period of time. Maybe months or years.

Q. Now, doctor, in addition to the chrysotile asbestos fiber -- let me ask, you what is an asbestos body?

A. Well, asbestos body is a structure that's formed on an asbestos fiber. So when an asbestos fiber gets inhaled, some of the asbestos fibers get taken up by the macrophage cells in the bodies. Sort of like the word means big eater. They try to engulf the fiber and carry it out of the lung reducing its ability to cause harm. Just like picking up germs. So these macrophage cells pick up fibers and deposit protein and iron on them leaving them coated and sometimes those become big enough to see with a light microscope. Those are called asbestos bodies when it's not the fiber only but it's a fiber that has this coating deposited on it.

Q. Did you find any asbestos bodies in Mr. Ginter's lung tissue?

A. Yes. Actually I didn't find any with the light

microscope, ordinary light laboratory microscope. But we did find in the electron microscopic analysis on the filter.

Q. Do you have a picture of that? If you can click on the next item.

A. It's called Exhibit 13.

Q. What is shown in Exhibit 13?

A. Well, this is two pictures of the asbestos body. And in the very center running along is -- you can see this image. In this brighter imagine there's a little thin core and that core is the core asbestos fiber inside this asbestos body. Since it's coded with iron material, protein, it's very hard to get the exact chemical compensation of this fiber. But this fiber is a very thin fiber. I think it was less than -- well, it was about a tenth of micron in diameter. And you can't be sure but it matched probably with chrysotile.

Q. At what concentrations were the asbestos bodies found in Mr. Ginter's lung tissue?

A. Well, in this analysis this was done at much higher magnification, so an even smaller part of the filter was searched and I believe that one was 96 thousand fibers per gram.

Q. What is the significance to this jury in deciding this case of finding asbestos bodies in Mr. Ginter's lung tissue?

A. Well, it's just another indication that he had asbestos exposure above background.

Q. Work related exposure.

A. "Yes.

Q. Now, doctor, did you find any other types of asbestos fibers in Mr. Ginter's lung tissue?

A. I didn't in the analyses that we did.

Q. Did you find any tremolite asbestos fibers?

A. Yes.

Q. And did you take a picture of those?

A. Maybe. Let's see. Exhibit 14.

Q. If you could.

A. Yeah. So that shows a thicker fiber running this way and it was shorter. I think it was about 7.

Q. Now we haven't heard that term before but is tremolite another type of asbestos fiber?

A. Yes, it is. Tremolite is another of the straight less flexible fibers called amphiboles but it's not used commercially on its own. It's usually found on a contaminate especially chrysotile because it occurs in the same kind of geological deposits.

Q. You say it's a contaminate of the chrysotile asbestos fiber, can be?

A. It can be a contaminate of it or curves jointly with it.

Q. What is the significance if any of finding the tremolite fiber, this asbestos fiber in Mr. Ginter's lung tissue?

A. It goes along with the history of asbestos exposure and it's the kind of asbestos you might expect to find in somebody that had chrysotile exposure, might also find some tremolite exposure.

Q. Now, can you give the jury an idea what the size of the tissue that you had, the actual wet tissue of Mr. Ginter's lung that you analyzed?

A. Well, the actual amount received, I'm not sure I have the weight. But it was a pretty small piece of lung tissue. Maybe a quarter of an inch or so in dimension. And from that portion was removed and weighed and then digested. So it was less than a gram was on the order. Probably less than a tenth of a gram.

Q. Now, Dr. Abraham, turning to the bottom of the first page of your report, did you have any slides that were taken of Mr. Ginter's pleura tissue to review?

A. Yes, I did. I had the slides from his biopsy and the slides from his lung removal surgery.

Q. And did you find any asbestos fibers or asbestos bodies in the slides that you looked at?

A. In the light microscope. No, I wouldn't expect to find asbestos fibers 'cause they're not usually visible in

the light microscope.

Q. Are all of the asbestos fibers that you found that came from Mr. Ginter's lung tissue?

A. Yes.

Q. Now, doctor, once again, I'm going to assume in this case there's no dispute Mr. Ginter has pleura mesothelioma and that his mesothelioma was caused by his occupational exposure to asbestos. My question to you, do you have an opinion you can state to a reasonable degree of medical certainty whether the chrysotile asbestos fiber you found in Mr. Ginter's lung tissue was a substantial contributing factor to the development of his mesothelioma?

MR. CROSBY: I'm going to object to the form of that question, Your Honor.

THE COURT: What basis?

MR. CROSBY: Basis is there's --

THE COURT: Speak up little louder.

MR. CROSBY: The basis, Your Honor, is we do agree he has pleura mesothelioma. We do not stipulate that it is as a result of industrial exposure.

THE COURT: I'm sorry, do not stipulate --

MR. CROSBY: That it's necessarily as a result of industrial exposure.

MR. PONTERIO: I rely on your expert reports. They say otherwise.

THE COURT: The objection is overruled.

MR. PONTERIO: You can answer.

THE WITNESS: Maybe you need to repeat the question.

BY MR. PONTERIO:

Q. Do you have an opinion you can state to a reasonable degree of medical certainty whether the chrysotile asbestos fibers you found in Mr. Ginter's lung tissue were a substantial contributing factor to the development of his mesothelioma?

A. Yes. There were evidence that he had had exposure to chrysotile and that that exposure was the substantial contributing cause of his mesothelioma.

Q. What do you base that opinion on?

A. Well, based on the knowledge about chrysotile being one of the kinds of asbestos known to be able to cause mesothelioma. The history of his exposure. And the confirmation of his exposure of chrysotile asbestos and the analysis of his lung tissue and the diagnosis of his mesothelioma.

Q. Dr. Abraham, you briefly touched upon this earlier for the jury that the toxic substance, the asbestos that's in a product, that's what if it's released causes mesothelioma. Do you remember that testimony?

A. Yes.

Q. My question to you, doctor, do you have an opinion you can state to a reasonable degree of medical certainty whether working with friction materials, that is brake linings that contain asbestos causes mesothelioma in human beings?

A. Yes, it can. It can. It's been reported to do so.

Q. What do you base that opinion on?

A. Well, on the knowledge that asbestos is recognized to be the cause of nearly all mesotheliomas and it's recognized that all kinds of asbestos are capable of causing mesothelioma. And reports of medical literature of asbestos being able to cause mesothelioma experimentally with chrysotile and reports in the medical literature that mesothelioma is related to chrysotile exposure.

Q. Dr. Abraham, can you tell this jury, are there any federal governmental regulations from either the Occupational Safety and Health Administration or the Environmental Protection Agency that says working with asbestos brake linings does not cause mesothelioma?

A. No.

Q. Are you aware of any international agencies, any agencies in the world that have studied asbestos that conclude that working with asbestos in brake linings does not cause mesothelioma?

A. No. There's none.

Q. We're at the tail end, doctor. I would like you to assume that Mr. Ginter testified at trial this past Friday and this morning that from 1979 through 1982 during a three year period of time as a chemist he had to test asbestos containing friction materials with the use of a FAST machine which simulated a wheel of a brake drum coming in contact with a brake lining. I would like you to assume he testified one of the purposes of this test was to determine the durability of the brake lining. I would like you to further assume that Mr. Ginter's work on this FAST machine 7 to 10 times a month with each test that was ran on the FAST machine lasting ninety minutes. I would like you to further assume that Mr. Ginter testified that each time before the test on the FAST machine was started, Mr. Ginter testified that in preparation of the sample size of the asbestos friction material that was tested on the FAST machine he would follow the Ford Motor Company instruction manual for the FAST machine and he would shake the asbestos, friction material to a one half inch by one half inch square with the use of either a hacksaw, a file or a powered grinder. I would like you to assume those facts are true. I would like you to assume Mr. Ginter testified that he saw visible dust when he performed each one of those activities. I would like you also to assume that Mr. Ginter testified that once the friction material was put into this loading arm of the

FAST machine it was turned on and the wheel would rotate and they would grind the friction material in that he would see visible dust while he was present recording the results for that 90 minute period. I would like you to assume he testified that this friction material contained forty percent to sixty percent asbestos. Do you have an opinion you can state to a reasonable degree of medical certainty whether this exposure to asbestos while working on the FAST machine was a substantial contributing factor to the development of Mr. Ginter's mesothelioma in 2010?

A. Yes. The way you described it, that would have been a substantial asbestos exposure.

Q. And what do you base that opinion on?

A. Well, your description of the process and the materials he was using and the knowledge about asbestos being capable of causing mesothelioma.

Q. And as we talked about and you talked about earlier with the cumulative effect, do you have an opinion whether each of the exposures Mr. Ginter had starting in 1968 and ending in 1983 or '82 also were a substantial contributing factors to the development of his mesothelioma?

A. Yes. I mean his cumulative exposure was the cause and each and every one of the things that went into that would be substantial contributing causes.

Q. What do you base that opinion on?

A. Well, what I've said is that asbestos exposure is known to cause mesothelioma. There's a dose response relationship. There's no safe threshold. So each one of the individual exposure was causing mesothelioma on its own. That's one of the criteria I use to call something a substantial contributing cause.

Q. I would like you to assume Ford's counsel talked to this jury about a term called forsterite. What is forsterite?

A. Well, forsterite is a mineral that's not the same as chrysotile. It can be formed when chrysotile is heated up to I think five hundred or six hundred or more degrees. It can actually convert the mineral from one form to another.

Q. Now when Mr. Ginter is using a hacksaw, using a file, using a powered grinder to prepare that friction sample pursuant to the Ford instruction manual, does that, any of those processes create forsterite?

A. It shouldn't.

Q. Why is that?

A. It shouldn't be generating enough heat to do that.

Q. Now, once the friction material is put into the loading arm of the FAST machine and the wheel is powering and it's grinding, I would like you to assume there was testimony it gets up to five hundred to six hundred degrees. Can that create some forsterite?

A. It's possible, yes.

Q. And do you have an opinion you can state to a reasonable degree of medical certainty whether that process of the grinding on the FAST machine also releases pure asbestos fibers into the air?

A. Yes. From what I understand it releases material, some of which might be converted but not all of it.

Q. What do you base that opinion on?

A. Well, from what I've read about grinding of chrysotile materials and just understanding when you, when something breaks apart when you're grinding it, it releases bits of it in all different forms from the material being grind.

Q. Does this EPA document, the Environmental Protection Agency document talk about whether asbestos fibers are released after the grinding of asbestos brake linings against an iron drum wheel?

A. I didn't see that specifically in here.

Q. Did it talk about compressed air? I thought I saw something.

A. I don't know if it said iron.

Q. Well, a drum, metal drum?

A. Right. It does mention asbestos fibers are released during blow out of dust after grinding.

Q. What kind of level of asbestos fibers did the EPA

find were released after a brake lining came in contact with a metal drum? What levels?

A. I think it said millions of fibers.

Q. Let me just see.

A. It says millions of fiber can be released from drum brakes for cleaning. I'm trying to see where it has the drum itself. Do you know exactly where that is?

Q. I think I -- I think the first paragraph it talks about that compressed air.

A. Right. In the section on using compressed air to clean drum brakes, it can release up to 16 million fibers in a cubic meter of air around the mechanic's face.

Q. 16 million asbestos fibers?

A. In a cubic meter.

Q. What size is a cubic meter?

A. Is like a yard by a yard by a yard. Meter by meter by meter.

Q. Doctor, have you previously testified for clients of my office that are alleging mesothelioma due to asbestos exposure?

A. Yes.

Q. How long have you been testifying for clients of mine in courts such as this?

A. I'm not sure when the first time was. Probably ten years or so.

Q. Are you being compensated for your time today?

A. Yes.

MR. PONTERIO: No further questions.

THE COURT: Cross.

MR. CROSBY: May I have a moment to see the doctor's file?

THE COURT: Sure. Step up, counsel.

(Whereupon a bench conference was held).

MR. PONTERIO: Your Honor, if I can just move into evidence these pictures of the asbestos fibers that doctor --

THE COURT: Identify the exhibits.

MR. PONTERIO: It is exhibits 11, 12, 13, and 14.

THE COURT: Any objection to 11, 12, 13 and 14, counsel?

MR. CROSBY: These photographs? No objection.

THE COURT: Received in evidence.

(Whereupon Plaintiff's Exhibits 11 through 14 were entered into evidence)

MR. CROSBY: May I proceed, Your Honor?

THE COURT: Please do.

MR. CROSBY: Thank you.

CROSS EXAMINATION

BY MR. CROSBY:

Q. Doctor, let's just start off with a couple of bullet points. First of all you just referred to an EPA publication, did you not?

A. Yes.

Q. What's the date of that?

A. That was 1986.

Q. Hasn't that particular position paper been rejected and superseded by the EPA?

A. I'm not sure to what extent it's been updated.

Q. Have you seen any updates?

A. Not that -- of that specific document about brake mechanics.

Q. Would it surprise you if the EPA have since as a result of greater background investigation changed their position?

A. Well, it wouldn't surprise me if they updated their report but I don't know to what extent they would have changed. I would be glad to see it. It's possible they have.

Q. Even though you say you relied upon this document you have not replied upon the more recent document from the same agency, do I got that?

THE COURT: He's indicated he's not aware of one.

THE WITNESS: Excuse me, I think I said I relied on the scientific information more so than a government policy statement.

BY MR. CROSBY:

Q. So --

A. I don't I'm just not aware of a more recent one from the EPA on that.

Q. Fair enough. Doctor, does everyone in this room have a certain amount of chrysotile in their lungs?

A. Probably if you look hard enough you can probably detect short fibers of chrysotile.

Q. When you use numbers like millions, what is the background amount of chrysotile let's say five microns or less in the ordinary citizens in Buffalo, New York?

A. Well, I'm not certain if they measured it in Buffalo. The sort of background that's been measured for short fibers is up to a few hundred thousand fibers per gram.

Q. Per gram?

A. Yes.

Q. Okay. And if we expand that to the entire lung as you've described it, how many grams are there in a lung?

A. Well, there's probably on the order of one hundred grams on a dry weight basis or maybe a kilogram, a thousand grams, about two and a half pounds before all the water is removed.

Q. So that's per lung?

A. That's for both together.

Q. So in the ordinary person's lungs today without any industrial contact with chrysotile in the lungs you would expect to have one hundred thousand times, what did you tell us?

A. Maybe a hundred.

Q. Times one hundred. Which would be what, ten million?

A. I think so. Your math is good today. Those are the short fibers.

Q. I understand. We'll talk about the length of fibers a little bit later and like the fibers as a result of using the FAST machine. By the way, have you ever seen a FAST machine?

A. No, I haven't.

Q. Have you ever been shown any literature about the FAST machine, how it works?

A. I've seen a description of it. I'm not sure I've seen a picture of it.

Q. Okay. And you are aware that the size of the piece of material that Mr. Ginter used on the FAST machine was a half inch by half inch?

A. Yes.

Q. You are aware it's bonded material?

A. Yes. It was mixed as it would be in a brake

material.

Q. So it's not raw asbestos?

A. That's right. I mean I understood it contained about forty to sixty percent asbestos, so the rest was whatever other materials in it.

Q. But they're bonded together, aren't they, with a resin?

A. I assume so, but I don't know what degree he was testing different formulations. I think that was what I was told was part of his job was to test different formulations.

Q. Okay. So do you have any real knowledge as to what he was doing?

A. Other than what we described, no.

Q. Other than the hypothetical that's been given you here today?

A. I haven't seen the formulations of what was in the bonding and things like that.

Q. Did you ever speak to Mr. Ginter before coming to testify about what he was doing?

A. No. I only met him in passing today when he was in the courtroom when I got here.

Q. Well, I looked at your folder that you brought with you. Is that your entire file?

A. Yes.

Q. In that file anywhere is there a copy of his prior

testimony, his deposition as to his lifetime exposure?

A. No. I don't have a copy of the deposition in my file but I did see a copy that was in the law offices of Mr. Ponterio.

Q. When was that?

A. Just today and yesterday.

Q. When did you write your report in this case?

A. That was back in September of last year.

Q. So you wrote your report without any reference to any of either Mr. Ginter's actual trial or deposition testimony as to his exposures or without speaking to him?

A. Yes. I was provided information on his exposures and that was enough for me to even reach a conclusion.

Q. What information were you provided about his exposure.

A. That he had worked with asbestos from about 1968 to approximately 82, 83.

Q. Anything more detail than that?

A. Not a great deal more. That he was a laboratory technician and a chemist and he was exposed to asbestos in molding compound insulation, matrix boards, friction material, joint compound and asbestos fibers. So that was the level of detail. I wasn't given numerical estimates.

Q. So for example you were never told that in one of his positions on a number of occasions in a facility where he

was covered with so much asbestos mixed material that he had to have his clothes blown off before he could walk out?

A. I don't think I was told that.

Q. And I take it you are aware that he's held a number of positions since 1968, aren't you?

A. Yes.

Q. Are you aware that he has claimed in this courtroom that he was exposed to asbestos at virtually every position he has held right from 1968 up to the time he retired?

A. I wasn't aware of that precise detail, but I knew he had multiple exposures to asbestos.

Q. But the volume of the exposures you don't know?

A. That's correct.

Q. Or when they occurred?

A. Not exactly on which days or months.

Q. Now, you talked about something called dose response, did you not?

A. Yes.

Q. And I think you used the example glass of water?

A. Well, I was shown that example, yes.

Q. And that hypothetically each exposure adds a drop of water to the cup?

A. Right. Some might add two drops. Some might one.

Q. Some might add an ounce?

A. That's correct.

Q. And that depends upon the environment he's in and the amount of exposure that he inhales?

A. Yes.

Q. By the way, the body does have a mechanism, a filtering mechanism, doesn't it?

A. Well, it has defense mechanisms that keep some asbestos fibers or keep dust from reaching the lungs and to clear out dust that do reach the lungs.

Q. And there is a difference in the type of asbestos, isn't there?

A. Well, there's different types of asbestos fibers, yes.

Q. And those different types have different potencies, don't they?

A. It's thought so, yes.

Q. In fact you published on it?

A. Yes.

Q. Didn't you publish an article a couple weeks ago?

A. I think it finally came out weeks ago.

Q. June of this year?

A. Yes.

Q. In that article -- let me give a copy to counsel. That was an article that you published along with Dr. Case?

A. Right. Dr. Case and Dr. Meeker, Dr. Pooley and Dr. Pinkerton.

Q. Are they all well-known experts in this field?
A. Yes.
Q. And you consider them all authoritative?
A. Well, I don't know if authoritative means like gospel or something like that. I considered them all experts and we have our agreements on most things and probably among those five people there's some differences of opinion on certain things.
Q. Do you personally respect their opinions?
A. Yes.
Q. And --

MR. CROSBY: Could you mark this, please.

(Whereupon the reporter marked the Journal as Defendant's Exhibit J for identification.)

BY MR. CROSBY:

Q. Let me show you an article what I assume you're very familiar with?
A. Actually I saw it for a long time. I haven't looked at it since it finally came out. But I did see it and I'm one the co-authors.
Q. This paper that you co-authored that came out in publication this month, do you have a preamble at the very beginning?
A. You mean the abstract of it, the part in bold?

Q. Yes.

A. There is one there.

Q. Could you just read to the jury the first sentence?

A. Sure. It says although asbestos research has been ongoing for decades, this increased knowledge has not led to consensus in many areas of the field.

Q. Next sentence please?

A. Two such areas of controversy include the specific definition of asbestos and limitations and understanding exposure response relationships for various asbestos types and exposure levels and disease.

Q. Okay. What are you saying there, doctor that within the scientific community?

A. Not everybody agrees. But they mostly agree that more research needs --

Q. Needs to be done?

A. -- could be indicated. Not everybody agreed with that on this committee. Some felt that we already know asbestos is a dangerous material. So understanding the exact mechanism isn't as part as preventing exposure. So there was that kind of discussion at that meeting which this was one out of 7 or so different groups of published report.

Q. This group internally disagreed as to more research was needed?

A. I'm not sure. We didn't have that discussion right

away. But I'm sure it says what's needed. I don't think anybody disagreed within this group.

Q. I would like you to go if you could to the next page, Page 4.

A. Yes.

Q. Would you put that up, please.

MR. CROSBY: Your Honor, could the technical assistant come up and figure out why this isn't coming up on the screen.

THE COURT: Absolutely.

MR. CROSBY: I'm of a different generation.

THE COURT: So am I.

THE WITNESS: The light is on now on the projector.

BY MR. CROSBY:

Q. While they're doing that, let me go on to a different subject and we'll come back to your paper in a few minutes. You talked about asbestos in general as being a cause for mesothelioma, correct?

A. Yes.

Q. But there are different types of asbestos, are there not?

A. Yes. I mentioned some of them.

Q. Okay. You mentioned chrysotile?

A. Yes.

Q. You mentioned the amosites?

A. Yes.

Q. What are the amosites? They're a different family, aren't they?

A. Right. They're part of the what's call the amphibole family.

Q. And what is meant by amphiboles?

A. Well, that's a really good question because the mineralogists have different definitions of it. I think the one that I find understandable is it means variable. There's a whole wide variety of compositions of these minerals.

Q. And included in that is amosite in the amphiboles?

A. Yes, the two commercial ones that I talked about, amosite and chrysolite.

Q. Anything else?

A. And the other ones that are written about as contaminates of chrysotile for example, are tremolite and anthophyllite and antrimolite.

Q. Tremolite is also the amphibole family?

A. Yes.

Q. Now, is there a structural physical difference between an amosite fiber and a crocidolite fiber?

A. Well, there's a chemical difference in the fibers. Look different in the microscope so I would say yes. But

mineralogists would probably define it more in detail.

Q. Well, you look at it under microscope. That's part of your job and training as a pathologist?

A. Yes. If you look at the electron microscope the way we do, you have to have the chemical information, not just the structure, the shape of it.

Q. But you have to know what the basic shape is to begin with, don't you?

A. Yes. I mean there can be chrysotile fibers overlap in Size range with crocidolite fibers and they can look straight. So you can't always tell just by looking at the shape.

Q. But generally they are not straight?

A. If they're longer than they're sometimes show the curvature as the one's found in Mr. Ginter's lungs that I showed you.

Q. Longer than what?

A. Long enough to show there's no magic number. But the shorter they are the less likely you are to see the curvature.

Q. And the curvature is kind of like a snake-like curvature?

A. If it goes twice. It may be C shaped or it might be S shaped, but in other words if you take that as curved shape and break it up in little pieces it may not look so

curved.

Q. But if it's not broken, up it doesn't curve?

A. It may. It doesn't have to. Depends on how it lies on the filter.

Q. And the amphiboles tend to be straight and longer, don't they?

A. No.

Q. And is there a half life between amphiboles and chrysotile?

A. Yes. Usually chrysotile is cleared from the lungs more rapidly than the amphibole fibers.

Q. What do you mean by that?

A. If you -- you can't test this in humans very well, but in animals that are exposed to a purer sample of one material like chrysotile and you measure how long does it take for the chrysotile to be removed from the lung, what's called a half life which is the time it takes for the concentration to go from whatever it is to half that concentration. So in chrysotile it might be a month or two or three.

Q. How about amosite?

A. With some of the amphiboles like amosite or crocidolite or tremolite, for example, it can be months or years.

Q. Could be as long as twenty years?

A. It can be. And the same is true for the longer chrysotile fibers. They can stay around longer too. So it's mostly the short chrysotile fibers that account for the very shorter half life.

Q. And give me a definition that the ordinary person can understand when you talk about short. You used the word microns before.

A. A micron is a thousandth of a millimeter. So a micron is about one fiftieth the diameter of a hair. A hair is somewhere around fifty microns. So a micron is pretty small. These fibers are often five microns or less is sometimes used to -- there's no, you know, mandatory definition but that's what's commonly used is five, kind of a cut off between short and longer.

Q. So when you talk about short, can we agree we're talking about anything five microns or less, is that a fair statement?

A. Well, we can define however we want for discussion. That's fine.

Q. Are you comfortable with that?

A. I am. I mentioned before on the background levels have been measured and they've used lengths of five or ten.

Q. In fact in your paper -- perhaps not. Yeah, in your paper you make reference to five microns, don't you?

A. In my paper? This paper?

Q. Yes.

A. That we were talking about? Yes, I think it's mentioned probably more than once in here.

MR. CROSBY: This is probably a good point as any because I would like to get into his paper.

THE COURT: We got to be out of here in about three and a half minutes, we have a problem with the projector, hopefully that will get cleared. As I understand, doctor, you will be back on Wednesday.

THE WITNESS: That's what I just learned.

THE COURT: Wednesday morning.

MR. PONTERIO: 9:30.

THE COURT: 9:30 Wednesday morning we'll continue with doctor's testimony. Tomorrow Tuesday again as I mentioned earlier we're going to start at 1:30 in the afternoon. Enjoy the evening. Don't talk about the case and we'll see you when you arrive tomorrow.

(Proceedings concluded)