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THE STATE OF SOUTH CAROLINA
In The Court of Appeals

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APPEAL FROM SPARTANBURG COUNTY
Court of Common Pleas
D. Garrison Hill, Circuit Judge

Appellate Case No. 2016-000227
Case No. 2013-CP-42-3915

Angie Keene, Individually and as Personal Representative of the Estate of Dennis Seay, Deceased, and Linda Seay,..... Respondents,

v.

CNA Holdings, LLC..... Appellant.

# RECORD ON APPEAL
# VOLUME III

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Okay. It's more videos. I hope everybody brought popcorn. This will be the deposition of Charles Laubly, the corporate representative for Celanese. This one is about 17 minutes long.

(WHEREUPON, Court's Exhibit No. 4 was played in open court.)

MR. PANATIER: That concludes that deposition, Your Honor.

MR. YOUNG: Judge, with Mr. Panatier's permission, I would like to tell the jury that this witness was 86 years old at the time of the deposition. That question wasn't read and answered.

THE COURT: Okay.

MR. YOUNG: Thank you, Your Honor.

THE COURT: Thank you.

MR. PANATIER: Your Honor, at this time, Plaintiffs call Angie Keene.

THE CLERK: Place your left hand on the Bible and raise your right hand.

WHEREUPON,

ANGIE KEENE,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. PANATIER:

Q Angie, how are you doing?

A Good.
Q Can you go ahead and just introduce yourself to the jury.
A My name is Angie Keene. My father is Dennis Seay. And I am the oldest of three. I have two brothers. And I will be 48 tomorrow.
Q So how many times have you testified in court like this?
A Never.
Q Okay. In fact, did you ask me where you should look?
A Yes.
Q Okay. And I've said, do what feels natural; fair?
A Uh-huh.
Q Okay. So as you can see, sometimes it doesn't go smoothly for me. I'm trying to get this computer up. I've got some photos I'd like to show you. But let me ask you this. Let's start at the beginning.
Who's your dad?
A My father is Dennis Seay, Sr.
Q Who is your mother?
A My mother is Linda Seay.
Q When were you born?
A October 3rd, 1967.
Q Do you have any children?
A I do. I have two daughters, Kelly, who is 15, and

Sidney, who is 14.

Q And I understand that they are part of sort of a pack of grandkids?

A They are. Right now, we have six grandkids and one little boy on the way.

Q Okay. So I'm not going to ask you a bunch of questions. I've got just a few I want to ask you.

Now, one of the things that we saw your dad do on his video was he -- it sounds like there was a little bit of, perhaps, a favorites war between the grandkids for granddad's affections?

A Yes, sir.

Q And he said he did this thing where he put his two fingers together and said, you know, Papa and selected grandchild; right?

A Yes.

Q Is it true that he wasn't totally truthful about what he said in the video?

A He wasn't, because he started that with me. And then it went to my younger brother, my baby brother, and then each grandchild, which, the other day, my oldest got real upset because she never knew he did that with the other one. But, yeah, he always did, Papa, Papa's buddy.

Q Okay. So here's a picture. Who is that a picture of?

A That's my father and myself.
Q Okay. So you were the oldest?
A Yes.
Q Okay. And growing up, can you just tell the jury a little bit about what kind of a father your dad was to you?
A Well, he -- dad was absolutely amazing. He always showed us love. He -- we were very poor. And growing up, we never knew it. He -- he wore -- he would -- might would wear the same clothes, but it was always tucked in. And he was always dressed nice, had his hair nice.

And we always did things. We would go fishing. And he would take all of us. We would all go. And we -- we would ride to the mountains. I'll make a joke about it still now. But we would ride to the mountains and drive through Santa's Land. We got to take pictures of the parking lot, but we never did go in. But we were happy with that.

And we grew up in a Christian home. Dad was always very adamant about his faith. And if I had to say one thing about him that has helped me in life tremendously, it is that you rely on your faith through the bad times, just like you do in the good times.

During the bad times and even through when he had two years of nightly pain where he would just cry and yell, he

still praised God through it all.

And we're trying to -- to continue that on through our kids, that he's still there with us no matter what the outcome is.

Q So -- so have you taken the lessons and the type of man your father was forward in your own life and with your own children?

A Yes, sir.

Q Okay. Let me show you a couple of other photos. This is, obviously, more recent; right?

A Yes, sir.

Q Now, the game I would play with this photo is find your mom.

A Well, what happened was I always had to set the camera -- I was always the picture-taker. And I'd set the camera up on the timer. And I would have to run to get in it --

Q Hold on. Let's see. There she is.

A So mom got knocked out a little bit because she happened to be behind me.

Q Okay. Big family?

A Big family.

Q Do you guys all get along, very happy?

A We have never had a fight. Our in-laws, my sisters-in-law are my best friends. My husband, I've been

married for 29 and a half years. And my husband and my dad were best friends. It's -- it's something that dad made us always know that we had one another. And that we needed to put love first beyond any kind of feelings that we might would have.

Q Okay. I've got some pictures. Now, I'm going to show primarily some pictures of when he got sick with you. Because my understanding is you were right there by him pretty much the whole time he was sick; is that fair?

A Yes, sir.

Q Okay. And he started to get sick even before he was diagnosed; is that --

A He did.

Q So one of these pictures -- you were pretty much the picture-taker; is that right?

A Yes.

Q And as a matter of habit, are you -- do you kind of take pictures and videos of everything?

A I do. I've got a whole coat closet, from the floor all the way up, of photo albums.

Q So this is, obviously, when he got sick?

A Yes.

Q And what's going on here?

A It's not staged. I just took pictures as things happened. And he was always very determined to let the

kids know that he was okay, even when he wasn't.

Q All right.

A And when they would come in, he would ask them to approach him. And he would always put his hand out. He always wanted to hold their hands.

And he would tell them, it's going to be okay. It's going to be all right. Papa is okay. And, of course, they knew differently.

But he was just always extremely positive. He fought from the very beginning until the very end. You could have told him the week before he passed away that there was a new chemo treatment that might would help him, and he would have left right then and went for it.

Q This is one a little bit earlier before he really, really got sick, isn't it?

A This one, I believe, was when he was getting his PET test done, I think.

Q Okay. And you said -- you said that other one wasn't staged. Was this one staged?

A No. He did this every day. And I would say, Dad -- and people would come to visit because he had cancer. And he -- they would be coming to -- some of them hadn't seen him in years and was wanting to come by and see him. And they were expecting to see a whole lot more sicker than what they saw.

And he had his weights beside his chair. And that was his weak arm. That was the arm that, underneath it, was the cancer. So, in his mind, if he could get that arm strengthened up, then he'd be able to sit up straighter or be able to lie on it a little easier. But he -- yes, he worked out.

Q So, now, at some point, he -- he did end up going to hospice; right?

A Yes, sir.

Q And when you were taking care of him, just give me an idea of how your days would go when you could come take care of him, and then how you guys would spend time together even once he got very sick.

A When he began to get sick in the beginning, it was with a collapsed lung. And the doctors didn't know why it had collapsed. And they -- they had it inflated again and thought that, with rest, he was going to be able to be okay.

And he came home. And within about a week, it was collapsed again. And with the collapsed lung, it's a lot of pain. And I've never seen my dad cry. And he would be just screaming and crying.

And so after a couple of times of the doctors trying to figure out why it's not staying open, they sent him to a surgeon, who said, Okay. I think we'll be able to get

it to open up and stay with talc.

The surgery was going to be excruciating. And they -- where they cut him, they broke two ribs. And he had, also, cut through a lot of nerves that couldn't heal. And no pain medicine could help. And he had to endure that for another month or so before it collapsed again and --

Q All right. Let me stop you there.

A Yes, sir.

Q Okay. You were kind of documenting this whole thing with your camera; fair?

A Yes, sir. Yes, sir.

Q And you sent us probably 200 pictures, didn't you, at least?

A Yes, sir.

Q And videos. I just want to show a few of these. Okay.

A And we did not know he had cancer at this point.

Q Okay. So this one -- and I'm not sure exactly of the timing on this one. I think this one is pretty late. But did you take a picture of his back?

A Yes, sir. And that was late.

Q Okay. And it looks like he's lost a lot of weight at that point?

A (Witness nodded.)

Q I'm going to blank that out. Let me ask you a little bit more. Tell me just how you spent father-daughter time with him, not just the taking care of him, but how you spent father-daughter time with him while he was sick.

A At the point of the -- after the second surgery, we -- I asked him to leave Spartanburg and go to a university. And we chose Emory. And I started taking off work and just going with them.

And we would spend the night. And that's some of my very best memories. We did that -- I can't even tell you how many months, even up to when they found the cancer. And the surgeons there at Emory is who found the cancer.

He had previously been diagnosed with COPD in Spartanburg. But with going to Emory, they had done testing, actually, for the COPD. And the tests came back negative, that he did not have it.

And so we were having to go back and forth probably sometimes twice a week. And I'd have to get off work, make sure -- my husband's absolutely wonderful. And he took over the role of taking the kids to school and getting them to their activities. So I spent a lot of time with dad and mom.

Q Let me ask you this. Was there sometime where you, actually, would just crawl into the -- into the bed next to him and --

A Yes.
Q -- be with him?
A Yes, sir. Every night I would come -- go -- I'd get everything situated with the kids. And at about 8:30 or 9:00, I'd leave my house and drive to theirs, which is about 15 miles away, and give mom a break.

And I would go in. And dad and I would watch American Pickers. He loved to watch American Pickers. And I would lie down with him. I couldn't lie beside of him because he hurt too bad on his side. But I would lie up to his arm and just pet his hand until he went to sleep. And we did that every night.
Q And your mom was, also, taking care of your father; right?
A She was. She would -- she would go up -- go up front into the den and try to relax during this time. And sometimes when he -- he's very mischievous. And he would take a spatula -- we'd gotten him a pie --
Q Well, he wanted a bell; right?
A He wanted a bell. But mom told me that if I did that, she'd never speak to me again. So I got a tin pie plate and a spatula, and would let him hit the pie plate.

So he would -- he'd say, Watch this. And then he'd hit it. He'd say, She's up there listening to her computer. She's not paying me any attention. Even when I

was there, he wanted her to be right there with him.

Q So he would kind of mess with her with --

A He did.

Q -- with the spatula and the pie plate --

A Yeah, he did.

Q Which was probably worse than a bell?

A He tried to be funny all the way up to the very end.

Q And then describe for us, towards the very end, his mind stayed sharp for a while, but it did start to go; is that fair?

A Yes. His mind was -- even with the pain medications, he could sit and have a complete conversation and be on point with everything that he was saying. But at the -- probably about a month before he went into hospice, he got very bad. And he would get confused about where he was at. And he would cry and want to go home.

And one day mom called and she said, I can't do anything with him. He's wanting to leave. He's wanting to go home.

And I said, Okay. Just tell him I'm coming. And I'll take him.

And I picked him up. And it took both of us to get him out to the car. It was raining that day. It was cold. And he couldn't get his jacket on him because he had a pain pump on one side.

So we got him out to the car and set him down. I said, Okay. Dad, I'm going to take you. And we drove down 85, and went around Hearon Circle, and drove straight back.

And he -- when we pulled up, he recognized the road. And I said -- he said, Why wouldn't you take me there last night?

And I said, Well, dad, I just couldn't get away from the girls. I said, But we've got you home now. And he was okay for the rest of the night.

But mom had to deal with that every day. He would think that his oxygen mask -- that the wires -- he couldn't -- even with that, he couldn't breathe. And he would think that they were clogged or that they had come off.

And nightly, he would call mom at 2:00, 3:00 in the morning and say, You've got to get under the bed. It's -- the bed's rolled over it.

So mom every night would get down and crawl under the bed and fix it for him. And there would be nothing there. But she would -- whatever he asked her to do --

Q So she would --

A -- she would do.

Q So she would tell him she was fixing the tubes, even though --

A And there was nothing --

Q -- they were fine?

A Yes, sir.

And may I say one thing --

Q Sure.

A -- about his character? He was always extremely giving. There -- he was selling his boat. When he realized he was not going to be able to fish anymore or take it anywhere, he was selling it. And a young guy came by to buy it. He was from Laurens. And he was a police officer.

And he -- dad sold it -- sold it for a very cheap price. Daddy didn't get to use it but just a few times. And the guy had it hooked up and was getting in his truck to drive it off.

And dad went, No, no, no. He goes back out there. He said, Son -- he said, You're young. And he said, And I appreciate your duty. And he gave him back $250. And he just -- was just so giving.

And another thing that's been brought up is the -- is his smoking. The reason why we know exactly when he quit was when I got married 30 years ago, I had a miscarriage a few years later. And dad -- when I told dad that I was expecting, he said -- he was so happy. And he said, Angie -- he said, I'm not going to smoke anymore. He

said, I'm not going to smoke around my grandbabies. He said, I'm not going to smoke anymore.

And at this point, I'm thinking he's going to need to go get the patch, and all this stuff. But he never picked it back up again. He just put it down. And that's why we know he never did.

Q Okay. He had a -- he had some problems with his skin when he got into hospice. He had some sores; is that fair?

A Yes, sir.

Q And you know what, I'm going to go right by this picture. It'll pop up for a second. I'm not going to -- we're not going to talk about it. Okay.

This is the last thing I want to do. You took bunches of videos of him.

A Yes.

Q Some videos he was -- he was singing to music he liked; right?

A Right.

Q Some videos, he was singing with his grandkids; fair?

A Yes, sir.

Q This one is about a minute long, but I'm going to play about five to 10 seconds of it. Okay. And I don't have it plugged into any audio. I've got the audio on here. So you may or may not be able to hear it. It's not

that -- terribly that important. But I just wanted to play this. This was -- was this in hospice?

A This was in hospice, yes, sir.

(WHEREUPON, a short video was played in open court.)

BY MR. PANATIER:

Q Okay. That's all I'm going to play. Now, towards the end, did your father suffer immensely, in your eyes?

A Oh, worse than I can imagine anybody suffering.

Q What is the -- you know, let me ask you. I did tell you, when you come to court, you don't wear any bling, but you do have one necklace on there. What is that?

A That's my dad's fingerprint.

Q It's his fingerprint?

A It's his fingerprint.

Q Are you the only one that has that necklace?

A No, sir. My girls have it as well. Mine has, Dad, on the back. And theirs has, Papa.

Q The last question for you is, what will be the one thing you take forward, the one thing you really remember and will miss the most about your father?

A That's hard. Because he was the -- the decision maker for -- not necessarily the decision maker. We went to him for every decision. He was mom's best friend. And they never had friends. They were just together, just the two of them.

And it's like that was all with us. My brothers and my sisters-in-law are my best friends. And then dad's just a part of it all. And he's not there anymore.

And it's not so much that -- I know he suffered. And I didn't want him to continue to live in that. However, the hard part is knowing that we may have 30, 40 years without seeing him. That's the hardest part.

MR. PANATIER: All right. Thank you very much.

I don't have any further questions for you. These folks may have some.

CROSS-EXAMINATION

BY MR. COLLIER:

Q Good afternoon, Ms. Keene.

My name is Chris Collier. And I've got just some questions for you this afternoon.

You're the representative or executor of your father's estate; correct?

A Yes, sir.

Q And in that capacity, you understand that you're now the named Plaintiff in the lawsuit; correct?

A Yes, sir.

Q And you understand that to commence or start a lawsuit, you file a document called a complaint; correct?

A Yes, sir.

Q Okay. And you understand that in this particular

case, that the initial complaint was filed when your father was still living; right?

A Yes, sir.

Q I'll hand you a copy of that. Plaintiffs counsel has a copy of it.

I think it's, also, there on the screen in front of you now, isn't it?

A Uh-huh.

Q Okay. You can refer to whichever copy is easier for you. But you see in the bottom right-hand corner there, if you kind of turn your head sideways, that it was filed on September 25th of 2013; right?

A Right.

Q Okay. And if you look at the first page there of the complaint, it contains the caption or the list of the Defendants that your parents were naming as Defendants in the lawsuit; right?

A Right.

Q And that first page there that we're looking at identifies eight Defendants, including 3M, CBS or Westinghouse, Chicago Pneumatic Tool, CNA Holdings, which is my client, Crane Co., Crosby Valve, and FMC; correct?

A Uh-huh. Yes, sir.

Q And would you flip over to the second page for me, please?

A (Witness complied.)
Q And on the second page, that identifies another -- I believe it's 12 Defendants, including Goodrich, Goodyear, Higbee, HOKE, Ingersoll Rand, John Crane, MetLife, Special Electric, Spirax Sarco, Sulzer or Pacific Pumps, and then Union Carbide; correct?
A Yes, sir.
Q And then I believe there -- at least, on this version, I think there might be a third page that has William Powell on it, but I'm -- it's neither here nor there.

So between the first page of the complaint and the second page of the complaint, that would be 19 Defendants who were named in your parents original lawsuit; correct?
A Yes, sir.
Q In between your father's videotaped deposition testimony that was played, I believe, on Wednesday and the testimony of his that was read into the record after that, and Mr. Thompson's testimony, you've heard several of those 19 Defendants mentioned in that testimony; correct?
A Yes, sir.
Q After your father passed away, the complaint was amended again to include you as the personal representative and Plaintiff along with your mother; correct?

A Yes.
Q Okay. Let me show you a copy of that complaint.
There you go.
And, ma'am, if you'll flip all the way to the last page of that third amended complaint, it shows that it was either mailed or served on April 16th of this year, down there at the bottom; right?
A I see that.
Q Okay. And similar to the original complaint, I'd like to walk you through the Defendants in the third amended complaint. Okay.
A Okay.
Q And it might be easiest for you for these questions to look at one on the screen or keep both of them side by side there with you so you can flip back and forth. And, please, let me know if I lose you for any reason.
The first Defendant listed on the third amended complaint is Aurora Pump Company; correct?
A I see that.
Q Okay. And you see that they weren't listed in the original complaint; right?
A Yes, sir.
Q Okay. And then we've got the Chicago Pneumatic listed again; correct?
A Right.

Q And then there's another new Defendant on the third amended complaint, CIRCOR Instrumentation Technologies; right?
A Yes, sir.
Q And then, of course, there's CNA Holdings or Celanese again and Crane Co.; correct?
A Yes, sir.
Q And then there's another new Defendant, Flowserve Corporation, which, also, includes Durco and Duriron in the caption there; correct?
A Yes, sir.
Q And then Goodyear and HOKE were repeated from the original complaint; correct?
A Yes, sir.
Q And then if you flip over to the second page of the third amended complaint, you've got John Crane; correct?
A Yes.
Q And then you've got another new Defendant by the name of Link-Belt; right?
A Yes.
Q And then Spirax Sarco, Sulzer or Pacific, William Powell Company, they all appear like they did in the original complaint; right?
A Yes.
Q And then the final Defendant on the third amended

complaint is a new one, York International; right?
A Yes.
Q So if we take the third amended complaint as a whole, it adds five new Defendants; correct?
A Yes.
Q So between the 19 Defendants in the original complaint and the 5 Defendants in the third amended complaint, that's a total of 24 Defendants; correct?
A Yes.
Q I'm glad my -- the math problem I was given was a little bit easier than the ones they were going through yesterday.

You understand that between these two complaints, that's a total of 24 Defendants that were sued, including Celanese and John Crane; correct?
A Yes.

MR. COLLIER: Thank you, ma'am.

I appreciate your time.

MR. ELLIOTT: No questions.

MR. PANATIER: Just a few follow-up.

REDIRECT EXAMINATION

BY MR. PANATIER:
Q Did you -- did you sit down at your typewriter at home and type out these complaints?
A I did not.

Q Okay. Did your lawyers do this --
A Yes.
Q -- for you?
And you're just the -- you're just the named Plaintiff because you're the executor of the estate; true.
A Yes, sir.
Q And can you -- can you tell us all the different legal reasons why someone may be named or someone may not be named at a certain time?
A No, sir.
MR. PANATIER: Okay. I have no further questions.
MR. COLLIER: Nothing further, Your Honor.
THE COURT: All right. Thank you, Ms. Keene.
MR. PANATIER: All right. One more video. This will be the video testimony of George McKillop. He's the company representative for John Crane, Inc. And this, again, includes both our designations and John Crane's designations.
THE COURT: It's one hour?
MR. PANATIER: Yeah. I think this one is approximately one -- let me get the exact time.
58 minutes.
THE COURT: Okay.
MR. PANATIER: And if -- Your Honor, if at any time it gets appropriate for a break, just tell me to stop and

I'll stop.

THE COURT: If anybody gets uncomfortable over there and wants a break, just wave, wave your hand.

MR. PANATIER: All right. Go ahead.

(WHEREUPON, Court's Exhibit No. 6 was played in open court.)

MR. PANATIER: That's all of Mr. McKillop, Your Honor. I don't know if you want to take a break now or just keep going. We have one more live witness today.

THE COURT: And that will be relatively short, or not?

MR. PANATIER: Pretty -- very short, yes.

THE COURT: Okay. Let's just go ahead.

MR. PANATIER: All right. Thank you, Your Honor.

At this time, the Plaintiffs call Linda Seay.

THE CLERK: Place your left hand on the Bible and raise your right hand.

WHEREUPON,

LINDA SEAY,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. PANATIER:

Q Are you doing all right?

A Yeah. Better than that.

Q Can you go ahead and introduce yourself to the ladies

and gentlemen of the jury?

A I am Linda Seay. I'm the wife of Dennis.

Q Okay. You're very soft-spoken. Try to speak up, if you can. Okay.

A Okay.

Q All right. The first thing is, you said Dennis was your husband?

A Yes.

Q How long were you guys married?

A Well, he says 37 years on his deposition, but it's --

Q He was wrong?

A Yes. It was 47.

Q 47. Okay. So even though he was under oath, he made a little error there.

A I tried to tell him. I said 40, but he...

Q All right. Now, he was -- in that deposition that we saw, he was already sick, was he not?

A Yes.

Q Now, I'm not going to ask you many questions, but I do want to ask you this. Will you tell us, first, how you guys met?

A Yes. And if my daughter did it, I would have grounded her for years.

He used to haul peaches. I'm from Knoxville, Tennessee. And he would haul peaches over there. And he

asked me one day, did I want to ride up to the top of the mountain to meet one of the other trucks --

Q Now, where were you, though? What were you doing? Were you just hanging out on the side of the road?

A Oh, no.

Q What were you doing?

A It was -- my parents owned a market, a fruit market.

Q Okay.

A So he would haul peaches over there. And he asked me did I want to ride to the -- Hendersonville to meet the truck that was bringing more peaches over. And I said, sure, you know. I said it wouldn't be three or four hours. And we was coming across the mountain and he just keep going and going.

I said, Now, wait a minute now. I said, Where's the truck with the peaches on it?

And he said, Well, they're not going to bring them so you've got to go to Spartanburg with me.

So he took me to one of his friends house. And he left. And he come back the next morning. And we were standing there washing dishes, me and the girl that lived there. And he -- I said something stupid. And he laughed. And he said, I just love her.

And so we said -- and he said -- they said, Why don't y'all go get married?

And I said, Sure. Let's go.

Q Okay. So let's get this straight. He kidnapped you?

A Well -- well...

Q You were a willing participant?

A Yes.

Q So on one day he picks you up in Knoxville. You guys come here?

A Yes.

Q And did you get married that day?

A The next day.

Q The next day. He kidnapped you on day one. And on day three, you were married?

A Yes.

Q Okay. And you stayed married for 48 years?

A Yes.

Q Okay. Well, here's the first picture I want to show you. Is that from your wedding -- Or what is that?

A That's her.

Q Oh, my God. I thought that was you.

A Oh, no.

Q I thought he looked older than you.

A No.

Q Okay. So this is the oldest daughter.

A Right. That's --

Q In fairness, was he older than you or younger than

you?
A He was about four years older than me.
Q Okay. When he kidnapped you. I got it. Okay.
Okay. Now, this is -- looks like one of those nice family portraits. This is all the grandkids; right?
A Yes. At the beach. Yes. We always went every year. And we all had to dress alike for pictures.
Q Let me ask you, when -- once you guys got married -- by the way, did your parents know?
A After -- yes, after we come back from Shelby. We went to Shelby, North Carolina. And there was a guy there that was getting a load of peaches to take -- he was from Knoxville. And he looked at Dennis and he went echt [phonetic], you know, in other words, they're going to kill you. Her parents are going to kill you.
And so we just, you know -- I mean, that's --
Q What's done is done.
A Done is done.
Q Did Dennis ever tell your father about the deal he figured he made for you?
A Oh, he traded a basket of peaches, he says. He always told everybody.
Q He got you for a basket of peaches?
A Yes. He gave my dad a basket of peaches. My dad gave me to him. But he says he got cheated.

Q Okay. So you guys had a long -- was it a happy marriage?
A Oh, yes, yes. I've got three beautiful children. Angie, she's always been my -- you know, then my youngest son there, he lived in Maryland. And when his dad got sick, he moved back home to be with him. And then my oldest son, he was -- you know, they were great. I don't know what I would have done without them.
Q What are your sons names?
A Justin is the youngest one, and Dennis Jr., and Angie.
Q Okay. So just over the course of your marriage, did your husband -- did Dennis always support you?
A Oh, yes. Oh, yes. We -- we -- I mean -- well, I guess I think I more or less supported him. Because if he wanted to go fishing, he'd say, Come on. And I'd think -- I didn't -- you know, I'd walk probably a half a mile, me eight months pregnant, you know, just be with him. We were just together all the time.
Q So you always wanted to be with each other?
A Yes, Yes.
Q And did he always -- did he always work? Was he always working?
A Oh, yes. Every day, yeah. He was a very, very good worker.

Q And then even though he worked as much as he did, was he a good father? Was he always there for the kids?
A Oh, my goodness, yes. As a matter of fact, that one and the other one has called me in the last two or three weeks. One of them, something happened to a battery in their car -- in the truck. And he would call -- they always call and say, Boy, I miss dad. Because he always was there for them and helped them, you know, and would do things for them. And they really miss him.
Q He took care -- I understand he took care of the yard?
A Oh, yes. Oh, yes. People would stop. You know, they were coming down the road, they would stop and look at the yard. And there's several has stopped and said, Who's your landscaper? Because they wanted to, you know, get him. But, yeah, he was -- he was real good with the yard, and everything.
Q But in fairness, he put you on weedwhacker duty, didn't he?
A Oh, yeah, I weed-eated. I wasn't going to get on that lawn mower.
Q A few more pictures. Just a few more. That's you guys at Christmas, it looks like?
A Yes.
Q And then where's that?

A That's up in Gatlinburg at the Apple Barn. That's his babies. They loved him so much. Oh, he just...
Q I like this picture. Can you -- I'll put you on the spot. Do you remember which particular baby that is?
A You did put me on the spot, because I don't know.
Q It's one of six. And you know it's a female. Does that help?
A Which one is it, Angie?
Q Was he -- was he always involved in the grandkids lives?
A Oh, yes. I mean, it was just -- I mean, when they come in the house, they just go straight to him. And, you know -- yeah. He was very, very good to the grandchildren. He loved them all. I mean, they just -- well, she was telling about the finger thing. But he --
Q And Angie, also, said he always -- despite not having a lot of money, he always dressed nice, always looked nice to present himself?
A Oh, yes. Yeah, he wouldn't step outside the yard without his hair combed.
Q Well, he had -- that was a nice head of hair.
A Yeah. He wouldn't step outside. He would always -- just always looked so -- I mean, he took about -- most of time, two baths a day.
Q Okay.

A Because he was just a very, very...
Q Was he a man with a lot of dignity?
A Oh, yeah. Yeah, he was.
Q I want to show you two pictures from toward the end of his life. Okay. Because Angie had said something to me about him always wanting to stay presentable, even as he got sick. And so what's this?
A That's -- that's one of the grandchildren, I believe, combing his hair. Sydney, yeah.
Q And then here, he's still shaving himself?
A Yeah, yeah. He couldn't -- he couldn't stand that. Every day I'd say, You're okay today. Because I had to, you know, give him his bath, and everything. And I was scared to shave him. I was scared I'd cut him. But --
Q I'm sure he was, too.
A Yeah. And he -- but he would have to every day. And I would say, You're okay today. I said, You don't have that much.

No. Go get it. Go get it.

Well, I was carrying water in and out, in and out to the room, you know. Because he had to have clean water.
Q And it looks like he's shaving around the oxygen tube; is that right?
A Yes. Yes, he was.
Q Was that okay by the doctors?

A I don't think they knew it.
Q So Linda, look, the last thing I want to ask you. Just tell the jury -- tell the jury what you miss most about your husband.
A I just miss talking with him. I mean, you know, we talked all the time. We had -- we would -- I mean, we were together for 48 years. We -- I didn't have friends. He didn't have friends. We were just together all the time. And I miss talking to him.

Sometimes I talk to him when I -- when -- knowing he's not even there. I'll, you know, slam a door or something. Because he'd always say, Oh, don't slam that door. And I'd slam it. And I'd say, Okay. Okay. I heard you. I heard you. I won't do it.

But I just miss -- with -- riding. We rode up in the country all the time. It's up there where he used to live. And just about every other Sunday, it would be, Let's drive up through the country. And I just miss all of that. I mean, it's -- it's -- I just sit there at night. And it's just -- it's terrible.
Q Do you sometimes forget that he's gone and --
A Yes, yeah. He -- I don't know. It is just -- it's sad.
Q One more thing. You told me that -- that you always looked forward to telling him things --

A Yeah.
Q -- when things would happen in your life.
A Yeah. If I went to the grocery store and run into a friend or something, you know, and they told me something, it's just like I can't wait to get home to tell him. And then it hits me, he's not there. He's not there.

And in the mornings when I wake up, the first thing is I've got to get up and I've got to fix his breakfast. I've got to -- you know. And then it hits me. He's not here. It is really terrible.

MR. PANATIER: Thank you.

No further questions.

MR. ELLIOTT: I don't have any questions.

MR. YOUNG: Ms. Seay, we don't have any questions.

Thank you, Your Honor.

THE WITNESS: Oh, okay.

MR. YOUNG: That's okay.

MR. PANATIER: All right. Thank you, ma'am.

Your Honor, that's it for today.

THE COURT: Okay. Ladies and gentlemen, we're going to resume the trial Monday morning. Just be back here at 9:15 Monday morning.

Don't talk about the case. Don't do any outside investigation about anything related to the case. And continue to keep an open mind. You haven't heard all the

evidence. And you haven't heard the law. So you don't have the tools you need to do your job yet.

So just continue to keep an open mind.

Thank you very much.

Have a good weekend.

(WHEREUPON, the jury was excused from open court at approximately 2:45 p.m.)

THE COURT: Okay. Anything else before we adjourn?

MR. PANATIER: No, Your Honor.

MR. ELLIOTT: Your Honor, just one thing. We don't need to do it now. We'll do it next week. But the Plaintiffs counsel has agreed to stipulate to the admissibility of the work history sheets. But we'll take care of that next week.

MR. PANATIER: Yeah. That's fine.

THE COURT: Thank you.

MR. COLLIER: The only other thing I need to do, Your Honor, is the offer of proof of Dr. Kradin, I believe it was.

MR. PANATIER: That'll just be a court exhibit; correct?

MR. COLLIER: Right.

MR. PANATIER: No objection.

MR. COLLIER: I don't know what exhibit number we're up to.

THE COURT REPORTER: Court's Exhibit No. 7.

MR. PANATIER: Whatever is next.

(WHEREUPON, Court's Exhibit No. 7 was marked for identification and admitted into evidence.)

MR. COLLIER: I just want to read one thing into record.

I've spoken with Mr. Panatier regarding this Court's Exhibit No. 7.

THE COURT REPORTER: Wait one second.

(Pause.)

MR. COLLIER: All right. So I've spoken with Mr. Panatier. And we're marking as Court Exhibit No. 7, CNA's offer of proof with respect to Dr. Kradin.

Court Exhibit No. 7 are those questions that were posed to Dr. Kradin during his trial deposition and the answers thereto concerning the damage to the mucociliary escalator, and the body's defense mechanisms, and Mr. Seay's smoking history. And these are the questions that CNA would have asked of Dr. Kradin if he had been alive at trial, and that were asked of him and responded to in his trial deposition.

THE COURT: Have a good weekend.

Thank you.

(WHEREUPON, the proceedings were concluded at approximately 2:48 p.m., to be reconvened on Tuesday, October 6, 2015.)

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|---|---|
| STATE OF SOUTH CAROLINA<br><br>COUNTY OF SPARTANBURG | COURT OF COMMON PLEAS<br>2013-CP-23-03915 |
| ANGIE D. KEENE, INDIVIDUALLY AND AS PERSONAL REPRESENTATIVE OF THE ESTATE OF DENNIS SEAY, DECEASED, AND LINDA SEAY,<br>PLAINTIFF,<br><br>vs.<br><br>CNA HOLDINGS, LLC, AND JOHN CRANE INCORPORATED,<br>DEFENDANTS. | ORIGINAL<br><br>TRANSCRIPT OF RECORD<br><br>**VOLUME III** |

October 6, and 7, 2015
Spartanburg, South Carolina

B E F O R E:

THE HONORABLE D. GARRISON HILL, JUDGE; and a jury.

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HOLLIE M. JENKINS
Circuit Court Reporter

# I N D E X

(PW) - Denotes Plaintiff's Witness
(DW) - Denotes Defense Witness
(IC) - Denotes In Camera

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All Exhibits were retained by the Clerk of Court for Spartanburg County.

TUESDAY, OCTOBER 6, 2015

THE COURT: Assuming we don't get canceled today, is everybody ready for the jury?

MR. YOUNG: No, Your Honor.

THE COURT: Okay.

MR. YOUNG: I guess I'm supposed to start.

Judge, on -- I think this is an odd situation. But on Friday, there was a video showed that had some audio to it. And before it was showed, while our corporate witness was -- video was being shown, Mr. Panatier came over and said to me, I'm going to show five seconds of a video. Is that okay? He didn't say anything about any audio. He certainly didn't say anything about Mr. Seay and Jesus.

And I just assumed, Judge, that that had been cleared with someone else on the Defense side. And I -- so I didn't object at the time. But I have ascertained over the long weekend that that was not cleared with anyone. I understand Mr. Panatier claims that he told somebody that that was in the video. But I have not been able to verify that.

So, Judge, we think that's highly improper. I mean, I feel like you ought to be able to trust people. And, heretofore, we had.

So in any event, Judge, we're going to make another motion for a mistrial. Or in the alternative, we'd ask

that that video -- audio -- the audio and the video of Mr. Seay in the hospital bed be stricken and not -- and Mr. Panatier be ordered or instructed not to refer to it again in front of the jury.

THE COURT: Okay. Mr. Young.

MR. YOUNG: Thank you, Your Honor.

THE COURT: Yes, sir. Mr. Panatier.

MR. ELLIOTT: Your Honor, John Crane would just join in.

THE COURT: Okay. Yes, sir, Mr. Elliott.

Thank you.

MR. ELLIOTT: Sure.

MR. PANATIER: I think I have three, maybe four responses. My first response is that it was cleared. The person I was clearing it with was Celanese's lead counsel. And I went over -- sorry. I've got a bit of a throat thing.

While Mr. Laubly's video was playing, I went over. He was busy, doing something else. I said, Hey, Lane, I'm going to show these pictures. And I'm going to play this video, five seconds at the end where he says "Jesus" over and over. I said that to Mr. Elliott, too.

And all of them have been turned over. They know what's on the videos. But I said, He says "Jesus" over and over. I'm playing five seconds of it.

If he chooses not to remember what he was told, that's not my problem. But he had full notice of what was on that video.

And my third response is that at the time, if he had an issue with it -- if anybody had an issue with it, they should have done something. If they had a problem with it, they should have objected. They should have asked for an instruction.

A lot of times, when there is sensitive material being played, they'll wait until after the examination, bring it up with the Court. None of that happened because they had all received notice of it. And they all knew it.

And, now, apparently, it's an issue after they've powwowed. But I went over to them and I said, Here's the video. Here's what he says.

THE COURT: When did you first give them the video?

MR. PANATIER: I think it was before the first setting. We sent a CD with all of the photos and the videos, just -- we produced everything.

And then right before the testimony -- I told him the day before, I said, Look, I'm probably going to have ten images or whatever for each witness that I'll show you guys right beforehand. Because we sent them hundreds of them.

And then I went through each one. And I said --

because there was a video playing, I said, This one's a video. And he says "Jesus," so.

THE COURT: Well, I don't know the first -- what do you mean by "the first setting"?

MR. PANATIER: The first -- I'm sorry. The first trial setting, July 27th.

THE COURT: Oh, okay.

MR. PANATIER: So before that -- before that setting, we produced everything.

THE COURT: And it had the audio on it then?

MR. PANATIER: Yes, of course. It never didn't have the audio.

THE COURT: Right. Okay.

MR. ELLIOTT: Your Honor, before the first trial setting in July, we got a 97-page exhibit list. And we asked Plaintiffs counsel to produce all of the exhibits, my paralegal did.

There was a delay in getting any of the exhibits. We followed up. And they responded that, We're having some trouble with downloading. Everybody is asking for all this stuff. We'll get it to you just as soon as we can.

We got a thumb drive that had some of the exhibits on it. I think like one through several hundred, like 200 or 300, and then 1000 through something. The video was #704. We didn't get it.

We followed up with them saying, We did not get all of your exhibits. We need all of your exhibits.

We got no response. We assumed they weren't going to use those exhibits. My office has never seen that video, never heard it.

MR. YOUNG: Judge, I just want to say, I've been trying cases for a long time. And it's not going to do any good for Your Honor for me and Mr. Panatier to get into a who shot John. But I am confident if the word "Jesus" had been used in our conversation that that would have -- I would remember that. Because that's not anything that's ever happened to me in any trial in my entire life. And, fortunately or unfortunately, I've tried a lot of cases.

And the other thing is, Judge, you know, in the middle of a Celanese corporate witness video, five minutes before you're going to show it is not really the time -- I -- even if you assume everything he said is true, which I dispute, that's really not the way to do something that -- that is like this.

And we're in the same situation as Crane about the exhibits, Your Honor. So, I just think, Judge, at the very least, we shouldn't hear about it anymore.

MR. ELLIOTT: Your Honor, I --

MR. PANATIER: I'll look into the issue of the

production. I know that there were many, many, many exhibits.

But the issue here is, there's not -- they're not complaining about whether it was produced. They're complaining that it was played.

And I -- if you try a lot of cases, you should know to make an objection if you have an issue. That's the first thing. It's waived.

And, secondly, I am very conscious of Defendants -- because I try a lot of cases, too -- not having notice of every little detail of my case. So if I know that I'm playing a video that is not sworn testimony, I know to tell them there is audio on this video, which I told both of these lawyers. And it was a three-second conversation. I said, I'm playing five seconds. He says "Jesus" over and over.

And I even told Mr. -- now I'm remembering more. I even told Mr. Young, I said, This is about a minute video. I'm going to play five seconds of it where he says "Jesus" over and over.

I certainly -- you know, I had -- I exercised discretion with the jury. I don't want to overdo the video. I didn't plan to play it again in closing. If that helps address their issue, that's fine. I'm not going to use it in closing.

But as far as whether or not they had notice of it, I went and sat next to both of these lawyers and I showed it to them and I told them. So I don't know what else I can do.

If they're -- if they wanted an objection or an instruction, they should have asked for it then. But, as an officer of the court, I gave them notice that there was audio on that video.

THE COURT: Okay. Well, I'd like to know more about the -- when it was produced and -- but I deny the motion for a mistrial.

As far as any further restriction on alluding to the video or playing it again, you're telling me you're not going to do that?

MR. PANATIER: That's correct, Your Honor.

THE COURT: All right. Well, I'd have to know more about the details of the production. But at this juncture, I respectfully deny the motion.

Yes, sir. Mr. Elliott.

MR. ELLIOTT: Thank you, Your Honor.

We just drafted a short motion in limine to prevent any witness or any attorney discussion -- discussing religion or a faith of a party in the case. It's -- some of it's come out. And it's water under the bridge.

But we would like Your Honor to order all parties not

to discuss religion or faith. It's not allowed. It's prejudicial under the rules. And just admonish us not to do that, the parties not do that in the future.

MR. PANATIER: My only response would be that it's just part of who my clients are. I mean -- and, again, they talked extensively about it. I'm not -- I'm certainly not going to be invoking religion to ask the jury for things. But if I say he was a man of faith and he had certain beliefs and values, that's just who he was.

That's what they testified about on Friday. Again, none of this was objected to. There was no issue about this four days ago.

Believe me, I'm not going to -- I'm certainly not going to get up and fire-and-brimstone this thing in closing, but he is who he was. He was who he was. And that was a man of faith. I think to the extent we discuss it in closing, that's probably all I'll say.

MR. ELLIOTT: Your Honor, some of it is water under the bridge. Mention it once, fine. It comes out again in the daughter's presentation.

The point is we could put Dr. Toca up, we could put George Springs up, and they could spend time talking about their religion, and how often they go to church. And that's who they are. But it's not relevant. It's not something the jury should consider. And going forward, no

one should be mentioning it.

We understand it's come in. And we get that. But it certainly shouldn't be spoken about in future in the case.

MR. PANATIER: Just one quick response. It's -- it's -- we're the ones asserting damages for the family members. And to the extent -- for instance, it was discussed -- Mrs. Keene discussed how her father raised her and what she misses, so did Ms. Seay. And they're asserting damages.

And to the extent that their faith touches on that or the jury thinks it touches on that in some way, it's relevant. Obviously, with an expert witness and a corporate representative, it's not because they're not asserting damages.

But, like I said, I'm not really going to bring it up anymore. I may say, he's a man of faith, or something in closing. I may not. But I'm not going to be harping on it.

MR. TIVIN: Your Honor, Mark Tivin on behalf of John Crane.

What we're concerned about is, for example, Mr. Seay testified that he wasn't -- he knew that he was either going up or down. And he wasn't going to lie in his deposition about this because he'd be going down. And, obviously, that -- you know, that's a sort of -- just

really -- you can, obviously, say he's a man of faith. And that's fine, you know. But I don't -- I just think the overt, I'm not lying because it goes against my religion, you know. You're not lying --

THE COURT: But when you take the oath, you have to swear or affirm.

MR. TIVIN: Yeah. But, you know, you don't need to kind of go overboard.

MR. PANATIER: And that came out in the video that they agreed to play.

MR. TIVIN: But I'm just saying -- that's why we're not moving to strike. I'm just saying going forward -- I mean, stuff has happened. And if it was one thing, it would be one. If it was a couple things -- just going forward. That's all.

And then we had an oral motion we want to -- I don't know.

Is it in a written motion?

MR. ELLIOTT: It's in there.

MR. TIVIN: I thought this was -- if we could have no more mention of the financial conditions of the parties. There's been testimony that the Seays were a very close family. And one of the reasons they were a close family is because they didn't have any money, and so that made them closer.

I believe -- that's me. I wasn't here, but that's me paraphrasing. We just don't believe the financial condition of the parties should be talked about in court. You can say you're a close family many different ways. And Mr. Panatier's a very effective attorney.

But we don't need to mention -- there's no need to mention that they didn't have any money growing up, or they had to skimp on vacations or clothing because they didn't have any money.

MR. ELLIOTT: Your Honor, sorry for the double team. It wasn't my intent.

But in our motion, we asked Your Honor to instruct the jury with a couple sentences on the religion and how it's not to a consideration in their deliberations. It's on Page 2.

MR. YOUNG: And, Your Honor, just for the record, Celanese would join in those two motions.

MR. PANATIER: Your Honor, my only response is these are four days late. If there was grounds for an instruction, there should have been an objection made and either -- either at the time of the testimony or shortly thereafter, if they didn't want to interrupt in front of the jury, which I understand.

But -- but the next court day asking for an instruction on something they didn't even make a timely

objection on. I mean, I -- I agreed to make objections on time. That's what I agreed to do. And they're not doing that. And now, they're asking for instructions based on testimony they didn't even object to.

THE COURT: Okay. What do we have on tap for today?

MR. TIVIN: Your Honor, this morning, the Plaintiffs [sic] first witness is Dr. Toca. He's a certified industrial hygienist. I'm going to put him on. My direct is going to be about 40 minutes, maybe an hour, depending on that.

After Mr. Panatier's done crossing him, I have our corporate representative, George Springs. He's in the hallway, too, waiting to go on. And I don't know how long the cross on that's going to be.

We've -- we were working. And we got the Dr. Crapo video, but I don't believe the Dr. Crapo video is going to be ready today. Dr. Roggli is coming -- still coming tomorrow. Celanese is having a couple witnesses tomorrow.

MR. YOUNG: Judge, we, I guess, moved everything one day. And so Mr. Bowyer is going to be here tomorrow. And we figure he'll be fairly long.

THE COURT: Now, who is he?

MR. YOUNG: He's the Celanese live corporate witness.

THE COURT: Okay.

MR. YOUNG: And then the last witness, Judge, is a

fellow, Don Buck, who works for Daniel. And he lives around here. And we've been working with his lawyer.

And right now, I told Mr. Panatier, we have him scheduled for first thing Thursday morning. And I'm assuming -- I know Your Honor wanted to finish the evidence on Wednesday. But I'm assuming that we could easily -- if we had already done the charge conference, we could easily do Mr. Buck and closings on Thursday. Because I don't think -- I don't know if there's going to be any rebuttal or not. But I think that's all the witnesses there are.

Right?

MR. PANATIER: Yeah. There's -- I don't anticipate any rebuttal at this point.

MR. YOUNG: So I don't think Mr. Buck is going to be a super long witness, Judge. Maybe an hour.

MR. PANATIER: It depends on what you guys do. But I anticipate -- I agree. Today if we -- if we -- Your Honor, we got some -- we've gone back and forth with John Crane on their Crapo video. And our guys are trying to cut that to be able to play it today.

If we can't, though, this afternoon may be a good time to start talking about the charge. And then, perhaps, we could get that knocked out --

THE COURT: Okay.

MR. PANATIER: -- if we have any extra daytime.

THE COURT: All right. So as far as witnesses, we have Crapo, Buck, Roggli. And tell me who else.

MR. TIVIN: Toca and Springs.

MR. YOUNG: And Bowyer.

MR. TIVIN: Mr. Bowyer.

MR. YOUNG: Mr. Bowyer, he's the Celanese live corporate witness. So it's Toca, Springs, hopefully, Crapo. Then Roggli, Bowyer, and Buck. And I think that's it.

MR. PANATIER: We'll do our 10-minute read-in of Mr. Dixon. We have a 10-minute --

MR. YOUNG: Well, we've got some things that we have to take up with Your Honor before that's done. But I don't think that's going to take a super long time anyway.

THE COURT: Okay.

MR. PANATIER: I still think either way, today is probably an early day.

THE COURT: Okay.

MR. PANATIER: And we can, hopefully, nail the charge.

MR. TIVIN: Because I'm not -- as opposed to me wandering around on cross-examination, I'm a little bit more succinct on direct.

THE COURT: Not all who wander are lost.

MR. TIVIN: Unfortunately, I am.

THE COURT: I doubt that.

MR. TIVIN: Your Honor, do you mind if I move the podium?

THE COURT: No.

Okay. Let's take like a three-minute break and let everybody get comfortable before we get the jury in here.

(WHEREUPON, a break was taken.)

THE COURT: Is everybody ready for the jury?

(WHEREUPON, there was no response.)

THE COURT: Okay. You can bring them on in.

(WHEREUPON, the jury came into open court at approximately 9:45 a.m.)

THE COURT: All right. Good morning, ladies and gentlemen.

Hope you all had a good weekend. And we're going to resume the testimony now.

So, yes, sir. Mr. Tivin.

MR. TIVIN: At this point, John Crane would call Dr. Toca.

THE CLERK: Place your left hand on the Bible and raise your right hand.

WHEREUPON,

FREDERICK M. TOCA,

after first having been duly sworn, testified as follows:

THE CLERK: Thank you.

MR. TIVIN: May it please the Court.

THE COURT: Yes, sir. Mr. Tivin.

DIRECT EXAMINATION

BY MR. TIVIN:

Q Can you, please, state your name for the ladies and gentlemen of the jury?

A Frederick M. Toca.

Q Are you currently employed?

A Yes, I am.

Q Who do you work for?

A Toca Enterprises, Limited.

Q What's that?

A That's my consulting company.

Q And is there any type of work that Toca Enterprise does?

A We do consulting in industrial hygiene and toxicology.

Q And are you an industrial hygienist?

A Yes, I am.

Q Are you a toxicologist?

A Yes.

Q And do you do this for free?

A No. I do not.

Q And how much do you charge?

A $450 per hour.
Q And this -- you realize this is a case involving mesothelioma, and gaskets, and packing, and asbestos?
A Yes, sir.
Q Have you testified in that type of case before?
A Yes, I have.
Q How long have you been testifying?
A I would say since 1999, or thereabouts.
Q And I'm, obviously, a Defendant in this case -- John Crane is a Defendant in this case. Have you ever testified on behalf of a plaintiff?
A Yes, I have.
Q How many times?
A There are two cases where I worked for a plaintiff.
Q But to be fair, the majority of the cases that you've testified for have been on behalf of defendants?
A Yes. That's correct.
Q And my client and my firm has hired you before?
A Yes, they have.
Q And you've testified numerous times on behalf of John Crane and O'Connell, Tivin, Miller & Burns?
A Yes, sir, I have.
Q Now, I'm going to attempt to use the ELMO. And I want to discuss your education with the jury. Okay.
A Okay.

Q Can you, please, give a rundown of your educational background with the jury, please?
A Certainly. I have a Bachelor of Science Degree in Medical Technology and Biology from Xavier University of Louisiana. I have a Master of Public Health in Industrial Hygiene in Air Pollution from the University of Michigan. And I have a Ph.D. in Preventive Medicine, specializing in industrial hygiene and toxicology, from the University of Iowa.
Q Now, this is a -- you're the first industrial hygienist -- well, strike that.
Is there something called a certified industrial hygienist?
A Yes, sir, there is.
Q What is that?
A Well, it's someone who is in the field and has passed the certification examinations and the qualifications required by the certifying board.
Excuse me. Could I have some water?
Q Yeah.
A Thank you, sir.
Q And that would be the "CIH" after your name?
A Yes, sir.
Q The "D" is a doctor. The "CIH" is certified industrial hygienist?

A Yes.
Q Then there's a "CSP." What does that mean?
A It's a certified safety professional.
Q What's that?
A All right. Just as in the field of industrial hygiene, one can seek certification through examination and through having fulfilled the educational requirements. One can, also, seek certification in the same -- by the same method in the field of industrial safety.
Q What is industrial hygiene?
A Industrial hygiene is the anticipation, recognition, evaluation, and control of those factors that come in or from the workplace --
THE COURT REPORTER: I can't hear him.
THE COURT: All right. Hold on, sir.
THE WITNESS: Yes, sir.
THE COURT: You're going to have to speak up just a bit.
THE WITNESS: Okay.
THE COURT: So we make sure everybody, the court reporter particularly, can hear you.
THE WITNESS: Yes. Is this any better?
THE COURT: Does the microphone need to be adjusted? Is it --
THE WITNESS: Does it come up any -- well, this might

work. Is this any better, sir?

THE COURT: Yes, sir.

UNIDENTIFIED JUROR: Yes.

THE WITNESS: Okay. I'm sorry. Let me start again.

So industrial hygiene is the anticipation, recognition, evaluation, and control of those environmental factors which may arise in the workplace which may cause illness or discomfort.

And so the industrial hygienist looks at the workplace, at all of those hazards, figures out what's there, how much is there, and has to understand how they might harm people. And then he designs a system or he arranges the work so that people do not get sick at work.

BY MR. TIVIN:

Q And would one of the things that industrial hygienists study or be aware of would be asbestos?

A Yes, sir.

Q You, also, got your master -- you, also, have a degree in toxicology. You're the first toxicologist that's been here. What is that?

A Okay. So toxicology is, basically, the study of how materials, chemicals in particular, can harm or hurt you. The biology of how that happens, or the chemistry within your body of how that happens, that it can cause illness or adverse effects.

Q Now, before you started your Ph.D. program at the University of Iowa, did you have any sort of research fellowship?

A Okay. Before I started at the University of Iowa, I worked at Los Alamos Scientific Laboratory, which is a government research laboratory. It was originally developed to develop the first atomic bomb.

I was an industrial hygiene technician there between the time I received my master's degree and until I went to work on my Ph.D.

Q Now, I've turned the page of your CV, and I see Los Alamos Scientific Laboratory. And that's the beginning of your work professional. Can you -- what did you do after your first job as an industrial hygienist?

A Okay. So after my doctorate, my first job was working for Gulf Oil Corporation. I was the director of their environmental sciences laboratory. So I set up that laboratory. I hired the staff. I worked on the development of the analytical procedures that we used.

That laboratory would collect samples from wherever Gulf had facilities, all around the world, and would analyze the air samples, water samples, and other materials to evaluate what toxic materials might be in the environment of our workplaces, as well as in the environment around our facilities. And so I ran that

laboratory for a number of years.

Q Now, you mentioned air sampling. Have you had any training on how to do air sampling?

A Yes. That was part of my training, both at the master's and Ph.D. level.

Q And with regards to air sampling, would that include air sampling for the ability of -- to count asbestos fibers in the air?

A Yes, it would.

Q Now, are you familiar with -- well, strike that.

Have you ever done tests where you've, actually -- where you've conducted the air sampling?

A Yes, I have.

Q Can you describe what the -- we heard earlier about an old dust sampling technique called a midget impinger --

A Yes.

Q -- starting with millions of particles per cubic foot?

A Yes.

Q Can you describe what that is to the -- do you have any experience with that?

A Yes, I do.

Q And can you describe what that is to the jury?

A Okay. Yes. So a midget impinger or a [inaudible]. You look at it -- okay. One way to think about a midget

impinger, it's sort of like a baby bottle full of water. Okay. There's a tube that goes down to the bottom of it, and that tube has a hole in it. You draw air through the tube through -- from the outside so that the water -- the air that you're drawing is coming into the bottom of that tube. And it's coming in. And it's bubbling into that water.

So anything that's in the air, you get in that liquid solution. It's not always water that you use, but you get in that liquid solution. So that's what we call a midget impinger, a small one like that.

Then there used to be another one called a Greenberg Smith that was about that big. It's hard to carry around. So that's why the little ones were used.

So you collect in this case particles in that liquid solution that you have in the impinger. You put it under a microscope. And you count the number of particles that you see in each field. You count a hundred different fields in each field that you look at through the microscope.

Q Now, is that the way that people count fibers today?

A No.

Q And how do people count fibers today?

A Instead of having this tube with liquid in it or a bottle with liquid in it, we now use a filter. And so you

have a filter in a filter holder. The air is drawn through the filter. And the particles are collected on the surface of the filter. And you then take a piece of the filter, put it under a microscope, look at it, and count the amount of particles that are there.

Q Now, after Gulf Oil, you went to Tenneco?

A Yes, sir.

Q And what did you do there?

A Okay. So I went to a company called Tenneco Chemicals, which was a subdivision of a larger company called Tenneco. And I was there the industrial hygienist for that company. Tenneco Chemicals was a small chemical company that had -- I think we had 25 or 30 small chemical plants that did a lot of things. We made building-block chemicals.

For example, we made acetylsalicylic acid, which is what aspirin is made out of. But we didn't make those nice little pills that you buy in the bottle. We made the raw stuff as a solid block. We sold it to people like Bayer, who ground it up and refined it and make it into pills. We, also, made other things which are known as building-block chemicals like benzene, and things that are used in chemical processes.

Now, my job was to go to all the facilities there, one, to do industrial hygiene, to sample the air and be

sure that our workers were safe. Two, to set up a relationship -- like usually I would do it with a local physician, who would do annual physicals on our -- on our employees. So I would contract with this doctor to do that.

Also, to -- to a limited extent at Tenneco, if we were making new products, which we didn't do very much of, to contract out with someone who would do analysis on those products to see how harmful they were. They'd do animal studies in those days on those new -- new combinations of products.

Q What did you do after Tenneco?

A After Tenneco, I went to a company called General Electric Company at their plastics business -- plastics business division. This job was different because, at Tenneco, I was the industrial hygienist. I was the guy in the field who went out and did all this stuff.

At GE, I now was a manager. And what I had was people throughout our plastics facilities who looked at the air, looked at the water, looked at the safety of the facility, as well as the industrial hygiene. My responsibility was for coordinating all of those activities for our operations in the plastics business division of General Electric.

Q And after you went to General Electric, it looks like

the next two jobs are for the same company, but they changed names. And what was that?

A Okay. So I left GE and I went to the United States Steel Corporation. When I went to United States Steel Corporation, even though it's called U.S. Steel, at that time, it really is -- was a multifunction company. Of course, we had steel mills because we made steel. But we, also, had chemical plants. We, also, had a company called Marathon Oil Company.

There were railroads because we had coal mines. And we moved materials from our coal mines. There was a fleet of ships on the Great Lakes which took ore in mines from up in Minnesota and brought them to our plant down in Gary, Indiana, and around there.

So the idea there was -- okay. My responsibility, when I first got hired at U.S. Steel, was to be the director of industrial hygiene for all of those different types of operations, to put programs in place.

Before I came, there had been two other directors before me. But my job was to coordinate all of this within all of the businesses, to manage the staff that did the air sampling, did the water sampling, did all of these things. So it was a much different job than the previous one that I had because it involved far, far more. For example, we had over 320,000 employees within U.S. Steel

at the time.

While I was at U.S. Steel, I got promoted from being a manager to being a director. So they added to my job -- it was called compliance. Because OSHA came into -- the Occupational Safety and Health Administration came into being. And so now I had to not only do the job of protecting our people and making sure that they were in a healthy and safe environment, but I had to, also, be sure that we complied with all of the federal regulations and state regulations that were in place.

Q Did any of your industrial hygiene responsibilities at U.S. Steel involve asbestos?

A Yes. Because within our facilities, particularly the chemical facilities as well as the steel -- steelmaking facilities, asbestos was used in various places. So the people who worked for me, although I -- I have to say I took very few samples at that point in my career myself, but the people who worked for me did. And between myself and my manager of industrial hygiene, we read every report that -- for anything that was collected and signed off on.

Q Now, where did you work after U.S. Steel?

A After U.S. Steel, I went to a company called Hoechst Celanese. And Hoechst Celanese at the time was, I think, the second largest chemical company in the world. It's a German company. And it bought this company in the

U.S. called Celanese. It was called Hoechst Celanese.

Now, my job there, again, was different. Because I was now the director of occupational health for North and South America for Hoechst Celanese.

So we had, again, many different businesses, the fibers business, the chemical business, the pharmaceutical business, the agrochemical business. But it was different in that my job was to report to the president and to the -- and to the directors at -- within the company on how to build, you know, the policies that we generated regarding health, safety. How to implement those policies, working with the various divisions in the plants, to then have a team of people who worked for me who went to the plants and audited the plants to be sure they were complying with our in-company regulations, as well as the regulations of the federal government, or states, or whatever.

So it was more of a broad overview of policymaking and making sure that the whole corporation was doing things and -- in the way that would protect our employees.

Q Now, the years that you were at Hoechst Celanese was '91 to '97?

A Yes, sir.

Q And after that you went into Atlantic Environmental?

A Yes, I did.

Q And that's when you started doing industrial hygiene consulting?
A That's correct.
Q And you continue on doing that through Toca Enterprises?
A Yes, I do.
Q I take it you have a pretty good position at Toca Enterprises?
A Well, I'm -- I'm Toca Enterprises. Basically, I'm Toca Enterprises only employee so, yes.
Q Now, we've mentioned that you were a certified industrial hygienist. Do you have to get recertified in that at all?
A Yes, you do. It used to be every three years. Now, it's every five years.
Q And are you -- have you been recertified?
A Yes, I have.
Q At any point in time have you ever lost your certification?
A No, I have not.
Q You're, also, a certified -- are you still a certified safety professional now?
A Yes, I am.
Q Now, I put it up here, and I'm going to -- it's a little better there. It says, Professional contributions.

The first one listed is the American Industrial Hygiene Association.

A Yes.

Q Do you see that?

A Yes.

Q What is that?

A Okay. The American Industrial Hygiene Association is the professional association for industrial hygienists. It's, also, the preeminent industrial hygiene association in the world, as well as in the U.S.

Q Now, is that different -- Dr. Holstein testified that the -- there was something called the ACGIH, which was the Association for --

A It's --

Q -- Industrial Hygienists in America.

A Okay.

Q Is that different?

A All right. There are two associations. Okay. ACGIH, American Conference of Governmental Industrial Hygienists, is, actually, a year older than the AIHA. However, they only permitted -- until recently, they only permitted people who worked for the government or people who worked in universities. You could not work for a corporation or anybody like that and be a member of ACGIH. Now, you can. But 48 years ago when I got into this

business, you could not.

So there was another professional association that invited everyone, regardless of whether you worked for the government, or whoever it to be. That is the American Industrial Hygiene Association. And that's why the American Industrial Hygiene Association has about 12,000 members, whereas the ACGIH has about 2,000.

Q Now, have you heard -- have you held any positions with the AIHA?

A Yes, I have.

Q And what positions have you held?

A I served two terms on the board of directors. I was secretary of the association. And I was president of the association.

Q Now, we've, also, heard about a peer review. Have you -- are you familiar with what peer review is?

A Yes, sir, I am.

Q Have you -- are you a peer reviewer?

A Presently, I am a peer reviewer for the Journal of Environmental and Occupational Health.

Q And have you published any articles --

A Yes, I have.

Q -- in the fields of industrial hygiene?

A Yes, I have.

Q About how many?

A About a dozen or so.
Q What is the Industrial Hygiene Roundtable?
A The Industrial Hygiene Roundtable is an honorary fraternity, sorority. Because we have men and women in it now. 48 years ago, we had only men. But now it has men and women.

You have to be invited to join the roundtable. It never has more than 35 members at any one time, which means that, obviously, old people like me have to be nice and take emeritus -- emeritus membership so that new young people can come in.

The idea is that it's supposed to be 35 of the best and brightest in the field who get together and discuss various issues in the field. So I'm, actually, no longer a member. I'm an emeritus member, which means I can't vote at their meetings or on anything. But I can attend and take part in discussions.
Q Have you received any awards regarding your work with industrial hygiene?
A Yes, sir, I have.
Q What is the Henry F. -- is it Smyth?
A Smyth.
Q Award?
A Yeah. Okay. So there is another organization called the American Academy of Industrial Hygiene. It's made up

only of people who are certified. In other words, I said the AIHA, with it's 12,000 members, anybody can join. Well, the academy, you have to be certified to be a member of that. They gave me the award for outstanding contributions to the profession of industrial hygiene called the Henry F. Smyth Award.

Q And what is the Borden Award?

A Okay. When I was given that award, it was called the Borden Award. It's now called by a different name. I think it's called the Distinguished Service Award.

But it is given by the American Industrial Hygiene Association. And it's, again, for contributions to the field of public health and to the field of industrial hygiene.

Q Have you held any appointments by -- have you been appointed anything by any U.S. governmental agencies?

A Yes, I have.

Q Which one?

A Okay. Well, starting with NACOSH. So there's this Occupational Safety and Health Act. And when the Congress made this act, they set up a -- let's say an oversight committee, which would be made up of people from government, from industry, from labor, and, also, from the public. That oversight committee advises the secretary who is in charge of OSHA on matters of policy. So I

served one term on that.

Q How did you get on that? Who appointed you?

A Well, technically, you're appointed by the President of the United States.

Q Now, as part of your work both through your employers, through your education, and your work in the associations, have you been in a position where you had to determine whether or not a person's exposure to a product was safe or not?

A Yes, sir, I have.

Q And have you done that on more than one occasion?

A On many occasions, yes, sir.

MR. TIVIN: At this point, Your Honor, John Crane would offer Dr. Toca as an expert in the field of industrial hygiene and toxicology, especially as it relates to asbestos.

THE COURT: Any voir dire?

MR. PANATIER: No, Your Honor.

THE COURT: All right. He's qualified.

You may proceed.

BY MR. TIVIN:

Q We're going to jump right in. And have -- are you familiar with the term "no-effect level"?

A Yes, I am.

Q Is that a term used in industrial hygiene?

A Yes, it is.
Q Are you familiar with the term "Hatch curve"?
A Yes.
Q What's that?
A Well, the Hatch curve is a dose-response curve. It's named after Dr. Theodore Hatch, who taught at the University of Pennsylvania at the time he wrote the paper.
Q Do you have an opinion, based upon a reasonable degree -- and I'm going to be asking you a lot of opinion questions, obviously, this morning. Would it be okay if you kept your answers to a reasonable degree of scientific certainty?
A Yes, sir.
Q Do you have an opinion, based on a reasonable degree of scientific certainty, whether the Hatch curve applies to asbestos?
A Yes, sir, I do.
Q And what is that? What's your opinion?
A My opinion is that it does.
Q Would drawing a diagram help the ladies and jury [sic] understand what a Hatch curve and the no-effect level is?
A Yes, sir. I think it would.
MR. TIVIN: Your Honor, I'd ask permission to have the witness step down from the witness stand to --

THE COURT: Absolutely.

THE WITNESS: Ladies and gentlemen, I know that I have trouble with my voice and I don't always talk as loud. So if you're not hearing me or if you're not hearing me, please, please, don't hesitate to say, talk up. I can't -- you can't hurt my feelings. It's just that I have a bad, bad voice here.

All right. So we want to talk about what's known as a dose-response curve. And in this case, this is what Dr. Hatch -- the way he described it, and why it's called the Hatch curve. Okay. Because we're going to look at dose concentration versus response.

For this example, I'm going to use a substance called carbon monoxide. Most of you are probably familiar with carbon monoxide. It's the result of incomplete combustion. It comes out of the tail end of your car. Or if you have incomplete combustion with your furnace, it can -- carbon monoxide can cause you to get very sick, or it can even kill you. When you crossed the street this morning, if there was heavy traffic, you were breathing some carbon monoxide. Because it was coming out of the tail pipes of those cars.

So if, like I said, when you crossed the street, you were breathing carbon monoxide, It was at a certain concentration. But it didn't do you any harm.

BY MR. TIVIN:

Q Doctor, now, let me interrupt you. This is a -- can you explain what you mean by "concentration"?

A Oh, yeah. So it is the amount -- in the case of carbon monoxide, it is the amount that is measured in the air. And a term that's used to measure a gas is "parts per million." Since carbon monoxide is a gas, how many parts are there per million? Parts there. Okay.

In the case of carbon monoxide, like I said, at very low levels, when you're crossing the street or -- and you have a little bit of carbon monoxide, your body can handle it. Because your body is at a -- is at what we call a state called homeostasis.

In other words, you're taking in the carbon monoxide. It doesn't affect you in terms of your feeling anything. Because, you know, your body can stand that much of it and you go right home. But if I were to raise that level of carbon monoxide -- okay -- now your body has to work harder. And it goes into a state called compensation.

Now, what is that carbon monoxide doing? Carbon monoxide likes to park itself and take away the place where oxygen would set on your red blood cells. So when it hooks up with your red blood cells in the case of homeostasis, there's so little that you feel nothing.

On the other hand, when it hooks up at a higher level

at compensation, now it's taking so much oxygen that, if you went jogging up -- or not even jogging, but walking up a set of steps, you'd be huh-huh [phonetic] because you're not getting enough oxygen as you're breathing.

Now, If I raised it to an even higher level, what happens now is it's taking away so much oxygen that you begin to have effects. You're probably seeing double. You may be dizzy. You may have a little bit of bleeding going on inside, internal bleeding. You don't feel well, basically, because now you're -- it's beginning to break down your body's ability to handle it.

And if we raise it to an even higher level, we have failure, which is known as death. Because you can't live without oxygen. And if the carbon monoxide takes it all away, that's it.

So this curve, as described in this manner, is what Dr. Hatch did in the paper that he wrote, which, having read the paper, it makes it easier to understand what's known as dose-response.

Q Now, does dose-response -- you mentioned dose-response applies to asbestos?

A Yes, sir, it does.

Q Would -- how does it apply to asbestos?

A Let's do this again. Okay. So now, again, we have a dose-response curve; right? And you go back here to

homeostasis, the amount that your body can normally handle.

Now, as I look at this jury, I don't see any of you old people like me. But if you're of a certain age and you lived in a large city, there is because of the way -- like in New York City or in other large cities, they used to use asbestos quite a bit in buildings, asbestos used to be in the brakes of cars, so forth.

So if you're walking through a nice large city on a morning -- when I was younger -- it's highly possible you're breathing in asbestos fibers. Because it was distributed so much throughout our society.

Q Now, Doctor, we've heard mention of background and ambient levels of asbestos. Is that what you're talking about?

A That's what I'm talking about. That's what I'm talking about.

So those levels -- okay -- because we know that -- you know, I can't say for these young folks over here. But for people like me who are older, you know, over 65, because we grew up in an environment like that and we do not see an astronomical amount or a large percentage of people all having asbestos-related disease, we know that there is such a thing as a no-effect level, or a level at which nothing is happening. And, generally, it has been

measured in certain cities to be between .003 to as high as 0.02. And this is measured in a different way. It's measured in fibers per cc.

See, when we talked about gases, we measured how many parts per million parts. Well, for particulates and for fibers, we measure it a little bit different because it's a solid. And we call it fibers. How many fibers could you see in a cubic centimeter of air? So homeostasis. However --

Q Doctor, if I could just interrupt for one second. When you're talking fibers per cc, that's through a light microscope?

A Yes, sir.

Q And if you were going to look at -- and all the governmental standards, are they all based on fibers per cc?

A Okay. All of the government standards are based on -- measured on a method called a PCM, phase contrast microscopy. And they're measured in fibers per cc.

Why? Because when they started making standards in 1970 when OSHA came around, all of the data on health was based on that kind of measurement. So even though we have more sophisticated methods of doing this, the more sophisticated methods do not match up with the way that the original health data was -- was developed.

So what I have to do as an industrial hygienist in order to talk about health, I have to -- I have to report it as it was originally done. In other words, the toxicology tests and the human tests from people who worked in asbestos mines and so forth were all measured in -- by that certain method, PCM. And that's why we still use it.

So homeostasis, the amount that's in the environment, background. But there is another level. Okay. And this is the level that was set by the government. It's 0.1 fibers per cc. And it's what we call the permissible exposure level. It's the level that was set by OSHA.

Now, OSHA set this in 1994. And when they set that level, they made this prediction. They said, you know, we're setting this at 0.1. And we believe that they are going to still people -- people are still going to get sick at this level, a certain number of people within a million people who are exposed are going to get this.

Well, guess what? Our government did something right. Because when they did this thing, they were basing it on -- let's say they were basing it on where they knew people got sick, had asbestosis. And they said, yeah, some people are getting sick.

Well, since the time they set this, though, it turns out people haven't gotten sick at the number that they

say. And this is shown by epidemiological studies, studies of large populations that are exposed at or below this level.

And so what we can say now is, look, if we can keep our workers exposure or anyone's exposure below that .1 in the environment, then there will be what we call a no-effect level. Okay. Because -- as long as I can keep it here.

And, basically, that's what industrial hygiene is. That's what I do in the workplaces. I go around, whether it's asbestos or whether it's any other chemical, I want to know where that no-effect level is. Because if I can define that, whether it's through toxicology tests, testing on animals, or, unfortunately, whether it's through epidemiological studies where large populations of people have gotten sick or died, we can -- if we can define where that is and I can keep that workplace below that, then I'm doing my job.

Okay. And that's dose-response.

Q Thank you, Doctor.

Now, you mentioned a couple terms I want to go through a little bit. You mentioned the permissible exposure limit, and that's the PEL. Are you familiar with the term "fiber-year"?

A Yes, sir.

Q What's a fiber-year?
A A fiber-year is the way that we measure what is known as cumulative exposure.
When I'm talking to you about fibers per cc -- okay -- how many fibers are in a cubic centimeter of air -- what the pathologists and physicians do is they say, well, okay, if we accumulate -- accumulated those numbers of fibers -- if you're breathing it in and we accumulate it over a period of time in years, that amount of fibers, how much would it take before people get sick?
I said, you know, at .1 in the air, we're saying it's good. But they want to know, because they're physicians and they're looking at tissues under microscopes, how much is too much? Okay.
So they say fiber per cc years. And it's a calculation of how many years you were exposed times the quantity of fibers. And you come up with fiber per cc years.
Q So, for example, in order to get -- if you're exposed at .1 fiber for three hours one day, would that be .1 fiber years?
A No. Three hours -- okay. You'd have to calculate three hours -- you'd have to convert the three hours into years. Okay.
Q So in order to get a fiber- year, you have to be

exposed for eight hours a day, five days a week, 50 weeks a year?

A Yes. That would be equivalent to a year.

Q And the PEL, is that -- are you familiar with the term "time-weighted average"?

A Yes, sir.

Q And what's a time-weighted average?

A Okay. So I said OSHA has what's known as a permissible exposure limit. In order for me -- if I go out -- if I sat in this room and measured the air and I want to compare the sample that I got to the standard, it has to have -- the simplest way to say it, it has to have a common denominator. You remember that from math. In order to compare two numbers, they have to have a common denominator.

What OSHA says is, okay, we're going to base this standard on an eight-hour workday and a 40-hour week. And if you want to compare what you measured here today in this courtroom to our standard, you have to convert the measurement. You measured it for one day for four hours or whatever it is -- you have to convert that into an eight-hour time-weighted average so that you can compare your number to our standard number.

And so mathematically, that's what I have to do to present to them and say, yes, this is a -- this is meeting

the standard or it's not meeting the standard.
Q So if someone just gives a concentration of -- or a number of fibers released from a study, if that isn't a time-weighted average, can you compare it to the PEL?
A It cannot be compared until you convert it or calculate it out as a -- using that common denominator.
Q Okay. Now, during your -- and is that something that's fundamental to toxicology?
A It's fundamental to industrial hygiene and toxicology. To measure things, you have to put them in same units, and you have to measure them in the same way.
Q Now, are you familiar with gaskets?
A Yes, sir.
Q And are you familiar with how gaskets are installed and removed?
A Yes, I am.
Q Now, did I ask you to do some work for me in this case?
A Yes, sir.
Q Did I give you some materials to review and look at?
A Yes, you did.
Q What did you look at?
A I looked at gasket studies which were performed by people in the field of industrial hygiene.
Q Did I, also, give you some testimony from this case?

A Testimony from this case, yes, sir.
Q And you reviewed the Plaintiff's testimony and Mr. Thompson's?
A Mr. -- yes. I reviewed the testimony.
Q Did you see anywhere in the testimony where somebody testified that Mr. Seay ever removed a gasket with a power wire brush?
A I think there's testimony, not from him but from other people that he -- that a power wire brush may have been used at that facility.
Q Was there anything linking the power wire brush to any gaskets that were sold by John Crane?
A Not to my knowledge. Not in the materials that I read, no.
Q Did you see anywhere in the transcript where anyone identified the Plaintiff as removing a John Crane gasket by any method?
A No, sir.
Q Was there any testimony that anybody was able to identify a gasket, the manufacturer of the gasket, when it was being removed?
A No.
Q Are you familiar with thermal -- asbestos-containing thermal insulation?
A Yes, I am.

Q Are you familiar with asbestos-containing cement?
A Yes, I am.
Q Are you familiar with asbestos-containing mud?
A Yes.
Q Are you familiar with how those products are installed and removed?
A Yes, I am.
Q And are you knowledgeable about the abilities of those products to release fibers when they're installed or removed?
A Yes, I am.
Q And for the -- I'm going to lump in the thermal insulation, the cement, and the mud, because they all kind of do the same thing; right?
A Yes, they do.
Q Have those been studied historically to determine if those are able to release fibers when they're being used?
A They have been studied. And there have been papers published regarding that.
Q Now, did you review testimony of -- in this case that Mr. Seay removed insulation, mud, or cement when he was a -- had to get at the bolts to the flanges?
A Yes.
Q And how often would he have to remove that insulation, mud, or cement when he had to get at the

flange?
A Oh, every -- every time he's trying to get at the flange or the gasket inside it, the material which is on the outside, he has to move -- remove it somehow, whether he chips it away or scrapes it off. But he has to remove it every time he performs that task.
Q And what are the numbers of fiber release from the -- strike that.
You know, you really should never say "strike that" because everything is always on the record. But...
A I'm not a lawyer.
Q What are the -- are you familiar with the fiber release numbers from those types of products? When I say "fiber release," I'm talking about asbestos fibers.
A Yes, sir. Yes, I am.
Q And I'm going to write on the board here. I'm going to write "TSI." I'm going to put this back so everyone can read it.
I'm going to put TSI for "thermal system insulation."
A Okay.
Q Okay. And what are the fiber release numbers for the removal and installation of thermal system insulation?
A It could be anywhere from 30 fibers per cc to 300 fibers per cc, depending on the circumstances.
Q Would these numbers -- would these be time-weighted

averages?
A In some of the studies that I've looked at, those are time-weighted averages.
Q And would the 30 fibers per cc be above the OSHA level -- be above the no-effect level?
A Yes, sir. It would be well above.
Q Now, I'm next going to write, gaskets.
A Yes.
Q And underneath that I'm going to write, install and remove. Are you familiar with whether asbestos-containing gaskets can release fibers when they're being installed?
A Okay. When they're being installed, yes.
Q And what are the range of those numbers for the installation?
A For the installation. In the literature, they are less than 0.01 to as high as 0.02, I think is the highest I've seen for just installing.
Q And that would -- that would include cutting them?
A Yes.
Q Now, if someone was installing -- didn't have to cut the gasket, but bought a preformed gasket --
A Yes.
Q -- would there be any exposure?
A There probably would not be any. I can't absolutely say. But it's going to be less than -- it's going -- it

falls into that less than 0.01 range.

Q Okay. Now, in this case, there's been talk about removal three different ways. So I'm going to write down three different things. Okay.

A Okay.

Q The first one is with a scraper. The second one is with a wire brush. And the third is with a power wire brush.

I want you to assume that the testimony is that sometimes they're able to remove it with a scraper. And if they weren't able to use a -- remove it with a scraper, they would use a wire brush. And sometimes if -- on some of the gaskets, if they weren't able to use a wire brush, they used a power wire brush. Okay.

A Okay.

Q For removing asbestos-containing gaskets with a scraper, what are those numbers that you've -- what's your opinion as to what those numbers are?

A Well, the numbers which I've read in the literature, as well as the numbers which I myself have done in measuring that, are from, again, 0.01 to 0.02 fiber-per-cc range.

Q And with a wire brush?

A With a wire brush, the tests which I did, the highest was 0.04.

Q What was the lowest?
A I think it's .01.
Q Okay.
A I don't recall exactly what it was.
Q And with a power wire brush?
A Okay. While I have not done it myself with a power wire brush, the studies which I have read have it between -- well, it's -- the highest number there is 0.02.
Q Now, the jury just heard about Dr. Longo, who got 31.
A Yes.
Q Why isn't that 31?
A I don't know why Dr. Longo's numbers are higher. I do know this, that there are over 300 tests that have been done and Dr. Longo's are the only ones that are in that high range.

And so, therefore, it's a statistical -- it's what you call a statistical outlier. I mean, if you've got 300 tests and one of them -- and they're all here and you got one that's there, from a statistical analysis point, that one's an outlier. It does not fit the data set. But I don't know why.

Q Now, one thing that we haven't talked about regarding these tests are -- what is a respirable fiber?
A Okay.
Q What is it?

A All right. So a respirable fiber means that the fiber is so small that it can, actually, enter your body through your lungs, you know. It can be breathed in, passed through the system, if it's not filtered out before, and, actually, enter into your lungs.

Q And is that an important concept to you as an industrial hygienist and toxicologist?

A Yes, it is.

Q Why?

A Because if the particle is so large that it doesn't get in the body, it's not going to hurt you.

Q Now, would the concept of respirable fiber size play into why the power wire brush is less than the wire brush?

A Yes. Let me explain it this way. Okay. When you use a power source like a power wire brush, you're applying so much energy to that source. And you're breaking it up so much that you get more chunks than you get fibers. You know, when you're scraping, you know you're getting fibers. But when you go, boom, like that with that machine for a minute, you get a lot of chunks and a lot of big pieces.

So you're seeing -- possibly, the reason which explains that, you're seeing fewer small fibers because you're getting the big pieces out.

Q Now, as an industrial hygienist, can you explain to

the ladies and gentlemen of the jury why the gasket numbers are so much lower than the insulation numbers?

A Well, first of all, they're two completely different materials. Gaskets are an encapsulated product. That is, they are coated, covered in the matrix that they come in. So they're different in that way.

Q And can you explain what the term "friable" means?

A Yes. Okay. Friable means this, that if you could take a piece of material that had asbestos and you could take it in your hand and you can squeeze it and get a dust like that, you know, it just crumbles in your hands, then, according to OSHA, it's friable. Gaskets are not friable.

Q Is thermal insulation friable?

A Yes, it is.

Q Based on your review of the literature, your education, and your review of the materials in this case, have you come to an opinion as to what place Mr. Seay had an increased risk of developing mesothelioma?

A Based on the testimony given in this case, his exposure to insulation and insulation removal gave him a greatly increased risk of acquiring an asbestos-related disease.

Q Do you have an opinion whether Mr. Seay's exposure to gaskets in general placed him at an increased risk of developing mesothelioma?

A In my opinion, because of the numbers of fibers released when one installs or removes gaskets is so low, that it would be in the no-effect level. He would not have been placed at an increased risk of acquiring an asbestos-related disease.

Q Now, all the gaskets that Mr. Seay used at the Celanese plant, were they all John Crane?

A No. They were not.

Q Was John Crane one of a number of manufacturers?

A Yes, sir, it was.

Q And do you have an opinion whether Mr. Seay's exposure to John Crane gaskets placed him at an increased risk of developing mesothelioma?

A In my opinion, it did not.

Q And why not?

A First of all, because of the numbers, the concentration is so low. But even if the concentration -- looking at that concentration, since it was one of many, many, many different products he used, it means that his cumulative exposure from that source would be even less.

MR. TIVIN: Thank you, sir.

Pass the witness.

MR. YOUNG: We don't have any questions, Your Honor.

THE COURT: Okay. Cross-examination.

MR. PANATIER: Thank you.

Good morning, everybody.

CROSS-EXAMINATION

BY MR. PANATIER:

Q Sir, I'll start at the end. You talked about Dr. Longo's paper --

A Yes, sir.

Q -- do you recall?

Now, Dr. Longo put some pictures of unused gasket surfaces in his paper. You've seen these before; correct?

A I've seen them before.

Q So what we're looking at there on the left is a slightly lower magnification than we're looking at on the right; correct?

A Okay.

Q Over here, you can see sort of the gasket surface, and you can make out that sort of rubbery -- sometimes it's neoprene-like material; right?

A Yes.

Q And you can, also, see some asbestos; correct?

A You can see fibers. Whether or not they're asbestos is -- you can't tell by looking at that picture.

Q Oh. You know from reading the paper that he was looking at asbestos gaskets?

A He was looking at asbestos-containing gaskets that, also, had a matrix.

UNIDENTIFIED JUROR: Can you talk louder?

THE WITNESS: I'm sorry. Am I not talking -- keep reminding me. No, that's -- that's good.

I said he was looking at fibers. Whether or not they were asbestos, by just looking at them through the microscope without any analysis, doesn't tell you that they're asbestos fibers.

BY MR. PANATIER:

Q Are you saying that he did no analysis of whether or not these were asbestos?

A Well, he did further analysis because -- on these samples, to define them as being asbestos. But you just asked me if, by looking at them, they were. You can't tell by looking.

Q Oh.

A He did further analysis is what you're -- is what you're getting at.

Q Okay. I'm sorry. Maybe I didn't make it clear. You know from reading the paper those are asbestos fibers?

A I know that he did further analysis and found that some of those were -- some of those were asbestos fibers.

Q All right. And you know that he showed some even closer images of the asbestos fibers; correct?

A Yes, he did.

Q And what we're looking at there, as you know from the

paper, those are all asbestos fibers; correct?
A Those are asbestos fibers that he's showing --
Q And that the --
A -- yes.
Q I'm sorry. And that the little chunks of stuff, that would be the rubber or neoprene-style binder; correct?
A Yes.
Q You know that generally asbestos composite gaskets are around 75 to 85 percent asbestos; correct?
A Generally, that's correct.
Q The rest would be that binder material that holds it together; true?
A That's correct.
Q You know that to be the case for Garlock gaskets, as well as John Crane gaskets; correct?
A That is correct.
Q All right. Now, you did some tests for John Crane, did you not?
A Yes, I did.
Q Okay. Are you relying upon those tests here today?
A I'm relying on those tests, as well as other tests in the literature done by others.
Q All right. They paid you to do some tests?
A Yes, sir, they did.
Q Okay. We'll get back to that.

So -- oh, another thing I wanted to ask you is, so you gave these numbers. And these numbers were your opinions on the ranges for exposure, based on your take on the literature; right?

A They were based on the published literature, yes.

Q But it's -- what I'm saying is, it's not any one study you're relying on. This is -- this is Dr. Toca's opinion on what the exposures would be; right?

A Okay. The one that you're looking at, the first two were taken from my studies. So they're not only my opinion, they are from my studies. But they are in line with our -- the same range as those other studies.

Q Okay. So let's be clear. These are -- these then are numbers from your studies that you did for John Crane?

MR. TIVIN: Objection. Mischaracterizes.

THE WITNESS: Not the last number. Because I did not do a power wire brush study --

BY MR. PANATIER:

Q The first two --

A -- that was taken -- the first two are.

THE COURT: I overrule the objection.

Go ahead.

BY MR. PANATIER:

Q Now, when I took your deposition in July, I asked you whether or not you had read Amy Madl's new paper entitled,

Airborne asbestos exposures associated with gasket and packing replacement: A simulation study of flange and valve repair work and an assessment of exposure variables. Do you recall that? It's this paper.

A Yes, sir. You asked me that question.

Q Okay. You had not read it at that time; correct?

A I had not at that time read it.

Q Have you read it now?

A Yes, sir, I have.

Q All right. So this one -- you understand this is another study funded by John Crane; correct?

A Yes, it is.

Q All right. And let's just look at what they say. They say right here in their summary, Average worker exposures during flange gasket work by PCME. What is that? Tell the jury what that is.

A Okay. That's -- PCME is a calculated concentration.

Q And what does it measure? First of all, it's a -- it's a light microscope measurement; right?

A It's a light microscope measurement.

Q And were these light microscope measurements?

A Yes, they are.

Q They are. So we can compare these two; is that fair?

A Well, we, actually, can't. Because those are time-weighted averages that you're looking at there. And

this one says it's between 12 to 59 minutes.
Q Okay. So what you did is you gave what the average exposure would have been over an eight-hour day; right?
A I gave the time-weighted average, that's correct.
Q That's what that means, an average over an eight-hour day; fair?
A That's what it means literally, yes. That if it were collected over an eight-hour day, that's what the concentration would be.
Q Okay. And so what that means is, let's say someone does one gasket job; right? And you take the measurement of whatever the asbestos release is for that. And if that's all they do on that day, then you can divide that over the eight-hour day and find an average, something like this; fair?
A That would -- that would be what their eight-hour exposure was.
Q If they were in a room working on gaskets all day, then you would have to take all of that measurement and divide that over the eight hours; right?
A That would be correct.
Q Okay. And what they found was for a -- one type of job, not a whole eight hours, they got .166 fibers per cc; right?
A That's correct, over a 12 to 59-minute time frame.

Q Do you recall from their study whether or not they said that that would have been about 800 times over their background calculations?
A I don't recall them saying that, no.
Q Do you recall how much John Crane paid you to do the studies of -- the study that you did for them?
A I don't recall. Because at the time, I worked for Atlantic Environmental. I did not -- I did not do it independently. I was working for a company.
Q All right. I'll bring out my easel here because I'm going to draw on this. I don't want to draw all over this one.

Now, you'll agree you're under oath, right?
A Of course.
Q Okay. You'll agree that my easel is bigger than Mr. Tivin's, my -- my pad?
A I didn't know it was a contest, but --

MR. TIVIN: I don't know if the easel's, actually, bigger, but I will concede that the pad is.

BY MR. PANATIER:
Q Okay. So you -- when was the first time you testified for John Crane?
A I think it was in the year 2000.
Q Okay. You, as of 2007 -- and if you need to see any testimony, I have it here. But I deposed you -- or I

cross-examined you in 2007 in California in a case called Pelley [phonetic]. Do you recall that?

A I certainly don't.

Q Okay. I cross-examined you in a case called Lehman in 2013 in Philadelphia. Do you recall that?

A I certainly don't.

Q I'm not very memorable. That's fair. At that time you told me that, as of 2007, you had testified for John Crane between 80 and 90 times; is that accurate?

A That would probably be correct.

Q Okay. And so that would have been about 2000 to 2007, 80 to 90 times for John Crane. You told me your average was probably five or six times a year. Is that still about right?

A That would not be right --

Q Okay.

A -- for the last 10 years. But that would have been right during that period of time.

Q Okay. From '07 until now, about what is the average number of times you testified for John Crane every year?

A It's -- well, let me explain something. It's hard for me to give you an average because for a two-year period, I was not doing any testifying for personal reasons.

So, you know, when you say an average -- okay. If

you say how much did I do this year, it's three or four -- three or four times in a year. But, you know --

Q Well, let's take out the two years, then --

A Okay.

Q -- where you were out for personal reasons. That's fine.

A Okay.

Q So let's say -- so from '07 to today is eight years. Let's take out two years. Let's say six years. In a six-year period, about how many times were you testifying on average for John Crane?

A That's about four times a year.

Q Okay. Would it be fair to say three times is average?

A Three times is fine.

Q Okay. So what we would do is we would take three times six, and add another 18 times; fair?

A Okay.

Q So by now you're over 100 times; right?

A Yes.

Q Okay. And that's just for John Crane; right?

A That is correct.

Q Okay. In this case, prior to your deposition, you had put in about 10 hours?

A I -- I don't remember the exact amount of time. That

would -- that would be about correct, though, I think. It's whatever I told you at the deposition.

Q That's what you told me.

A Okay. Then that's -- that's correct.

Q And if you need to see it --

A No.

Q Okay. That's all at 450 an hour. That's $4,500; fair?

A That's correct.

Q Okay. And I'll ask these questions. They were asked of some of my experts. Do you charge for your travel time?

A Yes, I do.

Q Okay. That's all at 450 --

A Yes.

Q -- right?

Now, you haven't just testified for John Crane. But they are by far the main defendant you testify for; true.

A At the present time, I only work for two different companies, John Crane is one, and the other. And John Crane is the only one that I'm, actually, doing any testifying for.

Q Okay. So how long has it been the case that you've really just been with John Crane as far as testifying?

A Well, in 2004 -- since 2004, I haven't had more than

three or four clients in a year.
Q Now, you -- you've been an industrial hygienist for a long time?
A Yes, sir.
Q Right?
A Since --
Q You know how OSHA changed things --
A Yes.
Q -- in the workplace and so forth; true?
A Yes.
Q Prior to OSHA, was asbestos regarded as a nuisance dust?
A Well -- okay. Nuisance dust by definition is a nontoxic dust. So asbestos, because it is known as a toxic material, would not have been called a nuisance dust.
Q In fact, you talked about the ACGIH; right?
A That's correct.
Q And you know that the ACGIH had standards for both asbestos and nuisance dust going back into the '40s; fair?
A That's correct.
Q And, of course, the nuisance dust level was higher than the asbestos dust, which was about 10 times lower; right?
A I don't remember the exact ratio. But there was a

great difference between them, of course.

Q You, actually, worked for Celanese from '91 to '97; true?

A I certainly did.

Q Okay. How many times did you go to the Spartanburg plant?

A I would say three times.

Q Okay. You were on a corporate level; right?

A Yes, I was.

Q Okay. At that time, can you tell us whether or not there was still asbestos in place in Spartanburg?

MR. YOUNG: Your Honor, I object. This is outside the scope of direct. It's not relevant to -- it's 20 -- 20 years or 15 years after Mr. Seay -- well, sorry. No speaking objections.

It's not relevant.

THE COURT: All right. Overruled.

BY MR. PANATIER:

Q At that time, was there still asbestos in the plant?

MR. YOUNG: Your Honor, could I have a continuing objection to --

THE COURT: Yes, sir.

MR. YOUNG: -- this line of questions?

THE COURT: Yes, sir.

THE WITNESS: At that time, I will tell you my focus

on those three visits was not on asbestos. And so I can't honestly answer your question for you.

BY MR. PANATIER:

Q Okay. Would it be, then, fair to say that when you dealt with Spartanburg, you weren't focused on the issue of asbestos at that time?

A That was not the specific reason why I visited that facility, although one of those times involved an audit. So my auditors, if there was asbestos, certainly would have brought it out to me. I just don't recall that specific.

Q Some of the other companies you testified for in asbestos litigation would be -- I have Ford, General Motors, Chrysler, Genuine Parts, Sears, Peerless, USG?

A Okay. Yeah. That was, again, before 2004. Yes.

Q Okay. And then USG was a company of U.S. Gypsum; right?

A Right. Okay.

Q They were a company that made a product. If you have drywall, you have seams, and you have to fill it with mud?

A That's correct.

Q Right? It's called joint compound; right?

A That's correct.

Q You cover the nail holes with joint compound, you cover the seams with joint compound; true?

A Yes.
Q And until about 1977, most joint compounds contained asbestos; correct?
A That's correct.
Q All right. And you testified for that company. And it is your opinion that joint compound which people applied, sanded, and so forth, would not put people at risk for asbestos; right?
A That -- the studies which were done at that time, yes, indicated that.
Q Well, in fact, it's your opinion that even today, looking back, you don't think that those products would put people at risk for asbestos-related disease; correct?
A I have -- I have to ask you this. I worked for one company, and I looked at their data. There are other -- if we're talking about joint compound here, other -- there were other joint compound makers whose products were different.

So I can't say absolutely for all joint compound. For the ones that I represented, I can say, yes, I believe that.

Q Well, USG made made a bag of dry asbestos-containing mud that was used for joint compound; right?
A That's correct.
Q And it contained anywhere from five to 11 or

12 percent asbestos; correct?
A That is correct.
Q All right. And it was your opinion that people who mixed that product, sanded it, swept it up, they were at no risk for mesothelioma by virtue of that work; correct?
A By virtue of the work and the studies which I looked at, yes.
Q Okay. Even though you testified -- you certainly testified for USG after 1977; right?
A Yes.
Q Okay. Because you didn't even start doing this until later --.
A That's correct.
Q -- fair?
And you made that testimony -- even though you knew that that product that contained asbestos, other manufacturers as well as USG's, had been banned by the government; correct?
A Banned by the government --
MR. TIVIN: Objection. Relevance.
THE COURT: Overruled.
BY MR. PANATIER:
Q The Consumer Product Safety Commission banned asbestos-containing joint compounds in 1977. You know that; right?

A I don't recall them having banned it in 1977, because it was still being used.
Q As containing asbestos?
A Oh, okay.
Q You understand that; right?
A Yes. Okay.
Q You know, it's interesting, in 2013, I asked you the exact same question and you did the same thing. You said, I'm not sure. I don't know what you mean by banned. Do you recall giving that testimony?
A I don't know if I said I don't know what you mean by a ban. But I was referring to the work that I looked at, which did not show that.
Q Well, let's be clear.
A Okay.
Q You were testifying on behalf of a company, based on a product they made back in the '60s and '70s that contained asbestos; correct?
A Correct.
Q You understand that that product as -- insofar as it contained asbestos, was banned by the U.S. government; correct?
A Yes.
Q Okay. Joint compound is not banned, but if it contains asbestos, it is?

A That's correct.
Q Right?
Nevertheless, you testified that the use of that product, insofar as it contained asbestos, did not put people at risk for asbestos disease; true.
A Based on the measurements that I looked at and that I had, that was correct.
Q Okay. Has the United States government unbanned joint compounds that contain asbestos?
A It hasn't, but there aren't any that do.
Q Okay. I think you testified that, as of 2014, you'd made approximately 2.25 million in asbestos litigation over the previous 10 years at that point?
A That's probably correct.
Q Okay. Let's look at your résumé a little bit. There's your résumé.
Now, if I look through this whole résumé, I'm going to find the word "asbestos" one time; right? You probably never counted.
A I've never counted --
Q Okay.
A -- but I doubt if it's in there.
Q All right. Well, it does appear one time, not for any publications; right?
A Again, I'll take your word for it. And you can look

at it -- you know, you can show it to me whatever -- wherever we're going with this.

Q Sure. We're going to talk about a presentation. But to be clear --

A Okay.

Q -- you haven't published on asbestos; right?

A No, I have not.

Q Okay. You participated in a book or you wrote a book; right?

A That's correct.

Q And that doesn't discuss asbestos or mesothelioma; right?

A That's correct.

Q You've done no original research on asbestos, other than the study that John Crane paid you to do; correct?

A That's correct.

Q Okay. And you didn't publish that study; right?

A I did not.

Q Okay. But the -- the one spot where it does mention asbestos, I saw here, was under presentations and publications, Preparing for Litigation, the Industrial Hygienists Perspective. And you gave that at a talk called the National Forum on Asbestos Litigation in 2003; right?

A That's correct.

Q So of all the presentations, all the publications you've given, the one that dealt directly with asbestos was this one in '03; is that fair?
A That's correct.
Q Now, you, also, had given presentations at the DRI; correct?
A That's correct.
Q Two times?
A Two or three times.
Q Okay. The DRI is the Defense Research Institute; correct?
A That is correct.
Q That is not like military defense. That's defense in civil cases like this; right?
A That is correct.
Q You gave two talks there, but those are not on your résumé, are they not?
A No. They were -- I can't even remember the topic. One of them was on general toxicology, but it's not on there.
And, by the way, the one that you pointed out was given to a same group for plaintiffs attorneys, this National Forum for Asbestos Litigation in New York City. So you might have been there.
Q Well, no. I was a two-year lawyer. I didn't get to

go anywhere.

But, sure, it's a National Forum on Asbestos Litigation. You'd expect both sides to be there; right?

A Well, both sides were at the DRI meetings also.

Q All right.

A I'm just saying I was invited to this by a group of plaintiffs lawyers.

Q And we've gotten into this before. You understand that the DRI, the Defense Research Institute, they have specialized meetings where plaintiffs lawyers aren't invited. You know that; right?

A But plaintiffs lawyers were invited when I spoke. That's all I'm saying.

Q Do you know the motto of the Defense Research Institute?

A I have no idea. I'm not a member.

Q It's, The Voice of the Defense Bar. Would you take my representation that's what it is?

A I'll take your word for it. You're a good guy.

Q Thank you.

The only thing that you have done professionally as it pertains to asbestos would be in your role at the various places you worked; right?

A That's correct.

Q Okay. And none of that -- you were not dealing with

asbestos at Celanese Spartanburg. Were you dealing with asbestos in terms of Celanese corporate-wide?

A Yes, I was.

Q Okay.

A And I would say at Spartanburg, I was responsible, if they had asbestos there, to know whether or not it was harmful. And that's why I said when we did the audit, if, in fact, there was an issue with asbestos, while I wasn't personally doing it, my audit team would have brought that out and made me aware --

MR. YOUNG: Your Honor, I just -- we're back on the thing with the continuing objection.

THE COURT: Yes, sir.

Overruled.

BY MR. PANATIER:

Q Let me ask you this. As far as -- and this would go to that probably. When you arrived at Celanese, was there a company-wide policy on how asbestos should be handled?

MR. YOUNG: Your Honor, this is 1991. Mr. Seay stopped working at Celanese in 19 -- I apologize, Judge.

THE COURT: Sure.

MR. YOUNG: Objection. Relevance.

THE COURT: I'm going to overrule the objection.

Go ahead.

THE WITNESS: When --

MR. YOUNG: Same continuing objection, Judge.

THE COURT: Yes, sir.

THE WITNESS: So when I was hired at Hoechst Celanese, I was the first corporate director -- I take it. For Hoechst Celanese, I was the first corporate director. Hoechst, the German company, had counterparts around the world, but I was the first one.

So all of the policies that were generated when I was there were generated by me. Even if a particular plant would have had one, the corporate policy became, you know, sort of like the federal government.

So, yeah, it started, if you will, with me for Hoechst South America or Hoechst Celanese.

BY MR. PANATIER:

Q Okay. And that would have included all of the plants, Salisbury, Spartanburg, Cell River, and so forth?

A Correct.

Q Okay. If I Google --

MR. TIVIN: I'm going to object to him Googling anything.

MR. PANATIER: I'll tell you what I'm going to Google.

THE COURT: I sustain the objection.

BY MR. PANATIER:

Q Okay. Atlantic Environmental, that's a company

you're involved with; right?
A Not at the present time. I was president of that company. I have not worked for them since 2004.
Q So if we were to go to their website, they wouldn't list you as an expert?
A I have -- you know how you have a continuing objection? I have a continuing objection with them to listing me presently. Because I haven't worked for the company in so long. But, yes, I think that he still lists my name in his literature.
Q Okay. So if we went to the website for Atlantic Environment Services -- that is an expert directory where people can go and hire experts; fair?
A That's correct.
Q And you're listed there. You're the first guy they list; right?
A As I said, without my permission. He's a good friend of mine. And I've never taken him to court, or anything. I just say, why are you listing me? Because if you were to go to hire me at that company, you couldn't hire me.
Q Okay. Hopefully, if someone came there to hire you, they'd give you a call and say, these people would like to talk to you?
A They are supposed to do that. I think, from what others have told me, what usually happens is that,

Dr. Toca is not available, but we do have, whoever they have.

Q And I asked you about this in 2013. You told me the same thing.

A That's correct.

Q You said, they don't have permission to list me. Now, have you -- and you just said he's a buddy. So you let him list you as someone who someone can go and hire as an expert?

A Actually, I have written him letters. And I have, also, asked some attorneys to write him letters. But it hasn't helped.

I guess unless I were to formally take legal action, they won't do it. And I just -- I refuse to do that with a guy that I -- I went to college with the fellow. And I've known him for, you know, a long time.

Q Okay. Now, up until '04, you were involved in -- with Atlantic Environmental Services?

A Right. My contract expired at that point, yes.

Q Okay. You were kind of the head of the company, weren't you?

A I was the president. And the fellow who's listing me was the CEO.

Q Okay. Now, you are -- you're not a medical doctor; right?

A That's correct.
Q You're not an epidemiologist or a pathologist; true?
A That is correct.
Q You said that you had some government involvement with different government agencies. But your involvement with the government hasn't involved asbestos or mesothelioma; correct?
A That's correct.
Q All right. Are you good on water?
A I'm good for now.
Thank you for asking.
Q Sure.
Sorry. I think I have the same thing you do.
Okay. So let's talk about your testing a little bit that you did for John Crane.
A Yes, sir.
Q Okay. Now, I'm going to go ahead and -- your gaskets that you measured ranged from 30 to 57 percent asbestos; correct?
A As I recall, that's correct.
Q You understand that John Crane gaskets, on average, contained anywhere from 70, 75, to 85 percent asbestos; correct?
A Yes, sir.
Q And let's do this. You agree that the percentage of

asbestos in the product will influence how much asbestos is in the air; right?

A That's correct.

Q Right. So if you have a product that's 10 percent asbestos and you -- let's say it's a gasket that's 10 percent asbestos. And you grind it off of a flange, you expect that to release less asbestos than one that has 80 percent asbestos; right?

A It's a possibility that that would happen.

Q Well --

A It depends on the conditions. Because you're counting fibers and you're not counting all fibers.

Q Yeah.

A All -- when you consider -- okay -- the method that you're doing and what you're doing, it is possible that the 10 to 20 percent might come out at the same number.

Q There's -- a lot of times, it just depends on what asbestos you happen to catch in that sampler; right?

A That's correct.

Q Right. But all things being equal, all things being equal --

A Right.

Q -- you would expect a flange that has a 10 percent gasket release less asbestos than one that has an 80 percent gasket?

A Yes.
Q And yours, on the whole, contain -- in fact, none of yours contained as much asbestos as any John Crane typical asbestos composite gasket; right?
A Based on the ones that I -- yeah, the ones that I examined. They were not John Crane gaskets. That's correct.
Q And you did not submit that for peer review; correct?
A I did not.
Q Okay. You were wearing respiratory protection when you did it?
A The technicians who were doing it were wearing respiratory protection.
Q Okay. They had Tyvek suits; correct?
A Yes.
Q And -- all right. And I have -- let me see. You recognize that as a photo from your study; correct?
A Yes.
Q Okay. And there you guys had removed -- it looks like you had removed a flange from a valve; right?
A Yes.
Q And were then applying some sort of oil or water to the flange?
A Absolutely not. That's incorrect.
Q Because if you applied oil or water to it, it might

reduce the levels of asbestos; right?
A Well, that was not done.
Q Okay. Well, let's look at the pictures. I've got six pictures; right? Do you see that?
A I see the pictures. You've shown them to me before. And I've told you, under oath, on numerous times that there was no oil, or water, or anything else. But I know you like to mention it. So let's go.
Q Well, I'm just looking at what's falling off of the rag.
A What you see is a piece of thread on the rag. And, as I said, you've shown me this on numerous occasions. And I've given you the same answer under oath.
Q Well, I showed it to you once in 2013. And you gave me the same answer, that it's just -- it just happens to be a piece of rag falling off; right?
A A piece of thread on the rag --
MR. TIVIN: Objection to the form of the question.
Mr. PANATIER: Okay.
THE COURT: Overruled.
BY MR. PANATIER:
Q If some sort of liquid had been added, it would reduce the amount of asbestos in the air; right? I mean, that's a general principle of industrial hygiene; right?
A That's correct. If it had been used, but it was not.

Q I understand that's your testimony.
Now, you agree asbestos is toxic; correct?
A Yes, sir, it is.
Q It's a carcinogen; correct?
A Yes, it is.
Q Let's go back to the ELMO.
You are familiar with the Industrial Hygiene Journal; correct?
A Yes, I am.
Q The Industrial Hygiene Journal was one of the journals of the American Industrial Hygiene Association; right?
A Yes, it is -- it was.
Q Well --
A It's changed the name.
Q Okay.
A It's changed the name.
Q It's called Synergy now, Synergy --
A No --
Q Or The Synergist?
A No. The Synergist is another one. That's the magazine. The journal, which I worked for, is Occupational and Environmental.
Q Okay.
A Which replaced this one.

Q All right. And I showed you this one in 2013. This is the February 1958 edition; right?
A Yes.
Q Okay. And here in 1958, they've got a section called, Asbestos. Can you see that, sir?
A Yes.
Q And I'll zoom in just in the first column.
A Okay.
Q They talk about hygienic standards. And we've seen these standards, five million particles per cubic foot; right?
A Yes.
Q And then it has a section -- a short section. It's only a column or two on the severity of hazards. And it says, Health. Lung. Continued inhalation of asbestos dust results in a form of pneumoconiosis known as asbestosis.

Now, pneumoconiosis is dust disease; right?
A That's correct.
Q The primary effect of inhalation is an interstitial pulmonary fibrosis. And that means in the lungs, fibrosis?
A That's correct.
Q Okay. They, also, said, Any appreciable decrease in the amount of asbestos dust in the breathing atmosphere

will cause a decrease in the incidence and severity of asbestosis.

And, of course, what that means is, generally, something we still know is true today, the lower the dust level, the lower the risk, generally speaking?

A Dose response, which we just talked about.

Q Right. "Individual susceptibility varies; right? Some people may get an asbestos disease from a level that doesn't cause disease in others; fair?

A That's what they say here. But that hasn't, actually, proven out, but --

Q So would it be your testimony that everybody gets the disease at the same level?

A No. But there are no tests that show individual susceptibility. In other words, it's not like some diseases where you can say this person is predisposed. So far, no one has ever demonstrated there's an individual susceptibility. It's just like with smoking.

Q Okay. So you don't think an example of individual susceptibility --

A I don't know.

Q Okay.

A And neither does anyone else.

Q Okay. You're not a medical doctor?

A That is correct.

Q Okay. Just checking.

There may have been reports of an increased incidence of lung cancer in persons with asbestosis; right?

A Yes.

Q So this is all in 1958. You've seen this before; right?

A Yes, I have.

Q You don't dispute that they wrote that?

A I do not.

Q Okay. Then on the next page, under, Industrial hygiene practice, recognition. And that's one of the things that you, actually, spoke with the jury about, that, as an industrial hygienist, you have to recognize the hazard; right?

A That's correct.

Q And one of the ways, when it comes to asbestos, of recognizing whether or not there are dangerous levels is to take samples, take air samples; right?

A That is correct.

Q Okay. This says, The spinning and weaving of asbestos in combination with other textiles for fireproof and heat-resistant cloth result in dust exposure.

Now, there they're talking about the textile workers who are weaving the stuff and spinning it; right?

A That's right.

Q Okay. It may be used by itself or combined with other materials for valve packings, gaskets, boiler lagging and pipe covering, protective clothing, shielding materials, and as automotive brake linings. In the building industry, it is used in the manufacture of asbestos cement products, heat insulating, and fireproofing materials.

First, did I read that right?

A Yes, you did.

Q Second of all, they've called out a number of different products that may contain asbestos here; right?

A Yes, they have.

Q Under the recognition part of industrial hygiene practice?

A Yes.

Q Okay. You mentioned the issue of whether or not there's a known safe level of exposure and what you called a no-effect level; right?

A Yes, sir.

Q So I showed you this before. You're familiar with OSHA's 2014 statement regarding asbestos?

A Could you -- could you make that --

Q I can make that bigger.

A Oh, thanks.

Q That's what I'm going to talk about.

Hold on. Let me give Mr. Tivin a copy.

Okay. So here's what I want to ask you. OSHA says -- this is 2014 there on the top. This was -- it's got a section on it that says -- just in all fairness, it says Reviewed 2013. Okay.

There is no safe level of asbestos exposure for any type of asbestos fiber. Do you agree or disagree with OSHA's statement?

A Okay. Referring to any type of fiber?

Q That's correct.

A Okay. I don't agree with that.

Q Okay. Asbestos exposures as short in duration as a few days have caused mesothelioma in humans. Do you agree or disagree with that?

A I agree with that.

Q Okay. Every occupational exposure to asbestos can cause injury -- and it says "of," I think it means "or" -- disease. Every occupational exposure to asbestos contributes to the risk of getting an asbestos-related disease. Do you agree or disagree with that?

A I disagree with that.

Q And, now, let's go back to the one that says, Asbestos exposures as short in duration as a few days have caused mesothelioma in humans.

Now, when you've considered that, is there a

particular type of fiber you're thinking about?
A I'm thinking -- yes. I'm thinking about amphibole fibers. I'm, also, thinking about concentration.
Q Okay. Amphiboles would be amosite, crocidolite, tremolite, actinolite, anthophyllite; right?
A Those are all amphiboles. That's correct.
Q But the commercially used ones, the ones that we really see in large proportion in products would be crocidolite and amosite; right?
A That's correct.
Q You know that amosite was generally included in a lot of insulation products; right?
A Yes, it was.
Q Crocidolite was more of a specialty product; correct?
A Yes.
Q You know it was included in gaskets; right?
A In some gaskets, that's correct.
Q You know it was included in some John Crane gaskets?
A Yes.
Q Okay. I've asked you about this document before, Chrysotile Asbestos by the WHO. Are you familiar with that?
A Yes.
Q Okay. And I've asked you before and you have agreed that the WHO is authoritative and reliable on the issue of

asbestos; correct?
A Yes, they are.
Q Here's what they say, All types of asbestos cause cancer in humans. Asbestos -- and it lists all those types I just listed off -- has been classified by the International Agency for Research on Cancer as being carcinogenic to humans. Exposure to chrysotile, amosite, and anthophyllite, and to mixtures containing crocidolite results in an increased risk of lung cancer. Mesotheliomas have been observed after occupational exposure to crocidolite, amosite, tremolite, and chrysotile, as well as among the general population living in the neighborhood of asbestos factories and mines, and in people living with asbestos workers.

Now, for that first paragraph, anything there you disagree with?
A Generally, I don't disagree with the statement, the overall statement of what they're saying, that asbestos causes disease.
Q Okay. The next paragraph, The incidence of asbestos-related diseases is related to fiber type, size, and dose, and to industrial processed -- processing of the asbestos. You certainly agree with that statement; right?
A I agree with that.
Q The last one, No threshold has been identified for

the carcinogenic risk of asbestos including chrysotile. Agree or disagree with that statement?

A I disagree with that statement.

Q Okay. Now, have you ever corresponded with OSHA, the WHO, or any other scientific or regulatory body on their opinions regarding that there's no safe level of exposure to asbestos?

A No, I have not. Not on the subject of asbestos.

Q All right. Let's talk about the AIHA. That was the organization that you were, actually, the president of; fair?

A That's correct.

Q The American Industrial Hygiene Association; true?

A Yes.

Q Okay. You've seen this before. This is the quick tips page. I'll blow that up. I can even give you a copy. Here you go.

A Okay.

Q Now, this quick tips page is talking about asbestos-containing floor material; right?

A Yes.

Q Right?

A Yes.

Q And I'll blow that up a little bit. It says, What is the hazard? And it talks about floors, how they contained

asbestos.

But I just wanted to ask you about this statement by the AIHA. It says, Asbestos is a known human carcinogen with no known safe threshold of exposure. Now, that's the organization you were the president of; right?

A That's correct.

Q Okay. Do you agree or disagree with that statement they made?

A I disagree with the statement.

Q All right. You, also, said that the epidemiology -- you told Mr. Tivin the epidemiology has shown that at .1 fibers cc cumulative exposure, the epidemiology has shown there's no increased risk for mesothelioma; right?

A What you said and what I said are slightly different.

Q Please, then tell me what you said.

A You said cumulative exposure at .1.

Q Uh-huh.

A And I said below 0.1 in the air. Okay. There is -- the epidemiology shows that people don't have an increased risk of disease. That's not a cumulative exposure. That is a measurement in the air. Cumulative is fiber per cc years over time.

Q And so what I'm trying to understand is, if you're just talking about a level in the air, .1 fibers per cc, what epidemiology -- epidemiological study looked at that?

A It looked at workers who were -- dust studies that looked at workers who worked where the air was measured --
Q Uh-huh.
A -- and the concentrations were below 0.1 fibers per cc --
Q Uh-huh.
A -- and they worked there for a working lifetime. And the epidemiology showed that that group of workers did not have an increased risk of disease beyond what you would see in the normal population. In other words, when you do the analysis epidemiologically.
Q What study is that?
A Those are studies of workers who worked in auto, auto repair people, brake repair people.
Q Okay. So you are relying upon the friction product epidemiology; is that right?
A That's correct.
Q You're not talking about people who worked in an industrial setting like Celanese; right?
A I am not. But we're talking not about where they worked, but what they were exposed to and what concentration --
Q Let me just --
A -- so that's relevant.
Q And I'm sorry to step on your words there.

But you're talking about people -- let's just take -- take your discussion here. You work at .1 fibers per cc. So we're talking about one tenth of a fiber per sugar cube in the air; right.

A Yes.

Q And you said they had worked at that level or below it for a lifetime; right?

A A working lifetime. That's correct.

Q So if you are exposed at .1 fibers per ccc -- per cc for one year, you would have a -- and that's all you had -- you would have a cumulative dose -- I drew a circle here. I don't know why I did that. You would have a cumulative dose of .1 fiber per cc years; right?

A Yes.

Q If you just did that work for one year; right?

A Yes.

Q Total dose. That would be a total dose. Are you familiar with a paper by Rodelsperger -- here it is -- entitled, Asbestos in man-made vitreous fibers as risk factors for diffuse malignant mesothelioma: Results From a German hospital-based case-control study?

A I can't say that I recall that study. I may -- I may have read it at some time in the past. But I don't --

Q Well, the reason I ask you about it is because you said that the epidemiology had come to a conclusion about

whether or not this put people at risk for mesothelioma. Okay.

A Yes.

Q So let me -- let me ask you if this influences your opinion. All right. So this is a table they put up of cumulative exposures. Can you see that?

Cumulative exposures up to the end of observation in terms of fiber years; right, just like we did here? Can you see that?

A Yeah. I -- I can see it.

Q Okay.

A I'm just trying to figure out what this --

Q So I'm going to tell you that the section all the way to the right is your confidence interval. The section -- yes.

A Okay.

Q The section right next to it is your -- your relative risk, your increased risk. Okay.

A Okay.

Q All right. So what they have is they have people who were exposed from zero to .15. And they found an average increased risk for those people. So those people were exposed zero to .15. So from way below to just slightly above your number; right?

A Okay.

Q And they found an increased risk for mesothelioma of 7.9 times; correct?
A Yeah.
Q Now, that 7.9 times, that's over an unexposed population; right?
A What do you mean by "an unexposed population"? You're saying that they were not exposed at all?
Q That's right. You compare --
A Okay. You're -- you're saying a comparison that you're making --
Q You compare exposed --
A Okay. All right.
Q -- versus nonexposed --
A That's correct.
Q -- right?
And so what they're saying is people who have this level of exposure in the same range you put, they had a -- an almost eightfold increased risk. So eight times greater risk over people who were unexposed; true?
A Yeah. But I do have a question about this study when we reach that point. Okay.
Q I will leave it for you to read. Okay.
A Because I want to know where they got these numbers from in terms of the air -- air measurements.
Q Well, I can't -- I can't --

A I know --
Q -- educate you on the study. I only asked you about the study because you said the epidemiology had reached a conclusion.
A Correct.
Q Okay.
A But in order to understand the epidemiology, I have to understand where their measurements came from and how they were measured.
Q Okay.
A And this paper doesn't tell me that, or you're not telling me that since I'm relying on you.
Q Well, I'm not the expert, am I?
A You put it up.
Q Let's make it very clear. You made a representation that the epidemiology had drawn a conclusion, didn't you, sir?
A It was not from this specific epidemiological study, obviously. It was from other epidemiological studies.
Q It was from the epidemiological studies of brake workers?
A Correct.
Q Okay.
A Correct.
Q Have you read this paper by Lacourt, Occupational and

non-occupational attributable risk of asbestos exposure for malignant pleural mesothelioma?

A As you've reminded me on numerous occasions, I'm not a physician.

Q Sir, I'm not trying to take you somewhere you don't have expertise. But you made a representation about the epidemiology. So I'm showing you epidemiological literature.

A Okay.

Q Is this something you would rather not talk about?

MR. TIVIN: Objection to form.

THE WITNESS: It's something that when you're asking me about medical data that I -- on papers which I haven't read, I'm not prepared to talk about.

THE COURT: I overrule the objection.

BY MR. PANATIER:

Q You have not read the Lacourt paper; fair?

A Yes, sir.

Q Okay. So we're not going to talk about it. We're not going to talk about the Lacourt paper then.

Let's talk about the Hatch curve. Okay. You did talk about that. That was the --

A Yes, sir.

Q -- the table you drew with a swoop like that; right?

A Yes, sir.

Q "Swoop," that's a technical term.

All right. So you used the example of -- I think carbon monoxide; right?

A Yes, sir, I did.

Q And what you were trying to illustrate was that, at least, so far as your testimony goes and -- and Mr. Hatch, that you're relying upon, that there is a safe level of exposure to different substances; is that correct?

A That is correct.

Q All right. Now, you took that from -- I believe it's this article. You tell me if this is -- if this is right. Is it this article, Changing Objectives in Occupational Health by Theodore Hatch?

A Yes. That's the article.

Q Right. And there's the table; right, the Hatch curve?

A That's correct.

Q Okay. Now, this paper, do you know when this was published?

There it is.

A Yeah, '62.

Q For both of us, '62. Okay. Do you know whether or not he says at all in this paper that that curve that you showed the jury applies to cancer?

A I don't think in this paper he says that.

Q Okay. And, sir, you're familiar with this book; right?
A Yes, I am.
Q Right. Of course, that's -- that's Selikoff's conference in '64; true?
A Yes. That's the summary of the conference, presentations.
Q Right. Okay. I want to show you from page 335 -- and I've shown you this before. I showed this to you in 2013. A man named C.G. Addingley says, I would just like to make one point. Dr. Roach said that in Britain mention is made of a safe limit of four fibers per milliliter -- by the way, milliliter is the same thing as cubic centimeter; true?
A Yes.
Q The exact same volume of air; right?
A Yes.
Q Okay. And that this is the -- a lower limit than the American limit.

At this time, in the '60s, America was at five million and Britain was at four million; right?
A Right.
Q Okay. I would like to say that this is the first time that any limit has been, specifically, stated as far as the United Kingdom industry is concerned. We do not

believe there is any safe limit.

And he's stating that in '64; right?

A Yes, he is.

Q Okay. We have our own ideas as to how low we can get. And we are always striving to get right down to zero.

As an industrial hygienist, do you agree that zero, for the safety of the workers, is the best goal to have?

A It's the best if you can obtain it, yes.

Q Okay. We, also, have our ideas about the American limit of five million particles per cubic foot as a safe limit. We know that there is no scientific basis for that limit whatever. And I think that if Dr. T. Hatch had been here, he would have agreed with that because it has been taken up with him in the past. Therefore, I would like it to be clearly understood that we do not accept four fibers per cc as a safe maximum limit in the asbestos industry.

First of all, does that refresh your recollection --

MR. TIVIN: Objection.

THE COURT: Sir?

MR. TIVIN: I object to the form and hearsay. This is clearly not part of the article. It's hearsay.

THE COURT: Overruled. I think the expert rules would allow that question.

Go ahead.

THE WITNESS: There is a bit of a confusion in these two statements. You realize they're talking about two different measurement methods here?

BY MR. PANATIER:

Q They are. One is per cubic centimeter or milliliter; one is a million fibers per cubic foot --

A No. I mean the five million particles per cubic --

Q Yeah. That's not really why I'm asking the question. Why I'm asking it is because this man says in 1964, We know that there is no scientific basis for that limit whatever. And I think that if Dr. T. Hatch had been here, he would have agreed with that because it has been taken up with him in the past.

Now, you've seen this before; right?

A I've seen it before.

Q Okay. Has John Crane showed you the results that were done by Dr. Millette where they looked to analyze whether or not John Crane gaskets contained any amphibole fibers?

A I've seen several Millette studies. I am not sure which one you mean, but --

Q Okay. Let me show it to you.

A Okay.

Q It's this one. Just tell me if you've seen that one before.

A Yeah. I've seen this study before, 2006.
Q Yeah. May 22nd, '06, is that the date you have on yours?
A That's what is on here. I mean, I've seen a study that he did in '06.
Q And you know that they found approximately .15 percent tremolite actinolite by transmission electron microscopy; correct?
A Yes. That's what it says.
Q And they even took a picture of it; right? I'll show that picture. Right? That's one of the fibers they found; true?
A Yeah. That's what it says.
Q Okay. And it says that's from John Crane sheet gasket 2150. I just want you to assume that Mr. McKillop testified by video and said that 2150 was, basically, the same as 333. Can you assume that?
A Yes.
Q Okay. From your review of the depositions in this case, do you recall whether or not Mr. Thompson identified John Crane sheet gasket 333?
A I -- let me say I don't know the different numbers with the -- with the product. But I don't recall him, specifically, doing that. But, again, I -- I don't know the numbers that go with John Crane. I'm not a product

expert for Crane in that sense.
Q Yes, sir. I understand. That fiber there, is that encapsulated?
A It's a single fiber. I would say it's not.
Q Okay. Actinolite, tremolite, that's an amphibole; right?
A Yes, it is.
MR. TIVIN: Objection. Beyond the scope. I didn't talk about fiber type at all.
MR. PANATIER: There's no -- there's no scope limitation.
THE COURT: Overruled.
BY MR. PANATIER:
Q How much more potent, from a risk standpoint, is crocidolite asbestos than chrysotile, in your opinion?
A If I -- if I recall correctly -- you're saying crocidolite over chrysotile; right? And I think it's a hundred times.
Q So your testimony is that --
A I'm not recalling exactly. But it's a hundred -- it's crocidolite, amosite, and then chrysotile. So --
Q Uh-huh. So you're saying from your recollection, crocidolite is 100 more times potent than chrysotile; right?
A Yes.

Q Where does amosite fall in there?
A Amosite is less than crocidolite.
Q Does amosite go right in there?
A So, actually, I may be wrong on the 100. I'm just trying to recall. It would go in between the two of them, yes.
Q Regardless of what the numbers are, it's your testimony that crocidolite is the most potent, amosite is the next potent, chrysotile is the least potent?
A Right.
Q Okay. You agree, based on your review of the testimony, that Mr. Seay worked with John Crane gaskets; correct?
A That he worked, specifically, with John Crane, I -- I can't -- I don't know if I can agree that he, specifically, worked with John Crane. It was one of many different types that he worked on.
Q Are you saying he didn't say he worked with John Crane gaskets?
A He said that there are John Crane gaskets there. It's one of the many brands that he worked with.
Q So he did say he worked with John Crane gaskets?
A It's one of the many that was there, that was in the plant.
Q How many did he identify? 400 or 500?

A I don't know. It was more like half a dozen or so, but I -- manufacturers.
Q I'd like you to assume that about four to five different gasket manufacturers have been identified. Can you assume that?
A Right. Yes.
Q Okay. And, sir, that he worked -- he and his coworkers worked with those four to five different manufacturers of gaskets over a period of about 10 years. Can you assume that?
A That's correct.
Q And, of course, you don't even have to assume it. You read the testimony; right?
A Yes.
Q That's accurate, isn't it?
A That is.
Q Okay. Now, are you telling this jury that over a period of approximately 10 years, that he could have pulled out gaskets and removed gaskets from all the other brands but not John Crane?
A No, I'm not. I'm just saying it's not the only one that he used. And he doesn't know on which day he used which one -- or I don't know which day he used which ones.
Q If they were putting in all four or five brands, they were taking all four or five brands out; fair?

A That would probably be true.
Q Okay. That would be true; right?
A Yeah.
Q There's no way -- there's no basis for anyone to say somehow he magically avoided one of those brands when they were pulling the gaskets out; right?
A I --
MR. TIVIN: Objection to form.
THE COURT: Sustained.
BY MR. PANATIER:
Q Are you aware of any scientific or industrial hygiene way to say somehow he avoided pulling out one of the brands?
A I know of no such way that you could do that.
Q And he did testify he used a power wire brush on a drill; correct?
A Yes.
Q Okay. Two more questions, then I'm done -- questions, areas.
You testified that it was your belief he had about 4.5 fiber cc years -- or, at least, 4.5 fiber cc years of exposure to insulation at Celanese; right?
A Yes.
Q Okay. And -- and that would have included amosite and chrysotile; correct?

A That's what's in -- that's what's in the insulation, yes.

Q All right. And do you know what year -- and I may be putting you on the spot. Do you know what year insulation was first made available as asbestos free?

A No, I, actually, don't.

Q Okay. That's fine.

And then, lastly, you agree that a company -- a reasonable company from an industrial hygiene perspective should test their products for safety before they sell them; correct?

A Yes.

MR. PANATIER: That's everything I have.

Thank you very much, sir.

Pass the witness.

THE WITNESS: You're very welcome.

THE COURT: We'll take about a 10-minute break. Don't talk about the case. Continue to keep an open mind.

Thank you.

(WHEREUPON, the jury was excused from open court at approximately 11:37 a.m.)

THE COURT: Yes, sir.

MR. TIVIN: Your Honor, my redirect with Dr. Toca is going to be fairly short. And I was wondering if we could -- and I don't believe I would be done with my

direct of Mr. Springs prior to noon. I was wondering if we could take an early lunch and I just put him on in his entirety after lunch, seeing how we're kind of short on -- we won't lose any time. And I'd rather not divide up the direct over lunch. And I just wanted to okay that with you before I --

THE COURT: So that witness cumulatively is expected to take how long, including --

MR. TIVIN: You should talk to the -- I mean, my direct is very short. But then the cross-examination is --

MR. PANATIER: An hour, hour and 15, something like that.

THE COURT: Okay.

MR. PANATIER: Don't hold me to it. It might go a little longer. But that's my -- that's my gauge.

MR. TIVIN: Okay. I am holding you to that.

THE COURT: All right. So we'll just -- yeah. That's fine.

MR. TIVIN: Okay. I just wanted to ask your permission before we got to that. Okay.

Thank you, Your Honor.

THE COURT: We'll take about a 10-minute break.

(WHEREUPON, a break was taken.)

THE COURT: Okay. Is everybody ready for the jury?

Okay. Yes, ma'am.

So you're talking about reconvening --

MR. TIVIN: Whenever. Sorry, Your Honor. I didn't mean to interrupt.

THE COURT: No, no. That's okay. You expect your -- how long is this going to take here? Five minutes?

MR. YOUNG: Judge, I hate to -- I had set a call at 12:30, because I thought we would break late as usual. So if you could just give us a little bit of time after that. I'm talking to my client. So I don't think it will take that long. But if we could just not start right at 12:30.

THE COURT: Okay, sir.

MR. TIVIN: And I can tell Your Honor that the whole thing with Mr. Springs is probably going to take two hours total. And I think that's at the outside, just so you're aware.

(Pause.)

MR. YOUNG: Judge, something that happened this morning reminded me of something. I have Googled this trial. And it's on the Internet, just that video part. But there's some commentary about the case on there.

So, I mean, I can show it to you if you want. But it's -- I'm just hoping that maybe you could remind the jurors not to do any investigation. And I'm not quite sure why I was so bored yesterday that I started to Google

our own trial, but --

MR. PANATIER: You got done Googling yourself, so you had to Google someone else.

MR. YOUNG: If I Google Hawkins Parnell, it's just all about Parnell and Thaxton. So I know about them already.

But just to be -- I don't want you to suggest that they shouldn't Google it because then they will. But if you just remind them not to do any --

THE COURT: All right.

MR. YOUNG: -- when they leave today.

(WHEREUPON, the jury came into open court at approximately 11:38 a.m.)

THE COURT: All right. Mr. Tivin, yes, sir.

MR. TIVIN: May it please the Court.

THE COURT: Redirect.

REDIRECT EXAMINATION

BY MR. TIVIN:

Q Dr. Toca, I'm going to -- I apologize. I'm going to be jumping around a little bit. You were shown this book, New York Academy of Scientists?

A Yes, sir.

Q And it was -- I think we can agree it was 1965?

A Yes.

Q In the portion that you were shown, it says that --

on the third line, it says, The American limit of -- we know that -- We have our ideas that the American limit of five million particles per cubic foot is a safe limit. Do you see that?

A Yes.

Q So does that seem to indicate that in 1995 [sic] that the American contingent -- in other words, at this conference -- believed a safe limit of exposure was five million particles per cubic foot?

A That's what it states, sir.

Q And can you compare millions of particles per cubic foot to fibers per cc?

A Well, there are estimates to do that. There's no good way to compare the two, but, yes.

Q The estimate, it's about what? About 30 fibers per cc?

A 30 fibers per cc would be approximately -- would be equivalent to five million particles per cc.

Q So in 1965, the book seems to say that the Americans thought 30 fibers per cc was a safe limit?

A Yes, sir. That's what it would indicate.

Q And then you were asked some testimony about joint compound. Do you recall that?

A Yes, yes.

Q Did Mr. Seay ever work with joint compound?

A To my knowledge, he did not.
Q Did they use joint compound to insulate the steam lines at Hoechst Celanese?
A No, they did not.
Q Did they use the asbestos-containing cement?
A Yes.
Q And mud?
A Yes, sir.
Q And as an industrial hygienist, are those the same product or different?
A No. They're different products, sir.
Q You were asked some questions about joint compound being banned by the government. Do you remember that -- those questions?
A Yes, sir.
Q Are -- asbestos-containing gaskets and packing, are they currently banned by this government, the United States government --
A No, they are not.
Q Excuse me. Let me ask the question.
Currently, are asbestos-containing gaskets or packing banned by the government?
A No, they are not.
Q You were asked some questions about potency. Do you remember that, the different types of asbestos?

A Yes.
Q And I think you were shown a study by Dr. Millette?
A Yes.
Q For the no-effect level, does that -- that you testified to the jury, does it matter what the fiber type is?
A It does not.
Q And you were, also, asked some questions about -- and you were asked hypotheticals about the testimony in this case. Do you recall Mr. Thompson testifying that 75 percent of the gaskets didn't need to use any tools?
A Yes, sir.
Q And so does that lead you to believe that 25 percent did?
A Yes.
Q And of that 25 percent, there was a subsection that you could remove with a scraper only?
A Yes.
Q And of that remaining subsection, there was one that you could use a wire brush only?
A Yes.
Q And so that leaves a -- that last percentage that they need to use a power wire brush?
A Yes.
Q And do you, also, recall that they testified there

were 350 people who worked in the maintenance department at Celanese?

A I don't remember the specific number, but, yes, there were many.

Q And was there any testimony -- and the testimony was -- was there any testimony you could identify whose gasket it was on removal?

A No, you can't. I mean, there's no testimony to that.

Q And that kind of goes to your study. You, also -- you were asked some questions about the asbestos fiber content of the study that you did?

A Yes.

Q Is there any way, when you're developing a study, that you can say, I want to remove a John Crane gasket, or a Garlock gasket, or any other gasket manufactured?

A No. Because the object of the study is to use something which has already been in a flange -- in the flange for a long period of time so that you're getting an actual reflection of what a worker would have removed.

Q So did you choose -- did you say, these are some flanges that I know only have 50 percent asbestos, I want to use these?

A No, sir, I did not.

Q How did you go about choosing the flanges that were used in your study?

A We took what we could get from different sources. It's not always -- it was not easy to go out and find these things that had been used over 20 years ago, or whenever.

Q Now, you were questioned -- you were asked a series of questions regarding a few days of exposure causing mesothelioma. Do you remember those questions?

A Yes, sir.

Q Was those -- were those case reports people who worked in a shipyard -- inside a ship in a shipyard?

A Well, they were case reports, yes, of people who worked at -- in a shipyard in the industry.

Q And is it important to you as an industrial hygienist as to what the dose those people received?

A Yes. That would be very important.

Q And the people that were exposed in those several days in the shipyard, weren't they spraying on crocidolite spray-on insulation?

A I don't really recall that. I'm sorry.

Q Is it an important thing for you as the total dose -- strike that.

Is it important to you, as an industrial hygienist, what the percentage of asbestos is in a particular product? Or is it more important to know how much asbestos the product can release?

A It's more important to know how much the product is releasing. Because that's what will be taken into the body.

Q And when you're talking about the releasing of asbestos from different fiber types, you believe that the insulation numbers are what you testified to earlier?

A Yes, sir.

Q And they're much higher than the gasket numbers?

A That is correct.

MR. TIVIN: Thank you, sir.

Nothing further.

THE WITNESS: Thank you.

RECROSS-EXAMINATION

BY MR. PANATIER:

Q Sir, you were asked whether or not gaskets are banned in this country?

A Yes, sir.

Q Okay. You know that OSHA has specific requirements that people have to follow if they're going to be using asbestos gaskets; correct?

A Well, that applies to all asbestos-containing products, yes.

Q They have a specific section for gaskets, don't they?

A It applies to the general standard that, okay, you have to monitor the air, find out what's released. And if

it's released above the standard, there are certain specific activities that you have to take.

Q My question was, do they have particular work practices for dealing with asbestos gaskets? Do you know that or not?

MR. TIVIN: Objection as to time.

BY MR. PANATIER:

Q Right now.

A I'm not aware of any that they have today.

Q So you're not aware whether or not they require wet down, glove bag, respirators, Tyvek, et cetera?

A Sir, that is if you were to have tested and found -- that's what I said, the basic standard says, okay, you have to identify, by testing, whether it's above the standard. If it is above the standard, no matter whether it's gasket or anything else, you have to do all of those procedures, engineering controls.

Q But in fairness, when was the last time you read the gasket standard in OSHA?

A I read the gasket standard in OSHA. It's been a while.

Q Okay. You were, also, asked about -- you know, you were asked about banned products. How many of the 3,000-plus asbestos products sold in this country are banned?

A I have no idea.
Q Okay. If a product is not banned, does that mean it's safe?
A I can't answer that question.
Q Is asbestos insulation banned?
A Yes, it is.
Q Okay. In what context?
A In the context if you're working with it and removing it. Again, but it goes to the basic point of the standard, which says if you are performing an activity with an asbestos-containing material, you have to define how many fibers are released. And based on that, if it is above the standard, there are things you have to do. And that's the basic part of the standard.
Q Perhaps, I asked a bad question. I asked if it was banned, not what the work practices were. I understand there are work practices you have to employ with all asbestos-containing products; correct?
A Yes.
Q Okay. And then lastly, Mr. Tivin asked you about joint compound. Do you recall that?
A Yes, I do.
Q And he said, Did Mr. Seay use asbestos-containing joint compound? Do you remember that?
A Yes.

Q And you know I asked you questions about asbestos-containing joint compound; right?
A Yes, you did.
Q You knew I wasn't asking you whether Mr. Seay used asbestos-containing joint compound, didn't you?
A Yes. But I didn't think it was relevant. But, yes, I knew you...
Q Well, in fairness, I was asking you about your own work history testifying for asbestos defendants; correct?
A That's correct. And it has nothing to do with this trial.
Q You didn't think that was relevant?
A Not to gaskets, if we're talking about joint compound.
Q Okay. So it wasn't relevant in your mind that you had testified for a company whose product had been banned?
A This case is not about that product.
MR. PANATIER: All right. Thank you, sir.
Pass the witness.
THE WITNESS: You're very welcome.
THE COURT: Thank you, Doctor.
You may step down, sir.
THE WITNESS: Thank you, sir.
THE COURT: And we're going to go ahead and take a lunch break now. And just be back in the jury room at

1:00. And we'll resume trial at that point.

Thank you.

Don't talk about the case. Don't do any outside investigation. Continue to keep an open mind.

(WHEREUPON, the jury was excused from open court at approximately 11:49 a.m.)

THE COURT: Yes, sir, Mr. Tivin.

MR. TIVIN: Your Honor, Mark Tivin on behalf of John Crane.

At this point, I -- even though the witness has been excused, I would like to mark the two pages of -- that he wrote on on the pad as exhibits -- John Crane Exhibit Nos. 1 and 2 for identification. I'm not moving them into evidence. I'm just marking them for identification.

THE COURT: Oh, okay. Yeah, sure.

MR. PANATIER: I have no objection to marked for identification.

THE COURT: All right. We'll see you back at 1:00.

MR. TIVIN: Thank you.

And does Your Honor care -- do you want it to be John Crane Exhibit No. 1 or do you want it to be Defendant's Exhibit No. 1? I realize there was an exhibit list filed, but there hadn't been anything entered in yet.

THE COURT: That's Ms. Jenkins call, not mine.

MR. TIVIN: I'll mark whatever you tell me.

THE COURT REPORTER: Defendant's is good.

MR. TIVIN: Sure.

MR. YOUNG: Mark, I would vote for John Crane.

(WHEREUPON, Defendant John Crane Exhibit Nos. 1 and 2 were marked for identification only.)

(WHEREUPON, a lunch break was taken.)

THE COURT: Is everybody ready?

MR. TIVIN: Mark Tivin --

THE COURT: Yes, sir.

MR. TIVIN: Mark Tivin on behalf of John Crane.

The next witness we are going to be calling is our corporate representative, George Springs. We had agreed on many motions in limine prior to the beginning of the trial.

However, there is one we agreed to bring up on a case-by-case basis. And I believe that Mr. Panatier is going to be using some MSD sheets with Mr. Springs that we had filed a motion on. We're not going to come to an agreement. Hence, we figured we might as well get a ruling now.

THE COURT: All right, sir.

MR. PANATIER: Yes, sir.

This is the MSD sheet from 1981 for the 333. It's up there. This is the style that's been identified -- one of the styles that's been identified as being present.

THE COURT: Okay. I see that.

MR. PANATIER: And I'm offering it really for two reasons. One is it goes -- even though it's a year after he left. I'm offering it for two reasons. One, it goes to the issue of causation. You can see on the next page it says, Product exposure to asbestos dust can lead to asbestosis.

And I, also, have the one for 2150 that I'm going to use. It says the same thing, except, causes asbestosis and cancer. And I can show you that one, too. The second -- so it goes to the issue of causation.

The second thing is under, Special Precautions, Proper labels required, on 1910.1001.

So I laid the foundation with Dr. Holstein for this. That the labeling requirement under OSHA was the same in '72 as it was in the early 1980s. So that this is a statement by John Crane that labels were required, under OSHA. It's an admission by them.

And then I'm, obviously, going to argue, well, shoot, if they were required in 1981, they were required in 1971. And I've laid that foundation with Dr. Holstein. So causation and labeling.

MR. TIVIN: Briefly, Your Honor. This is a post-exposure document. This goes to -- this has -- you have to show a relevance of what the post-exposure is.

The testimony will be, as Mr. Panatier's aware, that the OSHA labeling requirement has nothing to do with the warning label on John Crane. It's never been cited or anyone else -- by the government or any other regulatory agency for not having a warning on its products at any time ever.

Secondly, it isn't an admission. It doesn't say that using the gasket causes cancer. It doesn't say anything of the sort. MSD sheets have to list all ingredients. And the ingredients -- one of the ingredients is asbestos.

The fact that it's a post-exposure document leads to relevance, to the time period that the Plaintiff was, there's no question about it.

This isn't a feasibility case. This isn't a could we put a warning on it case. This is, and it's been undisputed, that there was no warning on the product.

So the fact that there wasn't any warning on the product, that's really not an issue in this case. And because of those reasons, we believe it's irrelevant, post-exposure, and it should not be admissible.

MR. PANATIER: It goes to negligence. They're admitting that a label was required. The OSHA requirements for labeling are the precise same requirements they were in '72. And so to the extent they're admitting a label was required but not included,

that goes to negligence and failure to exercise ordinary care.

And this is one for 2150, which Mr. McKillop said was fundamentally the same product. And on this one, it says, causes cancer and asbestosis.

MR. TIVIN: What year is that?

MR. PANATIER: This one is '81.

MR. TIVIN: Well, they're both -- I just wanted to make sure. They're both post-exposure. 2150 -- first of all, 2150 is not the product at issue. And as we know -- and he's using the 333. He's using the one for the product at issue.

THE COURT: Right.

MR. TIVIN: So I don't know what using another one for another product is which isn't at issue in the case. He's already getting the evidence in, if this is allowed to be entered into evidence --

MR. PANATIER: I can --

MR. TIVIN: -- and I think that --

MR. PANATIER: I can answer that, which is that Mr. McKillop -- the reason I designated Mr. McKillop's video on the issue of 333 and 2150 was, specifically, for this MSD sheet. He says they're the same thing. It's just different thicknesses. They're the exact same thing. They're both a rubber-bound asbestos gasket.

And this would be relevant because, in one instance in the same year, they're saying causes asbestosis and in another they're saying cancer and asbestosis on this one. You know, they're, basically, the same product. They're just different model numbers.

MR. TIVIN: They have the same amount of asbestos. And they're both -- I'm sorry for talking too fast.

They're both sheet gasket material. 2150 isn't at issue in the case. He's already requesting the one for the product that is at issue. And, plus, that is, also, post-exposure. And for the reasons stated for --

MR. PANATIER: I'm not offering for post-exposure conduct. I just --

MR. TIVIN: I know. But that's a --

MR. PANATIER: Yeah.

THE COURT: All right. So just back up and clarify. You said initially, Mr. Panatier, that these documents were after he left. "He" being Mr. Seay?

MR. PANATIER: That's correct. They're about one year after.

THE COURT: And how -- I'm a little confused --

MR. PANATIER: Sure. Yes, sir.

THE COURT: Because I recognize this name Pantaleoni as being someone associated with Crane Company.

MR. PANATIER: Yeah. We -- that just happened to

be -- I'm sorry that's on there. I can take that off. That was just used with another witness because Crane Co. used John Crane gaskets in their stuff. That was used in another deposition.

THE COURT: Okay.

MR. PANATIER: So that exhibit sticker is irrelevant.

THE COURT: But the real issue to this is from John Crane?

MR. TIVIN: No.

MR. PANATIER: No.

THE COURT: All right. And you would be asking the John Crane corporate representative what about these documents, specifically?

MR. PANATIER: Sure. What I would ask is I would have him verify that they are for the products they're for, that they sold, that were asbestos gaskets, and verify that their employee, Mr. Wisniewski, stated in -- and I don't even have to say the date if you don't want. But I could say that in 1981, they said that both -- under Section 5 of the MSD sheet for overexposure, they said, chronic exposure to asbestos dust can lead to asbestosis. And for their other one, which is, essentially, the same product, which I think he'll agree to, chronic asbestosis and cancer. That's number one.

Number two, is, sir, the company admitted that proper

labels were required under OSHA, which is 1910.1001. And that's really -- that's really all I need to get with him. Because I've already got the -- from Dr. Holstein that the labeling requirement was present in '72.

THE COURT: Okay. I understand that objection. And I respectfully overrule it.

MR. TIVIN: For both MSD sheets?

THE COURT: Yes.

MR. TIVIN: Okay. Thank you.

MR. PANATIER: Thank you, Your Honor.

(WHEREUPON, Plaintiff's Exhibit Nos. 1084A and 1084B were marked for identification and admitted into evidence.)

THE COURT: All right. Anything else before we bring the jury in?

MR. PANATIER: No, Your Honor.

MR. TIVIN: No, Your Honor.

I'm just going out to get --

THE COURT: Okay. Thank you.

You can bring the jury in, Ms. Camp.

Thank you, ma'am.

(WHEREUPON, the jury came into open court at approximately 1:07 p.m.)

THE COURT: Okay. Good afternoon. I hope y'all had a good lunch.

Just to clear up something in case there was any confusion. I told you at the beginning about the structure of a trial in a civil case and that the Plaintiff goes first, and then the Defense confronts the Plaintiff's evidence, and then the Plaintiff would rest. And then the Defense would have the opportunity to present witnesses and evidence.

We have a little bit of a twist on that in this trial. Because, even though the Plaintiff has not technically rested, the parties have reached an agreement to allow the Defense to go ahead and call some of their witnesses. And that's what happened this morning. That witness was a witness for one of the Defendants.

So you're going to hear in the next several days witnesses who were called by the Defense. And the Defense is putting up their case now, even though the Plaintiff has not technically rested.

So just -- so everybody understands that, I just wanted to explain. So -- and that agreement, to their credit, came from the lawyers. And they're just trying to move things along. Due to some witness scheduling problems, the Plaintiff wasn't able to rest as he normally and traditionally would. So everybody agreed the Defense could start their case just to move things along.

All right. Yes, sir. Mr. Tivin.

MR. TIVIN: As its next witness, John Crane would call George Springs.

THE CLERK: Place your left hand on the Bible and raise your right hand.

WHEREUPON,

GEORGE LEWIS SPRINGS,

after first having been duly sworn, testified as follows:

MR. TIVIN: Your Honor, may I approach the witness?

THE COURT: Sure.

DIRECT EXAMINATION

BY MR. TIVIN:

Q Can you, please, state your name for the ladies and gentlemen of the jury?

A My name is George Lewis Springs.

Q And what do you do for a living?

A My title is -- I'm the assistant corporate secretary and the custodian of asbestos records for John Crane, Incorporated.

Q So I take it you work for John Crane. But let's go back. When did you start working for John Crane?

A 1977.

Q And what did you do before that?

A I worked for a competitor of John Crane's for a few years. Before that, I worked in the oil fields in Texas.

Q Okay. When you started working for John Crane, what

did you do?
A I was a sales representative in Houston.
Q And what did that entail?
A I sold -- I worked in Houston. I had customers in the Houston geography. And I sold whatever products John Crane had to sell.
Q Now, this is a good enough time to ask that as any. How did John -- and how did John Crane sell its products to people who wanted to use them?
A We were -- we were and still are today, basically, a direct sales organization. In other words, we have our own sales employees. We have our own warehousing operation. And we sell our own products directly to our customers, as opposed to going through third parties.
Q And how long has John Crane been doing that?
A Since 1917.
Q Now, what did you do after you were a salesman?
A I became a branch manager in Freeport, Texas, which is just south of Houston. I went down there and opened a new branch, built a branch, managed that branch. And I was the only sales representative working out of that branch. So I -- I was my own boss. It's a great thing.
Q And how long did you do that?
A I did that from 1979 until 1986.
Q And then what did you do?

A I went back to Houston as a regional manager. I was responsible for what we called the southwest region, which was, basically, along the Gulf Coast, Texas, Louisiana, Mississippi, Alabama, Oklahoma, New Mexico, Kansas, like that.

Q And how long were you a regional manager?

A 1986 until 1998.

Q And then what?

A I went to Chicago, to Morton Grove, Illinois, our headquarters. And I was a vice president of sales.

Q That's a good enough time to -- let's talk about that for a little bit. John Crane has corporate headquarters located in Morton Grove?

A Correct.

Q And that's just outside of Chicago?

A Right.

Q When did John Crane start?

A 1917.

Q And in 1917, what did they -- what was their business?

A The name of the company in 1917 when it started was Crane Packing Company. And they were a packing company. They manufactured and sold packing.

Q And is that different than gaskets?

A Yes, it is.

Q Has John Crane ever manufactured gasket material?
A Not asbestos-containing gasket material. We do -- did and still do manufacture rubber gaskets and Teflon gaskets, but not asbestos-containing.
Q So how would John Crane get its asbestos-containing -- well, strike that.
John Crane sold asbestos-containing gasket material?
A Correct.
Q And Mr. Seay stopped working in either -- around either 1979 or 1980. Can you assume that?
A Yes.
Q Up until that date, did John Crane -- was John Crane still selling asbestos-containing gaskets?
A Yes, we were.
Q In the '70s, did John Crane ever manufacture any asbestos-containing gaskets?
A No.
Q But they sold it?
A We sold it.
Q And was their name on it?
A Yes.
Q And did they have a -- are you familiar what the word "style number" means?
A Yes. It's, basically, a part number for different kinds of packing, gaskets.

Q And is that how John Crane identified its different products?

A Correct.

Q Now, let's just -- let's just cut to the chase. When did John Crane first learn of this, learn -- first learn of the possible hazards from asbestos?

A 1970.

Q And how did they find that out?

A The president of our company at that time was a man named Karl Rohlen. And he and the manager of our packing division, George McKillop, they went to a meeting of a trade organization that we belonged to called the Mechanical Packing Association.

And at that meeting, a representative from one of the main asbestos product manufacturers, Johns Manville, gave a talk to the group. And the subject of his talk was Johns Manville's experience had been that their employees who worked with raw asbestos and smoked seemed to have a greater incidence of lung problems than people who worked with raw asbestos and didn't smoke.

Q So what, if anything, did John Crane do after that?

A Those gentlemen came back to our facility and put up signs that said, No smoking.

Q Now, did John Crane have knowledge of the -- that the hazards of asbestos could cause lung damage in the 1940s?

A No.
Q Have you ever testified any differently to that?
A Yes, sadly, I did make a mistake and testified about --
Q Can you explain that to the ladies and gentlemen of the jury, the circumstances behind that?
A A couple of months ago I was at a trial in New York. And the plaintiffs attorney was asking me questions about our plant, our facility where we manufactured packing. And he asked me numerous questions about the controls that we had for controlling the environment in that building. Some of those controls are vacuum, ventilation to carry the dust away. And he asked me numerous questions. And I guess I had a senior moment. I didn't listen close enough. That's for sure.

Because he asked me, in the midst of that, did John Crane do that in 1940, because they knew about the dangers of asbestos. And I stepped on my tongue and said, yes. Immediately after that, I cleared that up. I apologized to the jury. And I apologized to the Court. And I said that was a mistake. I said the wrong thing. We didn't know about it in 1940. And that's the end of that.
Q Now, John Crane's in Illinois. Does Illinois have a workers' compensation statute?
A Yes, they do.

Q Do you know when it came into effect?
A In the '30s or '40s. I think in the '40s.
Q And do you have any knowledge as to whether asbestosis was a covered disease under the statute?
A I know that -- I know now that it was, yes.
Q Did -- what did John Crane do in response to the workers' comp statute in the 1940s?
A We bought workers' comp insurance.
Q Was there anything in the -- that you're aware of, that John Crane knew in the 1940s that the use of gaskets could cause any sort of disease?
A No.
Q Now, we talked about style numbers. And there have been some style numbers -- you've reviewed some testimony in this case?
A Yes, I have.
Q And it'd be the testimony of the Plaintiff and Mr. Thompson?
A Yes.
Q And in Mr. Thompson's testimony, they -- there were some numbers mentioned?
A Yes.
Q Those were style numbers he was talking about?
A Correct.
Q Now, one of the style numbers was 333?

A Right.
Q And I'm going to show you what we're going to mark as John Crane Exhibit No. 3.
(WHEREUPON, Defendant John Crane Exhibit No. 3 was marked for identification only.)
BY MR. TIVIN:
Q Do you see that?
A I do.
Q What is that?
A This is asbestos-containing gasket material, John Crane Style 333.
Q And this gasket that -- this 333 gasket that you're handling, is that a -- has it always had the same formulation?
A Yes.
Q And when you're talking about sheet gasket, is this what a sheet gasket typically looks like?
A Yes, it is.
Q And if you wanted to cut a gasket out of this gasket material, what you would do is you would cut it out -- This is a part of a sheet?
A Yes. Typically, the sheets are four feet by four feet.
Q And how is this different than a precut gasket?
A A precut gasket would already be cut. In other

words, you wouldn't get a piece like this. You'd get a gasket already in the shape that you need to use it in.

Q Now, with that 333 gasket, is that something that you can take in your hand and crumble into dust?

A No. It's -- this -- this material is very, very sturdy, very hard, and durable.

Q Now, there is, also, a mention of a -- and has the 333 gasket always been this color?

A Yes.

Q And has it always said "Crane Packing Company" on it?

A Yes.

Q And as a matter of fact, as long as -- and there's a John Crane logo on this one, right?

A Right.

Q Now, as far as you're concerned -- as far as you can remember -- well, strike that.

Has John Crane always had John Crane and Crane packing number -- Crane Packing Company on their gaskets?

A Yes.

Q Have you -- there was, also, a mention of a style 2112?

A Correct.

Q Does that correspond with a John Crane number?

A It is [sic].

Q And what kind of a -- well, first of all, what kind

of asbestos does this have in it?
A Chrysotile asbestos.
Q And how much?
A 52.25 percent.
Q Okay. And 2112, what type asbestos is in that one?
A Crocidolite.
Q And how much is in that one?
A 52.25 percent.
Q Now, with regards to the crocidolite, what type of applications would you use a crocidolite gasket?
A Crocidolite asbestos products are, specifically, meant for highly acidic or very strong base materials. In other words, at both ends of the pH range, bases and acids.
Q Now, during your time as a salesman and your time as a -- working for John Crane, have you -- are you familiar with the type of plant that Mr. Seay worked in?
A Yes, I am.
Q And what type of plant was that?
A It was a fabric plant.
Q Was there anything that was identified in Mr. Seay's testimony or in Mr. Thompson's testimony that you saw that would give rise to the use of a crocidolite gasket?
A No, there wasn't.
Q What do you mean? Can you explain what that means?

A No services that were mentioned that I'm -- that I know of in that kind of a plant that would have those kinds of pH ranges, the very low and the very high pH ranges of acids and bases, in that kind of a facility.

Q Now, there was some mention of Dowtherm lines. Do you know what a Dowtherm line is?

A Yes, I do.

Q And can you explain to the ladies and gentlemen of the jury what that is?

A Dowtherm is a product made by Dow Chemical Company. Other people make the same kinds of products, but Dowtherm is, specifically, for Dow Chemical. And it's a heat transfer fluid. It is a very stable fluid at very high temperatures.

So if you're -- if you need a fluid that you can heat up really high and then pump it around and heat up other things with it, you need a fluid that's very stable, that won't try to evaporate, or explode, or degrade. And that's what Dowtherm does. It's used to transfer heat from one place to another.

Q Now, for a Dowtherm line, what kind of gasket would that require, a chrysotile or a crocidolite gasket?

A Chrysotile, if you were going to use a fabric gasket.

Q Now, there were some other numbers mentioned. One of the numbers that was mentioned was 750. Do you recall

that number?
A Yes.
Q Does that number correspond to any John Crane product?
A No, it doesn't.
Q Who manufactured 750?
A I believe it's Garlock.
Q And are they -- what did Garlock make? Is that another gasket manufacturer?
A Garlock was and is a gasket and packing manufacturer.
Q One of the other numbers mentioned was 2012?
A Correct.
Q Does that correspond to any John Crane product?
A No, it doesn't.
Q Now, does John Crane -- did John Crane retain any sales records of its asbestos-containing products?
A We have records of sales of our asbestos-containing products from 1977 until 1985.
Q And from your -- did you ever try to sell anything to Hoechst Celanese?
A Yes, I did.
Q Were you successful?
A Not -- not really. In my part of the world, when I was a salesperson, and a branch manager, and a regional manager, I had numerous Celanese -- then became

Hoechst Celanese -- plants in my geography. And I tried mightily for 18, 19 years to sell them stuff.

These -- these companies like Hoechst Celanese, Exxon, any of the big process plant companies, they, eventually, gravitate to a supplier, or maybe one or two suppliers. And that's whose stuff they use. Because they get familiar with it, they understand it, they trust it, they know what they're doing with it. And it's very hard for anybody else to break into those accounts with their product.

It just so happens that Celanese, and then Hoechst Celanese, was and still is a devoted buyer of a competitor of John Crane's called Durametallic, which was Durametallic back in those days. Now, it's called Flowserve. But John Crane didn't have much success selling them anything.

Q Now, let's talk a little bit about John Crane. We've heard a lot about John -- about gaskets and packing. John Crane was a sealing company, S-E-A-L-I-N-G?

A Yes. We call ourselves, and you'll see it on our literature, an engineered sealing company.

Q And what are the different kinds of seals that John Crane sells?

A Well, again, we started in 1917 selling packing and gaskets. In World War II, we invented a -- again, packing

and gaskets are used in all kinds of equipment with shafts, especially packing. And pumps and valves are two of the main places you use packing.

And in World War II, the need arose, because of the war, to run pumps at higher temperatures and higher pressures than packing was really capable of doing. So John Crane had already been in the process of doing this. But we perfected and began to sell a thing called a mechanical seal, which takes the place of packing and pumps and allows them to pump at higher temperatures and higher pressures. And so in World War II, we started making mechanical seals.

So, today, we sell mechanical seals. It's 99.9 percent of our business. And we still sell packing and gaskets, but it's a very small percentage of our business.

Q And in the 1970s, what percentage of your business was packing and gasket versus mechanical seals?

A I'll give you an estimate, in the neighborhood of 75 percent mechanical seals, 25 percent everything else.

Q Have you reviewed the John Crane sales records between 1977 and 1980 to determine if there were any records of any sales of any John Crane products to the Spartanburg plant, Hoechst Celanese?

A I have.

Q And what did you find, if anything?
A No sales of anything, seals, gaskets, packing, nothing.
Q Now, earlier, we -- the jury heard some testimony of George McKillop. Do you know who George McKillop is?
A I do.
Q And I'd like you to -- because it was a deposition and I didn't get to ask questions, I want to ask you some questions about some of the things he said. Okay.
A (Witness nodded.)
Q Do you recall him being asked about an excerpt from a catalog about nonasbestos products being safer?
A I do.
Q And you're familiar with that catalog?
A Yes.
Q Now, did -- that catalog, did it have any -- to your knowledge, as you recall, did that catalog pertain to any gasket materials?
A No. It was packing. Rite-Pak was the name of the product line. And it's packing.
Q And can you explain to the jury what John Crane meant by that statement?
A The catchphrase was it was, the right packing for the right application. So Rite-Pak. It was a group of products that were presented to our customers as a group

of products you could pick the solution for your service from. You didn't have to go look through the whole catalog. This is just a brochure about this thick.

Q And did the nonasbestos -- the safe or non-safe remedy [phonetic] have anything to do with asbestos in the product?

A No.

Q Did John Crane ever tell its customers not to power wire brush?

A Yes, we did.

Q Why would you tell its -- when did you first tell its customers not to use a power wire brush?

A The first evidence I've seen is about 1964.

Q And how -- why?

A We -- we publish a -- we published it for many years, and we still publish a book that explains how -- the use of our products, how they're manufactured, the materials they're manufactured from, how they work, how to install them, how to take them out, how to work with them. We use it for conducting classes that we teach our customers. And we teach our own people with this book.

And in that book in the section on packing, it says do not power wire brush on a flange. Because you need to get the flange clean, but you, also, need to keep it scratch-free. Because if you create a scratch all over

across it, it's a leak path. And it'll tend to leak.

So that's the reason for recommending not to power wire brush.

Q Now, in my opening statement, and I believe with Dr. Holstein, I talked about a stereophonic flange with grooves in it. Now, I misspoke there. It's a phonographic flange?

A Phonographic.

Q Can you explain what a phonographic -- which makes a lot of sense. Can you explain what a phonographic is?

A There's a flange -- I don't know if anybody has shown a flange here. You have two pieces of pipe you want put together. And, typically, in a process plant, they'll have a flange where you weld the flange to the pipe and you weld the flange to the other pipe. And then this flange has got holes in it for bolts. You put a gasket in between those two flanges, and you torque the bolts down. And that's what creates a seal between this flange, this flange, and the gasket material that's in the middle.

Typically, for a higher pressure service, that -- those two flanges will have a groove cut around them. It's a concentric groove. It goes from ID all the way to the OD. And it feels like an old -- I think y'all are too young to ever seen a real record, a 33 1/3 record, but it feels like that. It's got that groove in it.

And the purpose for that is to -- when you torque those bolts down and compress that gasket material, it will extrude into those grooves. It makes a better seal.

Q Now, you mentioned the terms ID and OD. That's inner diameter?

A Yes. Inside of the flange to the outside of the flange.

Q And if -- what happens to a worker if the flange doesn't work, if the gasket doesn't work?

A Well, it's variable. It depends on what's inside that pipe. If it's high-pressure steam, you get in the way of a leak, it'll really hurt you bad, burn you. It can kill you. If it's something like hot gasoline, when it leaks, it catches fire. It autoignites. That's bad. It could be some very toxic substance like chlorine. That leak is very bad.

So depending upon what's inside the pipe, a leak of a gasket can be anywhere from benign, it makes a mess, to fatal.

Q Now, prior to 1980, did John Crane ever test any of the gaskets that it sold that contained asbestos to see if they released asbestos?

A We did not.

Q Why not?

A Again, we had been selling that material since 1929

or '30. We understood how it worked. We understood how it was made. We understood the properties of it. We did not believe that it was capable of releasing the amount of fibers it takes to hurt -- to harm anyone.

Q Now, in Mr. McKillop's testimony, I believe there was some -- there was a memo read about machine spewing asbestos into the air. Do you remember that?

A I do.

Q Now, at that time had OSHA already come into being?

A Correct.

Q And at the plant in Morton Grove, did you use raw asbestos?

A We did.

Q And why would you be using raw asbestos at that plant?

A We made packing materials. We made packing materials out of many kinds of fibers, cotton, flax, horsehair, asbestos, many kinds of things.

Repeat that question. I lost myself.

Q You already answered it.

A All right. Good.

Q Now, we also -- we've, also, heard testimony, so it's a good time to talk about this a little bit. How many different kinds of asbestos-containing gaskets did John Crane sell?

A Gaskets?
Q Yeah.
A Probably about eight different style numbers.
Q But it seems to me that there are like a lot of different -- and how many different kinds of packing?
A Asbestos-containing or total?
Q Yeah, asbestos-containing.
A Just over 500.
Q Now, of those 500, is -- were they -- what was the difference between those 500? If you could, explain that.
A The first thing I should say is we made about -- just over a thousand different styles of packing, period. So about half of them contained asbestos and half of them didn't. Okay.

So -- and across the whole thousand styles, there weren't a thousand distinctly different styles. There were really just a couple -- a few dozen distinctly different styles. Then each style had subcategories or subproducts.

Like you might have a packing that you called 177. All right. That's a real number. And it was just woven asbestos with some lubricants in it. But you might take that same packing and call it 177AI. And you took the 177 and you added a piece of Inconel wire. So it changed from 177 to 177AI because you added the wire.

And 177 is a really good example because there's about 30 different variations of 177, different lubricants, a little bit different weave pattern, something a little bit different. So there weren't really over a thousand different styles. There were about a thousand different style numbers. But they were many variations of a few different basic styles.

Q And getting back to OSHA. Did OSHA require, because you're using raw asbestos in a plant after OSHA came into being, that John Crane do some monitoring in the plant?

A Yes.

Q And was that during the time of the complaints about the machine's spewing asbestos?

A Correct.

Q Can you explain to me what -- explain to me what happened there?

A John Crane does not have a union. So we have committees to handle some of the things that a typical union shop would handle. And one of the committees is a safety committee. And we have people on that safety committee from different departments, manufacturing departments inside the plants.

And in this case, when we were monitoring our plant for asbestos to protect our workers, we had -- the safety committee was involved in that process. We had a

gentleman that's responsible for the monitoring plant. We had a gentleman responsible for production in that plant. And, of course, we had the executives of the company.

And during this start-up of the monitoring process, there was a bit of conflict between the guy in charge of the monitoring and the guy in charge of production. And the safety committee was in the middle of this, reporting concerns of the employees to management, and then going back to employees, back and forth.

So this memo that you heard about is just simply a mechanism, part of the process of communication between management and the workers.

Q Was -- has OSHA ever come out to John Crane to do an inspection of the plant?

A Yes.

Q When OSHA came out to do their inspection of the John Crane plant, did they hide the fact that they were using asbestos in the '70s?

A No.

Q To your time, has John Crane ever been cited by OSHA for excessive fiber release?

A Never.

Q Has John -- there's been testimony about warning labels. Has John Crane ever been cited by OSHA saying that they should have had a warning label on the product

in the '70s?
A No.
Q Has John Crane ever been cited by the State of Illinois for any excessive fiber release for anything?
A No.
Q Has John Crane ever been cited by any state for excessive fiber release from its products?
A No.
Q During the '70s, was John Crane ever cited by any state saying that you had to have a warning label on your products?
A No, we haven't.
Q Has John Crane ever been cited by any regulatory agency -- federal, state, local, municipal -- saying they needed to have a warning label on their products?
A No.
Q Or by any regulatory agency saying that their products had excessive fiber release?
A No.
MR. TIVIN: Thank you, sir.
Pass the witness.
THE COURT: Mr. Young, do you have any questions, sir?
MR. YOUNG: Oh, I'm sorry. I don't have any questions, Your Honor.

THE COURT: Thank you.

CROSS-EXAMINATION

BY MR. PANATIER:

Q Good afternoon, sir. How are you?

A Good --

THE COURT: Cross-examination.

BY MR. PANATIER:

Q Be honest now. Have you ever -- do you ever speed in your car? Do you ever break the speed limit?

A Not any more.

Q You don't? Now, when you did -- now, you have in the past; right?

A Oh, yes, in my misspent youth.

Q Yeah. Did you get caught every time you did it?

A It seemed like it.

Q But did you?

A Probably not.

Q Okay. Now, one of the things -- you were asked this question, Let's cut to the chase. Mr. Tivin said, Let's cut to the chase. When did John Crane know asbestos was dangerous? And what was your answer?

A 1970.

Q All right. So I'm going to spend some time talking about that a little bit here about some of the things that were available to John Crane. About two months ago, you

testified in New York. And you guys just talked about this. Probably about five or six times in that trial, you said that John Crane knew asbestos was dangerous with regard to its employees.

And then when the John Crane's lawyer -- his name is Tom Burns, I think -- came back and asked you some questions, he, basically, said, Do you want to correct that? And you corrected it.

And you said, No, it wasn't the '40s, it was '70s; right.

A Yeah. I got confused.

Q Okay. How many times have you testified for John Crane at deposition or at trial altogether?

A I don't know exact number. I'd say 40.

Q Okay. And you get paid to do it; right?

A Sure.

Q 150 an hour?

A Correct.

Q Now, you're here as the face of the company, as the corporate representative; right?

A That's right.

Q So you're not -- you're not an expert. But you're sort of the -- the courtroom embodiment of John Crane; fair?

A Yeah. The company can't talk.

Q So in several other cases, I've cross-examined you. One was the Pelley case in 2007. You -- So far no one has remembered me crossing them. Do you remember that case at all?

A Not specifics.

Q Okay. Yeah.

A I remember the case. I don't remember anything about it.

Q That's okay. That was in Los Angeles. And then a case called Johnston in Texas. Do you recall that by any chance?

A I do.

Q Okay. And in both of those cases, you came in and you -- you disputed whether or not those men had even worked for John Crane; right?

MR. TIVIN: Objection, Your Honor. Relevance.

MR. PANATIER: It goes to what he's doing right here.

MR. TIVIN: The facts of other cases are irrelevant here.

THE COURT: Overruled.

BY MR. PANATIER:

Q Correct, sir?

A I don't remember the Pelley case specifically.

Q Okay. What about Johnston?

A Johnston. It Just so happens that the company he

worked for was my customer. I knew the man. And I was the one selling him stuff for the best part of 10 years and -- or trying to sell him stuff. And I never sold him what he said he used. It's as simple as that.

Q Is it, though? Because, remember, in that case, you, also, signed interrogatories. Do you recall that?

A No.

Q Okay. You know what interrogatories are; right? They're signed, sworn to -- answers to questions that are asked you in litigation; right?

A I don't doubt that I signed it. But I don't remember signing it.

Q Okay. And in that case -- and I can bring up the testimony, if you like. But in that case, I asked you whether or not there were distributors that Mr. Johnston could have bought the products from. And you said, No. But you had signed an interrogatory that said there were. Do you recall that?

A At that time? In that case?

Q Yeah.

A The relative time. We did have some distributors in some parts of the country, but not in my territory, not where he was.

Q Okay. Perhaps, on a break, I'll pull that out so we can look at that.

You were asked about this document.

MR. PANATIER: It's on the monitor, right?

MR. TIVIN: Oh, yeah.

MR. PANATIER: It just takes a little bit of time.

(Pause.)

BY MR. PANATIER:

Q The thing I'm going to ask you about is Rite-Pak packing. You're aware of -- you're familiar with this brochure, right?

A Right.

Q Okay. And this is the one that Mr. Tivin asked you about where -- sorry. I'm just waiting for this thing to come up. There we go. It's coming up.

Okay. Here's what it looks like, Rite-Pak packing. And that's just a catalog or brochure that John Crane would put out, correct?

A Correct.

Q And this is the -- this is the sentence that Mr. Tivin's asking you about. It says, Nonasbestos packing. John Crane-engineered nonasbestos packings are longer lasting, safer, and less abrasive than asbestos-type packings. Recognized as the standard in their field, our new generation of quality nonasbestos materials are, specifically, developed to meet existing OSHA requirements, right?

A That's what it says.
Q Because if there's no asbestos in the product, then you don't have to worry about meeting the OSHA regulations for asbestos; true?
A I don't believe that's what they was referring to, but, yeah, that's true.
Q Okay. You don't think the plain meaning of that, for anyone looking at that, is without asbestos, it's safer, sir?
MR. TIVIN: Objection to form.
THE COURT: Sustained.
BY MR. PANATIER:
Q Sir, it's your testimony that you don't think that they were saying, look, because they're nonasbestos, they are safer than asbestos packings? That's not obvious to you?
MR. TIVIN: Objection to form.
THE COURT: Sustained.
MR. PANATIER: Okay.
BY MR. PANATIER:
Q You heard what Mr. McKillop said; right? He said that they were talking about safer, but part of it was advertising and part of it was true; right?
MR. TIVIN: Objection to form.
THE COURT: Sustained. Sustained.

BY MR. PANATIER:

Q You've reviewed Mr. McKillop's testimony on this; correct?

A I've reviewed a lot of his testimony, yes.

Q Do you recall what he said about this?

MR. TIVIN: Objection. Form.

THE COURT: Yeah. That would be pitting the witness.

MR. PANATIER: Oh, okay. I understand.

This is -- can we mark this as Plaintiff's Exhibit No. 109 -- or I'm sorry, 1109.

(WHEREUPON, Plaintiff's Exhibit No. 1109 was marked for identification only.)

BY MR. PANATIER:

Q I'm going to show this to you, sir. Do you recognize this as an -- as excerpts from a John Crane catalog that would include packing, gaskets, and mechanical seals, and so forth?

A Yeah. There's no mechanical seals in this, but it would have.

Q Right. And for the pages that are here, those are true and accurate pages from that catalog; correct?

A I believe they are.

MR. PANATIER: Your Honor, we're going to offer Plaintiff's Exhibit No. 1109 into evidence.

(WHEREUPON, the attorneys had an off-the-record discussion among themselves that was out of the hearing of the court reporter.)

THE COURT: All right. No objection. It's in evidence.

(WHEREUPON, Plaintiff's Exhibit No. 1109 was admitted into evidence.)

BY MR. PANATIER:

Q So here's 333. You guys spoke about that. And it says that this is fabricated from over 75 percent long-fiber chrysotile asbestos; right?

A Correct.

Q How much did you say it had?

A 52.25.

Q This would suggest it had 23 percent, approximately, more asbestos than you said it did?

A I can explain the difference between the two documents, if you want me to.

Q Well --

MR. TIVIN: If he needs to explain his answer --

THE COURT: Yeah. You can explain your answer.

BY MR. PANATIER:

Q Sure. Go ahead.

A The document that I'm referring to and what I depend upon is an engineering document. It takes every one of

our asbestos-containing products and says what the percentage of asbestos was in those products. In this case, it says 52.25.

This is a document that's for advertising, and it says 75 percent. The reason for the difference is one number is by weight and the other number is by volume. It's the same packing with the same amount of material in it. It's just two different ways of measuring it.

Q Okay. You didn't say that on direct, though? You just said it had 52.2 percent; right?

A Again, that's -- the only document I have that I depend upon is an engineering document. And that's what that document says.

Q Do you have that here?

A I don't know if we have it or not. I can sure get it.

MR. TIVIN: I'm sure it's somewhere.

MR. PANATIER: Anyway --

THE WITNESS: I know we've produced it to your firm a number of times.

BY MR. PANATIER:

Q 52.2 is by weight or volume?

A 52.25 percent is by weight.

Q So are you saying that 75 percent would be by volume?

A Correct.

Q Okay. So in the total volume of the area that the gasket took up, 75 percent would be asbestos. You'd put it on a scale, it would say 52 percent was asbestos?
A No. You couldn't just put it on the scale. You'd have to somehow destruct it. In other words, take everything but the asbestos out, you know, burn it out, retort it out, dissolve it out. You'd have to do something to get everything but the asbestos out of it and weigh it.
Q Okay. This is Exhibit 1084A --
MR. PANATIER: Oh, and, Your Honor, you may have already ruled on this, but we're offering 1084A as the 333 MSD sheet and 1084B, the 2150 MSD sheet into evidence.
THE COURT: All right. There's been a previous objection which I overruled.
Go ahead.
MR. PANATIER: Thank you, Your Honor.
THE COURT: It's renewed for purposes of this.
MR. TIVIN: And may I have a continuing objection during this line of questioning?
THE COURT: Yes, sir.
MR. TIVIN: Thank you.
BY MR. PANATIER:
Q Sir, you recognize this is the material safety data sheet for Style 333, right?

A I do.
Q Okay. And, again here, it says, Percentage chrysotile asbestos. It says it right here, 60 to 80 percent. And you're saying that's just a by-volume measurement, is that fair?
A 60, 80 percent takes in the range that I've been talking about. 52.25 to what this says, 75 percent, again, you're -- not what this says, what that other one says. It's the same two numbers, basically, five percent off either way.
Q I'm just asking you, is it -- is this volume or is this weight?
A One would be weight. And one would be volume.
Q Are you saying that the 60 is weight, and the 80 is volume?
A That's the only way I can interpret it, yes.
Q It's not a range of one consistent unit?
A You're asking me a question I really can't answer, other than the way I've just answered it.
Q So your interpretation of this document would be that when John Crane puts out a MSD sheet and they give the percentage of chrysotile asbestos, they're saying it's from 60 to 80 percent. 60 percent would be weight, and 80 would be volume. That's your interpretation?
A That's one interpretation. Another interpretation

would be that we bought this stuff from three different manufacturers. And that's the range, perhaps, from those three different manufacturers.

Q I'm sorry. I'm not asking -- and I don't mean to bicker with you. I'm not asking you for an interpretation. I'm asking you, as the company, what is the answer? Is that 60 to 80 percent by volume or by weight, as the company?

A I believe the 60 percent is by weight.

Q And the 80 percent is by volume. That's how we should interpret that?

A Or it's by weight from different manufacturer.

Q Okay. This is 2150. 2150 was another one of the trade names of asbestos-containing gaskets you guys sold; correct?

A Correct.

Q And this one says 65 to 75 percent chrysotile asbestos; right?

A Correct.

Q Would you interpret this one the same way then, as 65 percent is by weight, 75 percent is by volume?

A Or one of three different manufacturers.

Q Okay. Let me ask you a little bit more about these guys. Just by way of example, you manufactured different types of asbestos-containing gaskets. Here's one that's

just called 888. It's kind of black. Would you call that black?

A Dark gray.

Q Okay. Do you know how much asbestos that one had in it?

A 52.25 percent.

Q All right. I assume that's by weight?

A Correct.

Q And then 2112. Down here 2112, you, also, said that was 52.2 percent; correct?

A Correct.

Q By weight?

A Right.

Q Okay. And this one is made of long-fiber blue asbestos. That's the crocidolite gasket; correct?

A That's correct.

Q That's dark gray?

A That's what it looks like to me.

Q Is that what it always looked like?

A As far as I know.

Q Okay. You said that you tried to sell to Hoechst Celanese at some point, or Celanese it was called when you were doing it; right?

A Yes, and Hoechst Celanese. It changed.

Q But you weren't the guy who was trying to sell to

Spartanburg, or Salisbury, or anywhere in North or South Carolina, were you?

A I sure wasn't.

Q You were in Texas?

A That's correct.

Q And there's a Celanese plant there; right?

A There were numerous Celanese plants.

Q Yeah. And you were dealing with those guys at those plants. You have no personal knowledge about any sales one way or the other -- or another to North or South Carolina Celanese plants, besides the -- the post '77 search for records you did; right?

A That's correct.

Q You don't know who was responsible for -- at John Crane for selling to -- or trying to sell to the Celanese plants; right?

A I don't know off the top of my head. That's correct.

Q Just to be clear, you have no personal knowledge about any sales or lack of sales to Celanese Spartanburg all the way through '77; correct?

A I do not.

Q Okay. Now, when you retired, I have down that you were a senior VP; is that right?

A That's right.

Q And at that time, when you retired, there were about

2,000 employees in the U.S. at John Crane?
A In that neighborhood, yes.
Q Okay. Have you ever -- have you ever come to court in one of these cases in the many times that you've come and said, we accept responsibility or we accept part responsibility for this man's mesothelioma?
MR. TIVIN: Objection to form.
THE COURT: Sustained.
BY MR. PANATIER:
Q Let me ask you for this case, sir. Does John Crane accept that it played a role in the development of Mr. Seay's mesothelioma?
MR. TIVIN: Objection to form.
THE COURT: Let me see y'all up here for one second.
(WHEREUPON, a bench conference was held.)
BY MR. PANATIER:
Q Sir, you testified in your deposition that you do not dispute anything that Mr. Seay testified to; correct?
A I can't think of anything.
Q Okay. The man knew what his job was; right?
A I believe he did.
Q Just like you knew what your job was; right?
A I thought so.
Q Okay. When exactly did John Crane destroy all their sales documents pre '77?

MR. TIVIN: Objection to form. Argumentative.

THE COURT: Sustained.

BY MR. PANATIER:

Q John Crane destroyed their sales documents at a certain point; correct?

A We have sales documents beginning in 1977. We have nothing before 1977. The reason for that is we had a document retention policy. We kept paper three years. We had no computers in those days. And there was no way for us to keep the mountains of paper we would have had to keep to keep the stuff forever. So we kept stuff for three years so we'd have time to collect our money, pay our taxes, and do all those kinds of things.

In 1980, we were involved in our first lawsuit that had to do with asbestos. So in 1980, we had documents back to 1977. And because we'd been sued, we decided we'd better keep everything from now on, the sales of asbestos-containing products. And that's what we did. So today, we have documents from 1977 to 1980.

So we didn't man-up and destroy all our documents. We destroyed them every year, everything that was more than three years old. We discarded them because there was no way to keep all of that stuff. It was too much paper.

Q Let me make sure I understand. Is it your testimony that John Crane, the second they were first sued in

asbestos litigation, they stopped destroying their documents?

MR. TIVIN: Objection to form. Argumentative.

MR. PANATIER: Your Honor, he just gave a narrative about their policy. I'm making sure I understand it.

THE COURT: All right. Can you rephrase it?

MR. PANATIER: Sure.

BY MR. PANATIER:

Q To be clear, you said you stopped destroying documents once you were sued in asbestos litigation; right?

A We stopped discarding anything to do with asbestos sales. We always discarded things that were more than three years old. That was our policy. It's not an uncommon policy in those days, I might add.

Q Mr. Tivin asked you about the condition of the workers at the John Crane plant in Morton Grove, Illinois; right?

A Right.

Q And he asked you whether or not you had been cited by OSHA, and all those types of questions. The truth is that, at least, six of your employees have claimed that they got asbestos-related diseases by virtue of working there; correct?

MR. TIVIN: Objection to form.

Can we approach?

THE COURT: All right.

(WHEREUPON, a bench conference was held.)

BY MR. PANATIER:

Q Sir, you said that the company, John Crane, was aware of the workers' compensation laws in the State of Illinois; correct?

A Correct.

Q And, in fact, let me give this to you just so you can reference it if it's not big enough up there. But I've shown you this document before at deposition; correct?

A I'll take your word for it. I don't remember it.

Q Okay. Can you see here? This is laws of Illinois, 59th general session.

A Yes.

Q All right. If we go -- it says at the top, This Act shall be known and may be cited as the Health and Safety Act. You can see it's approved March 16th, 1936; right?

A (There was no response.)

Q Down at the bottom.

A Correct.

Q Okay. And, in fact, then it lists -- has a section for occupational diseases; true?

A Yes.

Q Okay. Now, I'm not going to ask you to go through

this whole thing. But you know that silicosis and asbestosis were both identified as occupational diseases in the state of Illinois in 1936; true?

A Among many others.

Q And John Crane was someone who -- I think you represented, in your opinion, to be a reasonable employer would have known about this statute; correct?

A We did know of the statute. And we had insurance because of the statute.

Q So if you knew about the statute in '36 that identified asbestosis as an occupational disease, how can you say that John Crane only knew about asbestos hazards in 1970?

MR. TIVIN: Objection to form.

THE COURT: Overruled.

THE WITNESS: We knew there was an act. And the act required that we have compensation -- workers' compensation insurance for our employees, which we did.

Did we know every word of the act? Apparently not. But we did comply with the act.

BY MR. PANATIER:

Q So you're saying you knew about the act, you didn't read the act. Is that what you're saying?

A I didn't say that. I said the act required us to have insurance, and we did.

Q You know it has a scheme for how people are compensated if they get an occupational disease; right?
A Yes.
Q And just by way of example, right here it says -- it's got lots of different scenarios for how someone can be compensated. But it says, No compensation shall be payable for or on account of any occupational disease, unless disablement as herein defined occurs within one year after the last day of the last exposure to the hazards of the disease, except in cases of occupational disease caused by the inhalation of silica dust or asbestos dust.

So that right there tells you asbestos can cause an occupational disease; right?
A If you read it, yeah.
Q Well, sir, I'm asking you, I'm asking the company. Do you agree with that?
A Do I degree with what?
Q Okay. I'll state the question again. Do you agree that, just by virtue of reading that one paragraph, the company would understand that asbestos can cause an occupational disease?
A And I'm saying that the company knew of the act. The act required us to have workers' compensation insurance. And we had workers' compensation insurance. So anybody

who got any kind of injury that was covered, they were covered by our insurance. We didn't have to know every word of this act to be in compliance with the act.

Q Do you think it's reasonable for a company to read the laws that apply to it?

MR. TIVIN: Objection to form.

THE COURT: Overruled.

THE WITNESS: I think it's reasonable for a company to comply with the terms of the act. And we did.

BY MR. PANATIER:

Q How can you know whether or not you're complying if you don't read it?

A The requirement of the act was that we have insurance, and we did.

Q And how did you know that? By reading it or --

A I don't know how --

Q -- or taking a paragraph and reading that?

A I have no idea --

MR. TIVIN: Objection to the form.

THE COURT: Overruled.

BY MR. PANATIER:

Q You can see here. In fact, it goes on, The amount of compensation which shall be paid to the employee for disability from an occupational disease not resulting in death shall be in the case of silicosis, silicosis

complicated with tuberculosis, or asbestosis, or asbestosis complicated with tuberculosis. Again, it's clear that asbestosis is recognized as an occupational disease in the state where John Crane had its headquarters in 1936; correct?

A According to this act, it was.

Q You're familiar with the Illinois Labor Bulletin from 1943; right?

A I've seen it.

Q In fact, you saw it two months ago in that case in New York; right?

A Possibly.

Q Okay. This is -- you can see it's the Illinois Labor Bulletin. And it's put out February 28th, 1943, by the Illinois Department of Labor; correct?

A Correct.

Q And here in this article, they're talking about wartime operations because this is '43. Wartime operations emphasize industrial hygiene problems of asbestos industry. Now, you guys made 500 distinct asbestos products. You were part of the asbestos industry; correct?

A That's not what I would define us. We were part of the packing industry.

Q Okay. How many asbestos products would you have to

make before you would consider yourself to be a part of the asbestos industry?

A My definition of the asbestos industry would be the people who mined it, and milled it, and supplied raw asbestos to other people.

Q So even though you used raw asbestos in your operations and made asbestos products, you're not part of the asbestos industry?

A No. We were part of the packing industry in those days.

Q Okay. Here's what this says put out by State of Illinois, In order to appreciate the importance of preventative measures in this industry, we will consider briefly the disease asbestosis. Now, this '43 is seven years after '36, right?

A Yes.

Q Silicosis has been known as a serious lung disease for many years, but few people have thought of asbestosis as an even worse disease. What makes it worse is its insidious character, the fact that so much harm can be done before X-ray or other evidence can be found, and that the disease is progressive. The lung condition continues to grow worse even when the worker has left the offending environment.

Now, if I get outside kind of your area of

understanding, if I get into industrial hygiene, let me know. But that just, basically, means that asbestosis is the type of disease that once a person is removed from the environment where they're exposed, they can still have progressive disease; right?

A You just got outside of my area of expertise.

Q And they, actually, talk about the manufacture of asbestos textiles. The principal products in this part of the industry are asbestos cloth, twine, tape, woven brake lining, and woven gaskets; right?

A It's what it says.

Q Now, during this period of time, John Crane was using raw asbestos to weave a ropelike product, that being packing; correct?

A We -- I wouldn't say weave. We braided it.

Q Okay. It's a braided product made of raw asbestos; correct?

A We had one style out of the 500 that would have been called pure asbestos, but it wasn't raw by that time. It had been manufactured into something by us.

All of our asbestos-containing products were encapsulated, except for that one, that's not involved in this case. And they had greases and oils, various kinds of binders in them to encapsulate that asbestos. They weren't raw asbestos by the time we sold them. Most of

them contained 50 percent or less asbestos. And the other 50 percent was the binders, the things that held it together.

Q I was just asking whether or not you guys were braiding asbestos-containing packing. You were; right?

A You said "raw."

Q Okay. Well, you put raw asbestos into it.

A But when it went to the customer, to the consumer, it was no longer raw asbestos.

Q Simple question. Does raw asbestos go into the packing?

A But that's not what we sell to the customers.

Q Okay. I get it. I get it. It turns into something else when it's sold. But for purposes of the asbestos industry and this document from '43, John Crane was putting raw asbestos into a product that they were then manufacturing; correct?

A It's kind of a redundant statement. We bought raw asbestos. We bought asbestos yarn. And we manufactured it into packing. And that packing was some percent of asbestos and some percent of other things. Most of it's 50 percent or less asbestos, and 50 percent or more some binders, rubber, graphite, oil, grease, things like that.

Q Okay. Anything else?

A It depends on you, I guess.

Q I'm not sure it does.

Now, one of the raw -- the raw suppliers of asbestos to John Crane was Johns Manville; correct?

A Correct.

Q All right. Last paragraph, The industrial hygiene division welcomes discussion of the material present -- presented in this article by those interested in the prevention and elimination of asbestosis. You don't dispute that asbestosis was already regarded as a disease that could be prevented in the '30s and '40s, do you?

A Again, you're out of my area of expertise.

Q I'm only asking what the company knows. And if I'm outside of that, that's fine.

You guys sold Teflon gaskets in the '60s and '70s; right?

A Yes.

Q Teflon doesn't have asbestos in it; right?

A No, it doesn't.

Q Teflon could be used in caustic lines; right?

A It could.

Q Okay.

A Depending on the temperature.

Q Yeah. Now, from 1931 to 1985, John Crane sold asbestos-containing gaskets to the chemical industry; correct?

A Yes.
Q The gaskets all had the logo on it, the part number, the model number; right?
A Correct.
Q And the name was repeated kind of repetitively, the name, and logo, and part number, across the sheet; right?
A That's correct.
Q Okay. And throughout the entire time that Mr. Seay was working, there was never a warning on that product; correct?
A That's correct.
Q There was never a warning on any of the boxes that it came in; right?
A That's correct.
Q There was no communication from John Crane to any distributors or purchasers that, ultimately, used it of any asbestos hazards; correct?
A That's correct.
Q Okay. Has John Crane ever analyzed how much it would have cost to print an asbestos warning on the sheet material itself?
A Not to my knowledge.
Q Okay. Now, you were asked about power wire brushes, and you said that in the -- when was it? In the '60s, you put out a little pamphlet that said you don't want to

power wire brush?
A No. It wasn't a little pamphlet. It was a book about 2 inches thick. And that was in that book.
Q Okay. Did Mr. Seay testify he ever saw such a book?
A Not that I know of, no.
Q Did John Crane ever place an admonition, Do not grind off old gaskets, on its old gasket material or packaging?
A No.
Q Let's chat a little bit more about John Crane's knowledge. We heard from Mr. McKillop. And I just -- I think you've testified to this, too. John Crane -- Frank Payne, the president of John Crane, was a member of the American Society of Mechanical Engineers; right?
A That's correct.
Q From 1920 to the early '50s; correct?
A That's probable, yeah.
Q Okay. And you know they put out a publication called Mechanical Engineering; right?
A Mechanical Engineering?
Q Uh-huh.
A Yes.
Q It was a -- like a magazine; fair?
A Yes.
Q Okay. Allegedly, we will see it soon. There it is. Okay. So you can see that's the issue of Mechanical

Engineering from October 1933; right?
A Correct.
Q And I've asked you about these before. I'm not going to spend a lot of time on it. But you know that this one had a article entitled, The Control of Industrial Dust: The Problem of Local Exhaust in General -- right? You've seen that?
A Yes.
Q Okay. And one of the things they said here in February of 1933 is, It is well known that the inhalation of certain industrial dusts is an important factor in causing occupational diseases. Dusts such as granite has been shown to produce a fibrosis of the lungs, which is often associated with tuberculosis, while other dusts, such as asbestos, cement, slate, et cetera, are stated to produce a varying degree of fibrosis; right? You've seen that; true?
A I believe I have.
Q '33 is three years before the Illinois statute; correct, that we already talked about?
A Correct.
Q Okay. Let me show you another one. This is from February of 1935, another issue of Mechanical Engineering from ASME, the American Society of Mechanical Engineers, that Mr. Payne was a member of. This is an article

called, The Administration of Occupational Disease Control. And I want to ask you about this excerpt. I've got a few questions.

It says, The Role of Industry in Control of Occupational Disease. In any program for the control of occupational disease, the cooperation of industry is essential. Does John Crane agree with that?

A Yes.

Q Okay. Possibly one of the principal reasons why industry has been less willing in the past to correct an environmental hazard -- an environment hazardous to health is that little attempt has been made to provide it with definite data. Such changes as have been effected were largely accomplished as the result of arbitrary orders from the law enforcing agency. And no serious attempt had been made to establish the exact nature and extent of the conditions.

So first question. In the 1930s, '40s, or '50s, did John Crane endeavor to test its asbestos-containing gaskets in a field scenario where someone had an old gasket that had been baked onto a flange from heat or pressure, and they measured the work as someone removed it?

A No.

Q Okay. Next it goes on, Industry is penalized through

compensation payments if its environment causes occupational diseases and if it can be definitely shown that a health hazard exists, realizes that it is a matter of good business to control the condition causing it. But no industry will cooperate to the extent of changing its processes, installing new equipment, substituting new materials, et cetera, on the mere opinion of a lay inspector that a hazard exists. I'm going to stop there.

For the asbestos products that John Crane sold, at some point, did they stop selling them.

A Yes.

Q Okay. When was that?

A 1985.

Q 1985. And for the asbestos that was included in those products, did those products just completely stop being sold, or was there a substitute material that John Crane put in instead of asbestos?

A No. Those products were discontinued.

Q Okay. So they were able to find, from their already existing line of products, substitutes that would do the job of the asbestos materials that were taken off the shelves?

A The fact is, there's never been anything discovered that would take the place of asbestos in our products. There are other products you can use. They're not as

efficient. They don't work as well. They don't last as long. They don't prevent leakage as well. And they're more expensive. So there are other products you can use, but they're not as good and they cost more.

Q Okay. So what I -- back to my point. John Crane was able to recommend other products from its own product line for the products it had previously recommended that contained asbestos; fair?

MR. TIVIN: Objection. Post-exposure. Relevance.

THE COURT: Overruled.

THE WITNESS: The fact is, when John Crane began in 1917, none of the products contained asbestos. 1929 to '30, we started using some asbestos. In 1985, we stopped using asbestos. So -- and we didn't go out of the packing business.

So the fact is, all through those years, we had both kinds of products, asbestos-containing and nonasbestos. Our customers decided which they wanted to use, based on their idea of what was best for them. There was never a time when we didn't have both. Some worked better than others. And the customers decided which ones they wanted to use.

BY MR. PANATIER:

Q So it would be the case then for any industrial application, even if the asbestos may have worked better

for some of them, John Crane always had another product that would have done the job; correct?

A Not as well.

Q Right. But they had one that could do the job. Maybe not as long; right?

A It might not last as long. It might not seal as well, prevent leakage as well. Again, the customers made those decisions based on what they wanted to use.

Q John Crane is still in business, though; right?

A It certainly is.

Q Okay. Now, we have the Internet. I tried to get on Google earlier. We didn't make that happen. But we have the Internet; right?

A I do.

Q Right. You have the Internet. So if -- nowadays, if you want to look something up -- right -- if you want to research something, you can start on the Internet, and you can learn a lot pretty fast; fair?

A All that glitters is not gold. Everything you read on the Internet is not necessarily true.

Q Well, I disagree with that. I think it pretty much is true.

A Do you?

Q No. But back in the '40s, '50s, '60s, you might use a dictionary to look up a word; right?

A Yes, I did, once or twice.
Q Okay. And you might use an encyclopedia if you wanted to learn about a general subject; right?
A You might.
Q You've heard of Encyclopaedia Britannica?
A Yes.
Q Okay. I have one here. I went on the Internet, got it from eBay, Encyclopaedia Britannica. And I want to show you this. This one is, I think, from the '50s. Let me see. Yeah.
MR. TIVIN: Objection.
THE COURT: All right.
MR. PANATIER: This is state of the art, Your Honor.
THE COURT: All right. Let's -- I'm going to ask the jury to go out. Just to give everybody a break. It's a good time for that.
Don't talk about the case. Continue to keep an open mind.
(WHEREUPON, the jury was excused from open court at approximately 2:18 p.m.)
THE COURT: Mr. Tivin.
MR. TIVIN: Objection to form. Relevance as to what's in the encyclopedia. I mean, I don't even know how to begin to formulate another objection besides form, relevance, foundation. And I'll let -- we're not trying

to turn this into --

THE COURT: So he's here for -- a corporate representative?

MR. PANATIER: Yes.

THE COURT: Which goes to, in your opinion, Mr. Panatier, state-of-the-art knowledge?

MR. PANATIER: Of course. What the company knew or should have known, which I have to -- which I have to show. And then, also, they're held to a standard of an expert. And so I'm starting pretty basic. I'm going straight to an encyclopedia. So this is general state of the art.

And when we did the McKillop deposition, remember, we used a Newsweek article, you know. This type of information is -- I have to show what was known or knowable for John Crane. And so an encyclopedia seems like a good place to start.

THE COURT: Well, you've been showing him a number of articles, and there's been no objection. I think here the objection was hearsay.

So why is it not hearsay?

MR. PANATIER: Oh, well, it's not hearsay because it goes to notice. It's not being offered for the truth of the matter asserted. It goes -- it simply goes to notice, Your Honor.

MR. TIVIN: First of all -- sorry, Your Honor. Mark Tivin on behalf of John Crane.

The issue in this -- and I don't know if you want Mr. Springs to step outside for this argument or not.

THE COURT: That's probably wise.

If you don't mind, sir. You can probably use a break yourself.

THE WITNESS: Thank you.

THE COURT: Thank you.

(WHEREUPON, Mr. George Springs exited the courtroom.)

MR. TIVIN: There are several issues --

THE COURT: Yes, sir.

MR. TIVIN: -- in this case. Number one, it must be shown that this is the type of material that should have been relied upon by a company. There has to be some foundation showing a nexus, number one. That isn't going on here.

It doesn't go to notice because the issue in this case is whether the gaskets that were sold by John Crane were unreasonably dangerous, or if they knew or should have known that the gaskets that were sold by John Crane would release asbestos. It's whether the gaskets are unreasonably dangerous.

Showing someone an encyclopedia about asbestos doesn't put John Crane on notice as to whether their

gaskets would release any fibers, or anything at all. The issue in this case is regarding gaskets. And it's speculative to say that just because the Encyclopaedia Britannica says that -- has something about asbestos that has any nexus or link to what John Crane's duty in this case is.

And the duty in this case is whether their gaskets -- whether they knew or should have known that their gaskets release fibers in such a way that could cause disease.

And the -- talking about the physical characteristics of asbestos and asbestos is bad, this is not a raw fiber case. If I was selling raw fiber, then I believe this may, under some circumstances, be relevant without trying to turn this Court -- without turning this into a sideshow about these types of things. But the fact of the matter is, this is not a raw asbestos case. This is a case about gaskets.

Now, the -- the -- he's already questioned one witness about Newsweek. And so, if anything, this is, also -- and that witness was, also, the corporate representative of John Crane. This is getting to be cumulative testimony, if you want to just pull out every lay -- something that isn't in the scientific literature.

THE COURT: I don't know about -- I don't know if the Encyclopaedia Britannica could ever be cumulative of

Newsweek. The other way around maybe. But --

MR. TIVIN: He's already asked it. He's already made his point. There's no foundation. It's hearsay. It's speculative.

And the fact that he's saying it's going for notice -- if it's going for notice, then it should be like this has something with asbestos in it, not publishing any of it to the jury and not -- because then you are using it for the truth of the matter asserted, that asbestos is dangerous.

If it's notice, then it should be, Is there asbestos in here? Yes, no, I don't know. And then move on, not going into the particulars of the article. That shows notice.

THE COURT: Yes, sir.

MR. PANATIER: I'm sorry. I'm not aware of any legal authority for any of that argument. The -- I have to show what was known or knowable to this company. And I am doing that. I'm showing that there was available information in a fairly easy-to-access resource, an Encyclopaedia Britannica, pertaining to the relationship of asbestos and cancer.

They can cross on it and say, well, they didn't say gaskets. They can do that. But it is absolutely relevant to introduce evidence that the raw material that made up

either 52.25 percent or 85 percent of the product was causing disease in people.

Now, they can say it wasn't a final product, or whatever. That's all -- that's all argument. And that's all a fact issue. But the very fact of asbestos dangers and whether or not that was available is certainly fodder for cross in a case where I bear the burden of proof on what was known or knowable to this company.

THE COURT: Well, didn't he already say that they didn't know anything about it until 1970?

MR. TIVIN: Yeah.

THE COURT: And this Britannica is --

MR. PANATIER: '54.

THE COURT: -- 1954.

MR. TIVIN: But if it goes to notice, it doesn't give -- he shouldn't be -- he should be asking the question, Have you read this, not publishing it to the jury. If that is what goes to notice, is it in here?

Publishing the excerpts to the jury is hearsay. Because then you are using it to prove that -- the subject matter in the article. You're using it to prove that asbestos is dangerous by saying Encyclopaedia Britannica says it is.

It goes well beyond what -- they say they're offering it for notice. Offering it for notice is, does this

exist, not does this exist, and let me read the entire thing to you. Because then you're crossing the line from what I believe is impermissible notice testimony to impermissible hearsay testimony.

THE COURT: So the notice -- in the past in these cases when I've allowed the notice testimony, it's usually these journal articles of societies that the defendant was a member of.

MR. TIVIN: And we haven't objected to that testimony.

THE COURT: Yeah. So, I mean, this is a little different because it's so general.

MR. PANATIER: Yeah. That's -- well, that's, actually, a separate -- that would be a separate thing. I would argue that the exception to hearsay for those would be a learned treatise. It could, also, be that it goes to notice and it's nonhearsay.

But this is -- there is no -- there is no legal restriction. There is no foundation for an objection to what type of information was known or knowable. There is nothing. There's no precedent that they have given to this Court that says there should be some restriction on whether it -- whether it was known through an employee statute, whether it was known from a publication of the -- of the state itself -- right -- the International -- the

Illinois Labor Bulletin, whether it was the Mechanical Engineering, or whether it was an encyclopedia. That's all -- that's all cross-examination.

I just don't think there's any legal basis they've cited to the Court to exclude that. It is absolutely a notice issue. And it is nonhearsay for that reason.

MR. TIVIN: And we can say and we could -- if you're going to say that this is proper notice, which we dispute --

THE COURT: Right.

MR. TIVIN: -- he can always say, Are you aware of what this says? Does it mention asbestos in it?

Reading the article is hearsay. That doesn't go to notice. Because notice is, Did you know about it? Should you know about it?

That's what notice is. Notice isn't let's read the whole article and then pretend like we're not trying to prove the truth of what the article says is true.

MR. PANATIER: The only way I can prove what was known or should have been known --

THE COURT: Is to go into --

MR. PANATIER: -- is to, actually, show the jury what it is.

THE COURT: Right.

MR. PANATIER: -- if I can't show them, then I can't

meet my burden of proof.

MR. TIVIN: And he's done that in numerous ways with numerous articles. And this is cumulative as well, as our previously stated --

THE COURT: Yeah. I understand your objection.

I think I would overrule it, based on the notice theory that it's not hearsay under the rules as defined. Because it's being offered for the purpose of notice and, as the Plaintiff has suggested, it -- that can be explained on redirect.

MR. TIVIN: Then I would ask this Court for some sort of instruction to the jury that they are not to consider these articles for the truth, that these are merely articles to put notice in. It's not to say that anything contained in this article is true, or something to that -- you know, something to that effect.

THE COURT: Is there any objection to that?

MR. PANATIER: My only objection would be that I just consulted the rules on a whim. And it would, also -- it would, actually, come in as an ancient document under Rule 803.16 as an exception to hearsay.

So if the Court found it was hearsay and not just notice, since it's older than 20 years old, it can, also, come in for the truth of the matter asserted.

So I don't think that an instruction would be

warranted on that basis. Because if it comes in for notice, perhaps, but it, also, comes in as an ancient document. And it's 1954. It's 61 years old.

THE COURT: Well, I'll be glad to give that instruction. You're not putting it in. You're just --

MR. PANATIER: No, no.

THE COURT: You're just showing it; right?

MR. PANATIER: Yeah. I'm just showing it.

THE COURT: Okay.

MR. TIVIN: Thank you, Your Honor.

MR. YOUNG: Judge, is there any chance that we could take just a couple of minutes?

THE COURT: Yeah. We're going to. Yeah, yeah.

MR. YOUNG: Okay.

THE COURT: We'll just take about five minutes, 10 maybe.

(WHEREUPON, a break was taken.)

THE COURT: Anything else before we bring the jury in?

(WHEREUPON, there was no response.)

THE COURT: Okay. You may bring them on in, please, Ms. Camp.

(WHEREUPON, the jury came into open court at approximately 2:39 p.m.)

THE COURT: Yes, sir. You can continue, Mr. Panatier.

MR. PANATIER: Thank you, Your Honor.

MR. TIVIN: Your Honor, may I have a continuing objection so I don't have to interrupt?

THE COURT: Yes, sir.

MR. TIVIN: Thank you.

CONTINUED CROSS-EXAMINATION

BY MR. PANATIER:

Q Mr. Springs, we were talking about the Encyclopaedia Britannica. This one's from '54. I was just starting to get to that page, I think. Did you own a set of Encyclopaedia Britannicas as a young person? Not that you're not plenty young right now.

A I have been younger. I don't remember having a set. I had a set for my kids.

Q Okay.

A But I don't think I had a set.

Q Can you see this one is dated 1954, sir?

A Yes.

Q And I just want to turn to just one page in here. Can you see there's a section on top under, Cancer, Occupational Cancers?

A Yes, sir.

Q Okay. And if you -- if we zoom in here, do you see where it says right below my little flag, Cancers of the respiratory tract involving the mucosa of the nose, the

antral cavities, the larynx, the bronchi, and lungs occur in workers who are exposed to the inhalation of chrome salts, asbestos dust, and nickel carbonyl. Do you see that?

A I do.

Q That doesn't say gaskets, does it? But it says asbestos dust; true?

A That's what it says.

Q All right. Now, you said Johns Manville was one of the suppliers of asbestos to John Crane; correct?

A Correct.

Q Let me show you this document. It's an October 1st, 1968, letter from Johns Manville. Do you see that?

A To whom is it -- who is it to?

Q Well, look at who it's from -- from first. It's from the sales manager; right?

A Right.

Q Okay. And -- well, I'm not going to read it to you because I don't want to read it in. But I want you to assume this was going to their -- to their different customers. Okay. And it, actually, doesn't matter who it's going to. Because what he says is they were putting a warning on it in '68; right?

A That's what it says, yeah.

Q Okay. On the raw bags of asbestos; right?

A Correct.

Q You can set that aside.

Now, at the very beginning in this case -- of this examination, I asked you about the Johnston case in Texas. And you turned to the jury, and you said, Well, I knew the man. And he never bought any asbestos from me. Do you remember that?

A Right.

Q And I asked whether you had sworn interrogatories in that case. Do you recall?

A Yes.

MR. TIVIN: Your Honor, I'm going to object. Because this is impeachment on a collateral matter, whether he answered interrogatories in another case. It's not being used to prove any matters in this case.

MR. PANATIER: He made a representation in that case that that man did not buy any gaskets from him, and that he was disputing the product ID in that case. And he suggested to the jury that the man didn't buy any, but I'm going to impeach him.

THE COURT: Okay. Overruled.

BY MR. PANATIER:

Q This is Page 93. I'll hand it to you so you can look at it.

Sir, do you see that the question you were asked was,

I want you to read -- I want to read you a question from the sworn interrogatories you verified in this case, the Johnston case. If you want to see them, you let me know.

For Interrogatory Number two, for each product identified by the plaintiff -- in that case, it was Jerry Johnston -- in written discovery responses or sworn testimony as to any asbestos-containing product mined, manufactured, marketed, produced, researched, sold, distributed or patented by the defendant -- that would be John Crane -- at any time, were such products ever further distributed, marketed, packaged, labeled, or sold by companies or individuals other than defendant, John Crane.

And you can see, I said, Now, correct me if I'm wrong. What it's asking is for every product identified by Mr. Johnston, were those products ever further distributed, marketed, or sold; fair?

And you said, Fair.

Correct, sir.

A Correct.

Q Okay. And your answer was -- that you swore to, was, Defendant had a network of distributors of its products.

That's the first sentence; correct?

A Correct.

Q Mr. Johnston claims exposure at Dow Chemical in Jefferson Lake. John Crane sold products directly to Dow

Chemical and had a branch office in Freeport, Texas, during part of the relevant time period related to this suit; correct?

And you said, If you say so, yeah.

Correct?

MR. TIVIN: Objection to relevance.

THE COURT: Overruled.

THE WITNESS: Yes, sir.

BY MR. PANATIER:

Q And you -- and in that case, it appears you verified and swore to those interrogatory answers; correct?

A Correct.

Q Okay. I'm sorry about my throat.

You can set that aside. I'm almost done.

Let's go back to these MSD sheets. Now, a material safety data sheet is a sheet that started to be required in the early '80s; correct?

A Yes.

Q And to be clear, John Crane didn't put out any MSD sheets prior to 1981; right?

A That's correct.

Q Okay. And this is signed by Mr. Wisniewski, who is a John Crane employee in -- on tax day in 1981?

MR. TIVIN: Your Honor, may I have a continuing objection to this?

THE COURT: Yes, sir.

THE WITNESS: He was.

BY MR. PANATIER:

Q Correct. Okay. And that is for the product that is 2150, which we've talked about; correct?

A Correct.

Q Chrysotile sheet gasket?

A Correct.

Q This one is for Style 333, chrysotile sheet gasket; right?

A Correct.

Q What's the difference between these two sheet gaskets, if any?

A Basically, the binders that are in them to hold the asbestos together.

Q Okay. They both have approximately the same amount of asbestos in them. Whether you're talking about weight or volume, they were approximately the same; right?

A Correct.

Q Now, the one for 333, under, Health hazard data -- John Crane wrote this; right?

A Correct.

Q It says, Chronic exposure to asbestos dust can lead to asbestosis. Seek medical attention; correct?

A Correct.

Q Now, basically, the same product for 2150, health hazard data, chronic asbestosis, and cancer; correct?
A Correct.
Q But those -- those are different answers; right?
A They were different answers.
Q One -- one just says asbestosis, one says asbestosis and cancer; correct?
A Correct.
Q Okay. Did you know Mr. Wisniewski?
A I do.
Q Okay. Do you know his business?
MR. TIVIN: Objection to form. I don't know --
THE COURT: Sustained.
BY MR. PANATIER:
A Okay. I'm sorry. That was a bad question.
Did you know him to the extent you knew him to be a truthful person?
MR. TIVIN: Objection to relevance.
THE COURT: Sustained.
BY MR. PANATIER:
Q Okay. A different question. Do you have any -- any reason as the company -- not as George Springs, because you're here as John Crane -- as the company to dispute what he wrote on these MSD sheets?
A I have no way to dispute it.

Q Okay. And you could see here, sir, under, Special precautions, that one is 2150 and this one is 333. Do you see under, Special precautions, for both of them, it says, Proper labels required; right?

A Yes. And that's referring to disposing of the waste.

Q I'm not there yet. I know that's your answer, though. It cites a section of the Code of Federal Regulations 1910.1001, which you know to be OSHA; correct?

A Correct.

Q And you know that to be the OSHA labeling requirement; correct?

A Yes.

Q Okay. Now, this is an MSDS sheet for a product; correct --

A Correct.

Q -- called 333? And this one is an MSDS sheet for a product called the 2150; right?

A Correct.

Q And on the MSDS sheet for the product, it says Proper labels required, on both; right?

A Correct.

Q Correct?

A Correct.

Q Okay. Now, you just told me that that means proper label required on the waste; right?

A Correct.
Q Well, sir, do you see here that there's another section called, Waste Disposal, and it says it has to be properly labeled?
A Yes.
Q So your testimony is, they're not saying the product has to be properly labeled, but just the waste. And they said it twice; is that fair?
A That's fair.
Q And they did it again here. Under, Special precautions for waste, they say it has to be properly labeled; right?
A Correct.
Q And then under, Special precautions, on the MSD sheet for the product, it says, Proper labels; right?
A Precautions to be taken when handling and storing, yes.
Q Okay. Does that say "waste"?
A You handle and you store waste.
Q Does that say "waste"? That's the only question I have.
A It doesn't say "waste," but that's what it means.
Q Well, let me ask you about your sworn testimony that you gave in a case called Oney [phonetic]. That was in Virginia. That was in April of 2007.

And with reference to this MSD sheet, you were asked this question, The proper label -- here it is --

MR. TIVIN: Your Honor, I object to putting the transcript on the --

THE COURT: Sustained.

BY MR. PANATIER:

Q Okay. Sir, you were asked this question, The proper label they are referring to here is the labels on the asbestos products; Isn't that correct? Didn't you just read that?

And your answer was, Yes, sir.

Do you dispute that you swore to that testimony?

A May I see that?

Q Yeah. Of course.

A Yes. And that's pretty much what I said during this testimony, that there was no requirement for our products to be labeled.

Q Okay. That -- first of all, that's a -- kind of an answer to a question I didn't ask.

My question was, did you swear in 2007 to the question, the proper label they're referring to here is labels on asbestos products; isn't that correct? Didn't you just read that?

And you said, Yes, sir; correct?

A Yes. But on the page before that, the discussion was

that there was a label requirement by OSHA if certain criteria were met. And our products were exempted from that requirement.

Q Well, that's the company's opinion. That's your opinion; correct?

A That's what I'm here for.

Q Right. That's what you're telling the jury is they were exempted from labeling; right?

A Correct.

Q Did you ever have responsibility for filling out MSD sheets?

A No.

Q Because what Mr. Wisniewski wrote was proper labels were required. And you testified to that, that that was talking about label on the product; correct?

A That's not what I was testifying to, no.

Q Okay. Even though it -- that's the exact question you were asked?

MR. TIVIN: Objection to the form.

BY MR. PANATIER:

Q Right?

THE COURT: Sustained.

BY MR. PANATIER:

Q Let's just be real clear. Did I read the question and answer wrong?

MR. TIVIN: Objection to form.

THE COURT: Overruled.

THE WITNESS: But you didn't read what came before it.

BY MR. PANATIER:

Q Right. What came before it was your opinion that you told the jury, Our gaskets and packing were exempted from labeling; correct?

MR. TIVIN: Objection to the form.

THE COURT: Overruled.

THE WITNESS: The discussion before it had to do with the OSHA label. And the discussion was that our products were exempted from having an OSHA label. And then we started talking about what the label was all about. I don't believe there's any inconsistency in what I said then and what I'm saying now.

BY MR. PANATIER:

Q Okay. But to be real clear, your sworn testimony, your under-oath testimony to the jury is that every time Mr. Wisniewski wrote that a proper label was required under OSHA, he's talking about waste, not the product. Is that your testimony today?

A That's what the statute says, yes.

Q Well, let's look at the statute. First of all, let me -- let's be clear. John Crane never tested any of its

asbestos products, gaskets or packing, until it got into litigation; fair?

MR. TIVIN: Objection. Asked and answered.

THE COURT: Overruled.

THE WITNESS: That's correct.

BY MR. PANATIER:

Q Okay. You hired people like Mr. Toca and another man named Mr. Mattison, right?

A Yes.

Q So here's the warning requirement: Caution labels. Labeling. Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products; right? The word "products" does appear; correct, sir?

A Correct.

Q -- containing asbestos fibers or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material. Now, if we stop there, that's gaskets; right? Because gaskets have been modified by a bonder; right?

A Packings, too.

Q Right. But you have to keep reading. Such that -- so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no

airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph B of this section will be released.

Now, first of all, did I read that right?

A Yes, you did.

Q And, secondly, what it is saying -- and we've been over this before -- is, if it's modified by a binder or a -- some sort of material such that, in the foreseeable use of the product, fibers will not escape in excess of the limits, you don't have to put a label on it; right?

A Correct.

Q Okay. But you guys didn't test the product at this time. You didn't test it at any time pre-1980, did you?

A No. But when we did test it, the tests proved that we were right. It did not release fibers in that degree.

Q I'm sorry. You're talking about the tests paid for by John Crane, and Dr. Toca and Dr. Mattison?

A Those tests, yes.

Q I think I have one more -- one more thing. You've seen this document; right? The 60 Years of Progress Through the Eyes of the Stuffing Box; right?

A Yes, I have.

Q The stuffing Box is -- what is that?

A It was, for many years, an in-house magazine that our company produced for our employees.

Q All right. In this one -- I think you and I have put together -- 60th anniversary would mean this came out in '77; fair?
A Correct.
Q And I just want to show you a page on here. John Crane had the resources to do extensive product testing and did do extensive product testing; right?
A We tested our products to make sure they would work as we advertised they would work.
Q And this is one of the testing labs that John Crane had; right?
A Correct.
Q If John Crane had wanted to, they could have conducted tests for asbestos fiber release. They did not, however; correct?
MR. TIVIN: Objection. Speculation.
THE COURT: Overruled.
THE WITNESS: I really don't know if we could have done that or not with the labs we had. I don't know what kind of equipment it takes, what kind of expertise, what kind of scientists. I don't know what it takes. And I don't know if what we had matched up with what it takes.
BY MR. PANATIER:
Q The first question is, they had the monetary resources if they had wanted to purchase the equipment;

correct?

MR. TIVIN: Objection. Financial.

THE COURT: Overruled.

THE WITNESS: Again, I don't know what it took or what it would have taken. So I don't know if they had the financial resources to do it or not.

BY MR. PANATIER:

Q They had the financial resources once they got sued, didn't they?

MR. TIVIN: Objection.

THE COURT: Overruled -- excuse me. I'll sustain that objection.

MR. PANATIER: No further questions.

Thank you, sir.

MR. TIVIN: What did you say?

MR. PANATIER: No further questions.

MR. TIVIN: May it please the Court.

THE COURT: Yes, Mr. Tivin.

REDIRECT EXAMINATION

BY MR. TIVIN:

Q In all the articles that you were shown regarding old articles, did any of them talk about gaskets?

A No.

Q And is that the product that John Crane sold that's at issue in this case?

A The gaskets?
Q (Mr. Tivin nodded.)
A Yes.
Q You were asked about the MSD sheets. Is it your impression that the MSD sheets are required to list all the ingredients of a product?
A All hazardous ingredients.
Q And then you're supposed to put -- was the -- asbestosis and cancer, was that referring to gaskets or was that referring to asbestos, if you know?
A Those comments on the second page are comments referring to whatever hazardous constituents of the products are. It's not talking about the product that's named on the front. It's talking about the constituents of the product that were hazardous.
Q You were asked if you ever were caught speeding. Do you remember that?
A Yes.
Q Do you have -- do you have auto insurance?
A I do.
Q And the law requires that?
A It does.
Q Did you ever sit down and read every portion of the law that requires you to have auto insurance?
A No.

MR. TIVIN: Nothing further.

RECROSS-EXAMINATION

BY MR. PANATIER:

Q You read the speed limit signs; right?

A To the degree that I can, yes. I'm getting old.

MR. PANATIER: No further questions.

THE COURT: All right. Thank you, sir.

MR. PANATIER: Can we approach?

THE COURT: Yes. Come on.

(WHEREUPON, a bench conference was held.)

THE COURT: Okay. So here's the plan. They have a video of some testimony. There's some logistical issues with some of the editing. They're trying to condense it to what they both -- or all three have agreed to play.

They need about 10 minutes to get it queued up. It'll last about an hour. And then we'll break for the day and come back in the morning. Okay.

So just take about a 10-minute break. Don't talk about the case.

(WHEREUPON, the jury was excused from open court at approximately 3:01 p.m.)

(WHEREUPON, a break was taken.)

MR. PANATIER: It turns out the direct is an hour and a half.

THE COURT: Okay.

MR. PANATIER: So it will fill the day.

I've tendered this to the other side. This is our proposed jury charge. This is Muldoon, plus premises. And that's --

MR. TIVIN: Did you put the one in there that says directed verdict should be entered on behalf of John Crane?

MR. PANATIER: Oh, yeah, yeah. I put that in here.

THE COURT: Now, this is y'all's proposal?

MR. PANATIER: That's our proposed.

THE COURT: Have you all seen it?

MR. YOUNG: Well --

MR. PANATIER: We just gave it to them, yeah.

THE COURT: All right. Well, the one I want to see is the one that emerges after y'all have had a chance to weigh in on it.

MR. PANATIER: We're going to do that.

MR. YOUNG: Judge, I think that the big issue is going to be the premises liability charge. Because there appears to be a lot of charges in just a general premises case. And then there's a lot of law where it's an independent contractor who's taken over the -- that section of the work site. And I think that's going to be the -- probably the big dispute for the charge.

THE COURT: Okay.

MR. YOUNG: Because I had been working on that just in case we were going to do it today.

MR. PANATIER: We're going to meet on it and see what we can hash out.

THE COURT: Great. Thank you.

All right. You can bring the jury on in.

Thank you.

(WHEREUPON, Court's Exhibit No. 8 was marked for identification and admitted into evidence.)

(WHEREUPON, the jury came into open court at approximately 3:21 p.m.)

THE COURT: All right. We're going to have the video deposition, I believe.

MR. TIVIN: May it please the Court.

For its next witness, John Crane will call Dr. James Crapo by video.

THE COURT: Okay.

MR. TIVIN: Today -- we'll only be completing the direct examination today. Then we'll finish it tomorrow.

THE COURT: This takes about an hour.

MR. PANATIER: An hour and a half.

RM. TIVIN: Hour and a half.

THE COURT: Okay.

(WHEREUPON, Court's Exhibit No. 8 was played in open court.)

MR. PANATIER: Your Honor, cross will be tomorrow.

MR. TIVIN: Your Honor, pursuant to an agreement with the Plaintiff, at this time we would offer Dr. Crapo as an expert in the area of pulmonary medicine, as well as the causation of pulmonary diseases, including asbestos-related diseases such as mesothelioma, lung cancer, asbestosis, or pleural plaques.

MR. PANATIER: And, Your Honor, I just included all of what would have been in my voir dire in cross-examination.

THE COURT: All right. Thank you.

We'll resume tomorrow morning at 9:15. Don't talk about the case. Continue to keep an open mind.

Thank you very much.

Don't do any outside investigation. Don't get on the Internet and search anything related to the case. Remember, you have to confine your decision to the evidence you hear in the courtroom.

(WHEREUPON, the jury was excused from open court at approximately 4:55 p.m.)

THE COURT: Okay. See you back at 9:15.

(WHEREUPON, the proceedings were concluded at approximately 4:56 p.m., to be reconvened on Wednesday, October 7, 2015.)

WEDNESDAY, OCTOBER 7, 2015

THE COURT: Yes, sir. Mr. Tivin.

MR. TIVIN: We're going to be calling Dr. Roggli, who's out in the hallway, first as a live witness this morning before -- we finished up the designations. And it looks like there's about 30 minutes left on the Crapo video that we'll play whenever. We'll finish that off.

It's come to our attention that there was a -- there might be a possible issue with Dr. Roggli's testimony. I didn't know. We intend on calling Dr. Roggli. We disclosed him a long time ago. And I informed Plaintiffs counsel that I was going to be eliciting testimony about John Crane from Dr. Roggli. And he indicated he may have some objection.

Based on Dr. Roggli's deposition, Dr. Roggli was a defense medical -- the defense medical witness. And he was deposed. When he was deposed, he said he didn't list every defendant that he was retained by.

But he was -- but in our witness disclosure that was filed in September of 2014, we listed Dr. Roggli as a witness and said he would have opinions regarding John Crane's -- his opinions regarding causation of mesothelioma and his opinions about any John Crane products that -- how it would relate to the causation of mesothelioma.

THE COURT: Okay.

MR. TIVIN: And that they wouldn't. So I'll let --

MR. PANATIER: You know, everybody designates everybody. When a deposition comes up, you ask, who -- who has retained you, who -- who are you working for? And when he was deposed in 2014, he said I was retained by Crane Co., which is not them, and William Powell, not them.

And I'm not moving to exclude him, or anything like that. My point is, we didn't ask him if he had any opinions about John Crane because he wasn't retained by John Crane. We asked him about Crane Co. and William Powell.

So, look, I'm not going to object to him doing his general medicine or giving opinions about products in general. But if he has John Crane specific opinions, I have an objection to that. Because they -- they recently put him on their final witness list. And they could have reoffered him if he had John Crane specific opinions. And he was never reoffered. He was deposed a year ago.

So, again, I think 99 percent of his testimony is totally fine. It's just if he has John Crane specific testimony, he wasn't deposed on that.

MR. TIVIN: And just to briefly respond. He's already -- in his deposition they talked about gaskets.

They've deposed him, their firm -- I don't know if Mr. Panatier has -- hundreds of times about gaskets. This is not a surprise. This isn't anything -- there's no prejudice to anybody for him to -- if he's going to give gasket testimony, he [sic] should be allowed to ask John Crane testimony because John Crane is gasket. It's not like we're introducing a new product type or a new product usage that was specific to John Crane.

The only evidence in this case is that they were one of six. They were all used interchangeably. No one could tell what they were on removal. And they didn't use any one any differently than any other one.

So if we're allowed to ask general gasket questions based on the evidence in this case, I should, perhaps, asked a hypothetical that -- about what evidence has been introduced at the trial regarding my client specifically. And if they -- if they had wanted his deposition, they could have asked for it. It was never requested.

THE COURT: Yes, sir. Mr. Elliott.

MR. ELLIOTT: Your Honor, since my office handles the discovery, I'd like to just make a point. Dr. Roggli was disclosed in the normal discovery process in our designations of experts. And in our final exhibit list, which was -- excuse me -- witness list was provided before July 27th. So they've had that note. And we named

Roggli, Dr. Roggli, as one of our experts.

So they've had that, you know, for however many months. And we co-retained him. You know, in these cases one defense lawyer takes the lead. And then we -- the other Defendants join in. And that's what happened here. And he was disclosed months ago as a co-witness.

MR. PANATIER: It's not incumbent upon me if he has new opinions to ask, does your guy have new opinions? It's incumbent upon them to say he has new opinions, here's his deposition again.

When he was deposed on September 19th, 2004 [sic], he was asked who's retained you in the case.

And he says, Crane Co.

Anybody else?

William Powell.

Anybody else?

No, sir.

So, again, like I said, yeah, I don't have any objection to him testifying about gaskets. He talked about gaskets in the depo. I know his gasket opinion. But if he's going to give specific testimony about John Crane, that's my only objection.

MR. ELLIOTT: Except he was disclosed a year ago as a John Crane witness.

MR. PANATIER: And when he was disclosed, he didn't

give an opinion about John Crane. He wasn't retained by them.

MR. TIVIN: I don't have anything further to say, Your Honor.

THE COURT: What are you going to ask him about John Crane gaskets?

MR. TIVIN: I want you to assume that John Crane was one of the gasket people there. And do you have an opinion as to whether that was a substantial factor?

THE COURT: So is he going to go into the styles and all of that?

MR. TIVIN: No.

THE COURT: Just general?

MR. TIVIN: Yes. Do you have opinions on gaskets? And that doesn't cause anything. And I go, now, John Crane was a gasket manufacturer -- or is alleged to have supplied some of the gaskets here. Do you have an opinion whether any of the John Crane gaskets were a substantial factor?

He's going to say, no. Because gaskets didn't do it, a subset of gaskets didn't do it either.

THE COURT: All right. Well, okay.

Thank you.

I think that the presence of Dr. Roggli as an expert for the Defense is equally likely as the presence of

Dr. Brody or Dr. Holstein on the Plaintiff. Both of -- or all three of which are probably as certain as the turning of the earth.

So I don't find it a surprise to either side or to the Plaintiff, specifically, as to what Dr. Roggli's going to say because he's testified hundreds of times. His opinions aren't any secrets. And if it's just general gasket testimony, that's not a secret either. I mean, he's testified about that hundreds of times, too.

So using the analysis set forth in Jumper v. Hawkins, I find although the testimony would be central to the case, I don't find it to be unfair, prejudiced to the Plaintiff. I don't find there was any malicious nondisclosure or failure to comply with discovery rules. At most, it's a technicality and probably a foreseeable oversight as these cases shift and parties settle.

So I find it to be immaterial that there was not further disclosure made about what he's going to testify to and the scope of his testimony. Again, these are well-known issues. And both sides are fully capable of addressing them.

And the Plaintiff -- I don't find there's any prejudice to the Plaintiff to allow that kind of testimony in this case by this witness.

All right. Anything further?

MR. YOUNG: Your Honor, this is not a dispute, but I -- I had told Mr. Panatier last night, oddly enough, Mr. Buck, he is under subpoena, but he said he wasn't coming this afternoon because he was teaching Bible study. So I jokingly was going to tell Mr. Panatier that was going to be my first question, Why couldn't you come yesterday afternoon? Just kidding.

But, anyway, he will be here first thing Thursday morning. We can start whenever you want. And that's the last -- will be the last witness.

So if we could do the charge conference when we finish today, I think we'd still be good to go to do closings tomorrow.

THE COURT: Okay.

MR. YOUNG: And I think all the lawyers agree with that.

So I apologize, Judge. I mean, we could send the sheriff after him. But I'd rather not do that, if it's okay with Your Honor. He is under subpoena.

THE COURT: Well, the gentleman's going to be here tomorrow morning. It doesn't seem to be holding up the trial. So it's not really an issue that we need to force at this point.

MR. YOUNG: That's what I thought, Judge. I just wanted to let you know. Because I had said yesterday we

would try to get him here this afternoon.

THE COURT: Yeah.

MR. YOUNG: We just were unsuccessful.

But I -- I still think this -- because I think the charge conference -- because we got a new type of claim here that wasn't in the other charge, it may take a little longer --

THE COURT: Okay.

MR. YOUNG: -- than it'd ordinarily take.

THE COURT: All right. And I'm sure your subpoena had RSVP on there, right?

MR. YOUNG: Well, we've been dealing with -- is it Mr. McDonald?

MR. COLLIER: Right. It's Mott's office, Your Honor. That's who we've been dealing with.

THE COURT: Okay.

MR. YOUNG: We've never talked to Mr. Buck. We've only talked to Mr. McDonald.

THE COURT: Oh, right. Okay.

Anything else before we bring the jury in?

(WHEREUPON, there was no response.)

THE COURT: I take that as a "no."

Okay. We can bring the jury on in.

Thank you.

MR. YOUNG: Oh, sorry, Judge, no.

MR. TIVIN: Sorry, Your Honor, no.

MR. PANATIER: No.

(WHEREUPON, the jury came into open court at approximately 9:30 a.m.)

THE COURT: Good morning, ladies and gentlemen. Is that chair more comfortable?

UNIDENTIFIED JUROR: Well, we can see the screen better.

THE COURT: Can you see it okay, sir, on the right?

UNIDENTIFIED JUROR: Yes, sir. I'm good.

THE COURT: Okay. Thank you.

Well, we're ready for the next witness the Defense is going to call.

Yes, sir. Mr. Tivin.

MR. TIVIN: Your Honor, we're going to interrupt the playing of Dr. Crapo's video deposition and call Dr. Victor Roggli on behalf of John Crane.

THE CLERK: Place your left hand on the Bible and raise your right hand.

WHEREUPON,

VICTOR LOUIS ROGGLI, M.D.,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. TIVIN:

Q Can you, please, state your name for the ladies and

gentlemen of the jury?
A Victor Louis Roggli.
Q And are you a physician?
A I am.
Q Are you currently licensed to practice medicine?
A Yes, sir.
Q In what states?
A In the State of North Carolina.
Q What kind of physician are you?
A I'm a pathologist.
Q What's a pathologist?
A Well, pathology literally means the study of disease. And a pathologist is a physician who makes diagnoses based either on biopsies that a surgeon might take and send to the laboratory, or a pathologist makes diagnoses based on fluid samples sent to the laboratory, such as a blood, urine, or spinal fluid sample.
Q I have a document called your curriculum vitae. I've put it on the ELMO. Can you, please, give the jury your educational background?
A Well, I did my undergraduate work at Rice University in Houston, Texas, and received a BA degree in Biochemistry and Environmental Engineering in 1973. I then went across the street to Baylor College of Medicine in Houston, and received my MD degree from Baylor in 1976.

And I then entered a residency training program in the specialty of pathology with Baylor-affiliated hospitals in Houston, Texas, and finished that training in 1980.

Q And we've heard about board certification. Are you board-certified in anything?

A I am.

Q And what are you board-certified in?

A I'm board-certified in anatomical and clinical pathology by the American Board of Pathology.

Q And are you still board-certified in that? Is there any recertification?

A I'm grandfathered in, so I don't have to recertify. I just have to keep up with continuing medical education credits.

Q Do you hold any academic appointments?

A I do.

Q And what are they?

A I'm a professor of pathology at Duke University Medical Center.

Q And how long have you been doing that?

A I've been a full professor since 1994. I've been at Duke since 1980.

Q So that would have been right after you finished your residency, you went to Duke?

A Correct.

Q Now, are you familiar with -- have you studied asbestos and its ability to cause disease?

A I have.

Q And how did you first become interested in that topic?

A Well, that was during my residency training in pathology. And one of the very first areas of training which we had was in autopsy pathology. And one of the very first autopsies which I -- which I participated in was a man who died unexpectedly. He was found unexpectedly at autopsy to have a cancer of the abdominal organs called a malignant peritoneal mesothelioma.

And my mentor at that time, Dr. McGavern, knew that those cases can be caused by asbestos. So he said, what you've got to do is get lung tissue from this case, dissolve it in bleach, Clorox bleach, just like you can buy off the grocery store shelf, and look for asbestos.

And I did that, and to my amazement and surprise, found asbestos in the tissues. And then Dr. McGavern, in his wisdom, said, now you've got to figure out what that means. You've got to collect 50 consecutive cases from this hospital that don't have any asbestos-related disease and don't have any exposure, and find out how much asbestos they have in their lungs. So that got me

interested in it. And I've been pursuing it ever since.

Q And that is a lung -- known as a lung digestion study?

A It is.

Q Are lung digestion studies helpful in determining causation of different asbestos-related diseases?

A Yes, they are.

Q And would that include mesothelioma?

A Yes.

Q Why?

A Well, they are an indication of what an individual's lifetime cumulative exposure was. It's not perfect. But we believe it's the best available method to -- to accurately determine what a person's important exposures were that contributed to disease.

And so the asbestos fibers accumulate. We can count them, compare them to a control population, and see how much is in the lungs.

Q This is the first time we've heard the word "control population." What does that mean?

A Well, that's a group of patients who weren't exposed or had no evidence of exposure to asbestos greater than what you and I might have. And there's no evidence that that background population or control population has any increased risk of asbestos diseases from the background

levels of asbestos which we all are exposed to.

So we're looking for a level in the lungs that's greater than that for the control population -- or background population.

Q Now, getting back to your background. Have you ever -- have you received any awards or honors in the -- your work in medicine?

A I have, yes, sir.

Q And can you, please, explain those? Tell the ladies and gentlemen of the jury about them, the ones you find most notable.

A Well, I graduated from Baylor with honor, Baylor College of Medicine. And I was elected to Alpha Omega Alpha, which is the honorary medical society. I, also, received the Stewart A. Wallace award as the outstanding first-year student in pathology at Baylor Hospital.

Q Now, do you belong to any professional societies of note that you think would have -- you wrote -- worked with your work on asbestos?

A Yes.

Q Which ones -- I notice that you belong to a lot of them. I mean, are there any of those that you want to point out to the ladies and gentlemen of the jury that are of note?

A Yeah. I mean, there's -- there's the -- as a

pathologist, I'm a member of some of the general pathology societies like the International Academy of Pathology, and the U.S. Canadian Academy of Pathology, the American Association of Pathologists, the College of American Pathologists.

Because I have special interest in diseases of the lungs, I'm a member of the American Thoracic Society and the American College of Chest Physicians.

And then I'm a member of some subspecialty pathology societies like Pulmonary Pathology Society and the Society for Ultrastructural Pathology. And there's a few other things I'm a member of as well.

Q What is ultrastructural pathology"?

A Well, that's the -- what we call the fine structure or detail of cells that's beyond what you can see with a regular light microscope pathologists use on a daily basis. And to see that very fine structure, we use an electron microscope, which is a much larger microscope. It needs its own room to fit into.

And with the electron microscope, then we can look at the fine detail of cells, see things that you cannot appreciate with a light microscope. But it, also, allows us to see particles, and structures, and fibers that we could not see with a regular light microscope. So we, also, use it as part of our asbestos analysis.

Q During your work as a pathologist, have you had occasion to review cases involving mesothelioma?
A I have.
Q About how many times?
A In my private consultation files, I have more than 3,800 cases of mesothelioma. And as part of the U.S. Canadian Mesothelioma Panel, I've seen another 500 or 600 cases. And then just from my work at Duke and the Durham VA Medical Centers, I've seen another 100, 200 cases there.
Q You mentioned U.S. Canadian Mesothelioma Panel. What's that?
A Well, that's a group of 12 pathologists who have a special interest in the disease mesothelioma. And we act as a referral for other pathologists who send us cases, either because it's a difficult case, or because mesothelioma's a pretty rare disease. Pathologists may not be comfortable making the diagnosis. So we offer them a second opinion as to whether their case is, actually, a mesothelioma.
Q And that -- that's 12. How did you -- since when have you been on that panel?
A Since April of 1987.
Q And when did that panel form?
A A little -- it was probably in early 1987 or in '86.

Because they were on case number 32 when I joined. And now, we're on case 2,500-and-something.

Q And how did you get on that panel?

A By invitation of the chairman.

Q Now, have you published any -- are you familiar with peer review?

A Yes, sir.

Q And have you published any articles that you -- in the peer-review literature?

A I have.

Q And do any of those articles have to do with asbestos?

A Yes.

Q Any of them have to do with the causation of asbestos-related diseases?

A Yes.

Q Approximately how many articles have you published in a peer-reviewed journal?

A I believe that currently my CV has 200 articles that have been published or accepted for publication in the peer-reviewed literature.

Q Have you been invited to give seminars or lectures to pathologists or anything regarding asbestos or asbestos-related disease?

A I have.

Q Approximately how many times?
A Oh, let's see. It goes on for pages and pages in my CV. Probably -- I would guess a hundred times, maybe.
Q Have you written any books regarding asbestos?
A I have.
Q And would you tell the jury about that?
A Yeah. In 19 -- about 1987, I was looking at medicolegal cases, and I was tired of having to write all these references out at the end of my report. And I thought, it'd be nice to have this all in one place.

So I talked to two of my mentors, Dr. Greenberg from Houston, Texas, and Dr. Philip Pratt at -- that I came to study with at Duke. And I said, we should write a book about pathology of asbestos-associated diseases. So we did that, and got it published five years later in 1992. And then the third -- second edition came out in 2004, and a third edition in 2014.

Q Now, I have another page of your CV. What is the NIOSH Board of Scientific Counselors?
A That is a board that was appointed in about 1989, after we had a meeting at the National Institute of Environmental Health Sciences in Research Triangle Park, North Carolina, to advise NIOSH about areas of further investigation that were needed regarding fibers.
Q And when you say "fibers," does that include

asbestos?

A Sure.

Q What is the International Mesothelioma Panel?

A Well, in about 1995, we had an impromptu meeting of several pathologists who -- from around the world who had a special interest in mesothelioma. Each of them was a member of a mesothelioma panel in their own region.

So there were a number of people from the U.S. Canadian Mesothelioma Panel, someone of them from the French panel, someone from the -- from the Australian panel, from the Japanese panel. And we decided to get together and form a -- a panel where we would meet once a year at the U.S. Canadian Academy of Pathology meeting.

So what we do is meet together and talk about special topics that are related to diagnosis of mesothelioma. And we've, actually, written a monograph about the pathology of malignant mesothelioma, which was published in 2006.

Q What's a "monograph"?

A It's -- it's something that's longer than an article that you would publish in a journal, but it's focused on a -- on a very narrow topic. So it's not as detailed or broad as a textbook. So it's sort of in between an article in a journal and a textbook.

Q Speaking of journal, do you sit on the editorial boards of any journals?

A I do.
Q And which journals do you sit on the editorial boards for?
A The first one, I think I was invited to was Modern Pathology, which is the journal for the U.S. Canadian Academy of Pathology. And then I was invited on the Archives of Pathology & Laboratory Medicine, which is the American Medical Association pathology journal. And then very recently, I was invited to be on the editorial board for Ultrastructural Pathology.
Q And just looking at your CV, it appears that you've written approximately 36 book chapters?
A Yes, sir.
Q And of those 36 book chapters, how many deal with asbestos?
A I'd say probably around 18 or 20.
Q And then on books and monographs, you have seven. And we've already talked about those?
A Yes.
Q Now, do you do this for free?
A No.
Q I mean when I say, "do this for free," do you testify for free?
A No. I have to take a vacation day when I'm away from my work at Duke. So I charge for my time.

Q And how much do you charge?
A $600 per hour.
MR. TIVIN: At this point, John Crane would offer Dr. Roggli as an expert in anatomical and clinical pathology, as well as the causation of mesothelioma and all asbestos-related diseases and asbestos medicine in general.
MR. PANATIER: I'll reserve for cross, Your Honor.
THE COURT: Okay. He's qualified.
Yes, sir.
BY MR. TIVIN:
Q Now, Dr. Roggli, you just mentioned -- has my firm hired you before?
A Yes, sir.
Q You know, how long have you been working with my firm --
A About since --
Q -- or any other incarnation of my firm?
A About since 1996 or '97, I believe.
Q And approximately how much money have you made testifying in asbestos cases?
A That I've made myself. Let's see. Since -- I started testifying in 1985. And I think by 2005, I had made the first million dollars over that 20-year period. And since then, I've made probably about 100,000, a

little -- maybe over 100,000 per year since 2005.

Q Now, do you testify for plaintiffs and defendants?

A I do.

Q And have you ever testified for Simon Greenstone Panatier and Bartlett?

A I have.

Q About how many times have they retained you to give testimony?

A They've retained me in more than 300 cases.

Q And John Crane's retained you before?

A Yes, sir.

Q And other defendants have retained you before?

A Yes, sir.

Q Now, are you familiar with the -- I'm just going to jump right in. We've been here for a week and a half, so I'm going to kind of jump right in.

Are you familiar with the dose required to cause mesothelioma?

A Yes.

Q And when I say "dose," I'm talking about dose of asbestos.

A Yes, sir.

Q And you've studied that? You've studied that in your background?

A I have.

Q Now, are you -- there has been testimony in this case that each and every occupational exposure to asbestos contributes to the causation of mesothelioma. Okay.

A Yes.

Q Do you agree with that?

A No.

Q Why not?

A Well, I was part of the Helsinki group that met in 1997 in Helsinki, Finland. There were 19 of us from around the world to look at how you diagnose asbestos-related diseases and how you determine causation.

For mesothelioma, we determined that you needed either a fiber analysis with increased levels, or you needed to have pleural plaques or asbestosis, or you needed to be able to see asbestos bodies in slides. If you didn't have any of those, then you needed to have a substantial history of -- a significant exposure to either an occupational, domestic, or paraoccupational or environmental exposure.

So the word is "significant," which means there are insignificant exposures. And there are types of exposures which I would consider to be trivial and not likely to be contributory.

Q And have you used your lung -- in your history, have you dealt with -- in your lung digestive studies, have you

determined what the exposures of different classes of people are to different asbestos types?

A By classes, do you mean occupations?

Q Yes.

A Yes.

Q And what have you learned in that regard?

A Well, in about 1991, a very famous -- world-famous pathologist wrote that all the mesotheliomas in the world are caused by crocidolite asbestos. And that wasn't our experience.

So we looked into it and, actually, wrote a paper in 1993, which indicated that, looking at 94 cases of mesothelioma where we had done those fiber analysis that I told you about, that the amosite, the main fiber type in the United States that's associated with mesothelioma. However, when we did that study, it was very heavily loaded with people who were insulators or shipyard workers. So we weren't sure that that was applicable across exposure groups.

So in 2002, we did a study where we looked at 19 different exposure categories, that included 12 industries, six occupations, and one nonoccupational exposure that accounted for 90-plus percent of the mesotheliomas that we were looking at. And of those 1,445 cases, we had done fiber analysis on 268 of the cases.

And what we found was confirmatory, that amosite was the main fiber type across all of the exposure categories and across all of the occupations with a few exceptions.

Q Are you familiar with the products that were used in the United States in the '50s, '60s, and '70s that contained amosite?

A Yes.

Q And what types of products contained amosite?

A There was several. There was a board called Marinite board that had certain specialty applications. But most amosite went into insulation products, that is, pipe insulation, the half rounds that fit around the steam pipes, and block insulation, which was used mostly around the very large boilers that were present in a lot of industries.

Q Now, we've heard testimony in this case. Mesothelioma is a cancer involving the lining of the lung; Correct?

A Yes.

Q And so mesothelioma isn't really a cancer in the lung?

A True.

Q So why would looking in the lung tissue help you determine what causes a cancer that isn't in the lung?

A Well, there have been some people who have claimed

that in the analysis that we've done and reported extensively in the literature and in my textbook, that we're looking at the wrong place, you should look at the pleura. And that's wrong for two reasons.

One, people who say that don't understand what the purpose of a fiber analysis study is. It's to determine if this person has an exposure, which is different from that of a background population. And to determine that, the best place to look is in the lung.

The second problem with that argument is that studies have shown that what accumulates in the lung drives what gets to the pleura. So studies have shown that mostly amosite is present in the lungs of, for example, insulators and shipyard workers. And that in certain hot spots in the pleura is where those commercial amphibole fibers accumulate. And they're likely responsible for mesothelioma to occur.

Q During the course of your research, have you become aware of the medical and scientific literature regarding the ability of asbestos-containing thermal system insulation, such as pipe rounds, block and mud, to release fibers when used?

A Yes.

Q Have those levels been associated with causation of mesothelioma?

A Yes.
Q During that same study, have you become familiar with the medical and scientific literature regarding the potential fiber release from the use of gaskets?
A Yes, sir.
Q Do you have an opinion that, based on a reasonable -- and I've asked you a lot of opinion questions. Would you agree that your opinions have been on a reasonable degree of medical and surgical certainty?
A Yes, sir.
Q Do you have an opinion whether the potential fiber release from gaskets has been related to the causation of mesothelioma?
A I do.
Q Have you ever -- have you ever had any statements in the past which contradict -- first of all, what's your opinion?
A My opinion is I don't think that chrysotile asbestos in gaskets or packing is going to be a contributory factor to mesothelioma.
Q And have you ever said anything in the past that maybe contradicted that, or maybe give people to think that you contradicted that?
A Yeah.
Q Can you explain that to the jury?

A In 2001, I wrote an affidavit in a case down in New Orleans and indicated that I thought that chrysotile -- exposure to chrysotile-containing gaskets that I think they were made by a certain manufacturer were a contributory factor to disease. And I had certain criteria for causation for chrysotile and mesothelioma cases. And I had literature supporting that causation.

In 2006, I was at a meeting and did a calculation and realized that -- in terms of chrysotile exposures, that opinion was no longer tenable. And, as a matter of fact, after that meeting and I did that calculation, I, actually, placed phone calls to two of the attorneys for firms that I was doing -- looking at the most cases for at that particular point in time. This is in 2006. And one was John Crane, and the other was Jeffrey Simon of Simon and Greenstone.

And I told them that, henceforth, I'm not going to be able to testify what I had in 2001 regarding chrysotile exposures. Because now I believe it would take seven to 10 fiber cc years of chrysotile to double your risk of mesothelioma. And that did not support my prior testimony.

Q You just said a lot of information there that was over my head. What was this calculation that you did that changed -- that made you realize that you would change

your opinion?

A Well, we knew from the literature and studies we had done what was the background rate of mesothelioma, which it's about one case per million population per year. So it's a rare disease.

We, also, had seen publications about how often chrysotile miners and millers develop mesothelioma. And that was published back in 1997. And it turned out that's about 300 cases per million population per year.

And we -- I had, also, been in a meeting where they said what the levels of exposure were. So I said, well, we can calculate how many mesotheliomas you saw at this level of exposure and then -- because we knew that they worked for about 20 to 30 years, the guys who got mesothelioma there. And then we could extrapolate back to the level that doubles your risk of mesothelioma.

And when I did that, I saw that the number you got was seven to 10 fiber cc years, which was well above the levels that I had testified previously about chrysotile being causative.

Q Now, have you had occasion to review any materials in Mr. Seay's case?

A I have.

Q And what did you review?

A I reviewed pathology materials and medical records.

And I created a report -- let's see -- the date of it is April 28th of 2014 -- indicating that, based on the pathology that I had to review and the medical records, that he had a malignant pleural mesothelioma. And that I did not see any of the objective markers of asbestos exposure like pleural plaques, asbestosis, asbestos bodies in slides. And there wasn't enough lung tissue for us to do a fiber analysis.

Q And you're of the opinion that Mr. Seay's mesothelioma was caused by exposure to asbestos; right?

A Yeah. And that was -- then I was given a hypothetical about what his exposures were. And then I gave an opinion about whether I thought that was the cause of his disease.

Q I want you to assume that Mr. Seay and then there's a co-worker Mr. Thompson testified that they each worked at Celanese in the '70s. During that time, he regularly worked hands-on with asbestos-containing thermal insulation, chipping off mud with a screwdriver and wire-brushing it to get to bolts, and then occasionally using -- cutting half rounds, as opposed to other types of thermal insulation. I want you to further assume that he developed mesothelioma.

Do you have an opinion as to whether that exposure to asbestos-containing thermal insulation products was a

substantial factor of his mesothelioma?
A Yes.
Q And what's your opinion?
A I believe it would be, yes.
Q And what's that based on?
A That's based on the studies that we did. Among the occupational groups we looked at included machinists, maintenance workers, and millwrights. And among those cases where we did fiber analysis, the main fiber type we found in the lung was amosite. And that comes from insulation products, which Mr. Seay claimed he was exposed to.
Q Now, I want you to assume that Mr. Seay, also, worked with gaskets generally. I want you to assume that he removed these gaskets with a screwdriver, a wire brush, and occasionally a power wire brush.

Do you have an opinion as to whether those exposures -- and assume that those gaskets contained asbestos. Do you have an opinion whether those exposures would have been a substantial factor in his developing mesothelioma?
A Yes.
Q And what is that opinion?
A I believe they would not.
Q Why not?

A Because, as I indicated, the chrysotile exposure takes certain levels before you get a significantly increased risk. And I've read a number of studies which looked at fiber release from -- from the use of these gaskets, which was well below the permissible exposure limit that OSHA has of 0.1 fiber per cc. At that level, 0.1 fiber per cc, it would take you 70 to 100 years of work to get to seven to 10 fiber cc years.

Q Now, I, also, want you to assume that John Crane was one of six manufacturers that were identified by Mr. Seay and Mr. Thompson. And Mr. Thompson testified that 20 of the gaskets that they worked with -- 25 percent stuck on the flange, and of that remaining 25 percent, some needed to be wire-brushed off, some needed to be -- and of the ones that weren't able to be wire-brushed off, sometimes they used a power wire brush.

Based on these facts, do you have any exposure -- do you have an opinion whether any exposure to any John Crane gasket would have been a cause to Mr. Seay's mesothelioma -- a cause of Mr. Seay's mesothelioma?

A Yes.

Q And what is your opinion?

A I think that they would -- it would not for the same reason that I gave for gaskets in general.

Q Now, I, also, want you to assume that Mr. Thompson

identified a type of gasket that contained crocidolite and he said that Mr. Seay used them.

Now, based upon the hypotheticals that I've given you previously, do you think that if -- do those facts change your opinions regarding the causation of Mr. Seay's mesothelioma?

A It possibly could. The levels you need for crocidolite-related mesothelioma is much less than for chrysotile-related mesothelioma. But I'd have to have some sort of an analysis by an industrial hygienist to let me know that he reached that level or not. So I couldn't tell.

Q And if -- so if there's no testimony regarding how often -- in this case regarding how often he worked with this type of gasket or what he, actually, did with this gasket or whether he, actually, removed this gasket, it would be impossible for anyone to determine whether that exposure had anything to do with his disease; correct?

A I think that's fair.

MR. TIVIN: Thank you, sir.

Pass the witness.

CROSS-EXAMINATION

BY MR. PANATIER:

Q Good morning, sir.

A Good morning.

Q I think I've met you in person once or twice. My name is Chris Panatier. So far no one has remembered that they saw me before. And I doubt you did.

I do like your tie.

A Thank you.

Q It's very nice.

Okay. So just to distill down your testimony today, primarily what you're saying is, first of all, Dennis Seay had mesothelioma?

A Yes, sir.

Q Right. And even though you -- there was not enough tissue available for a lung digestion, there were no -- there was no asbestosis. There was no pleural plaques. This was an asbestos-caused mesothelioma?

A I think based on the exposure history that I was asked to assume, yes, sir.

Q Okay. And you don't take issue with any of the treating doctors diagnoses, which was the same; correct?

A Correct.

Q All right. And then what you're saying as far as the cause of this disease is, your testimony is the cause is the amosite-containing insulation, not the gaskets; fair?

A I would say it a little differently.

Q Okay.

A I would say that a substantial contributing factor to

his mesothelioma was the amosite-containing insulation. That exposure to the gaskets was not a substantial contributing factor. Whether or not there were, also, other products that might have been contributing factors, I'd have to have information about what they were and what the exposure levels were before I could comment on those.

Q All right. So you were not -- either not provided the deposition testimony in the case or you didn't ask for it. You just asked for information from the lawyers; is that fair?

A Yes, sir.

Q Okay. You were asked to assume what the exposures were, and you did a little bit of that on direct; fair?

A Yes, sir.

Q Okay. So then just to be clear to summarize what your opinions are on the causation in this case is, if he worked at Celanese for about 10 years or so and he worked around asbestos-containing insulation -- now, most of that insulation is going to be a combination of amosite and chrysotile; fair?

A Yes, sir.

Q Okay. And, typically, most of the asbestos-containing insulation is about 15 percent asbestos; is that right?

A Yeah. Another 85 percent was filler materials. Yes,

sir.

Q Okay. And so for those 10 years at Celanese, the substantial factor cause, in your opinion, would be the insulation that he may have been exposed to either pulling some off to access equipment or as a bystander; is that fair?

A It would be a substantial. It might be the only substantial. I don't know.

Q All right. Now, for the different trades that you discussed -- and I think you said in your studies, they were millwrights, machinists, and there was another one?

A Maintenance workers.

Q And maintenance workers.

A Yes, sir.

Q And you found substantial elevated levels of amosite in their lungs when you looked in their lungs; right?

A Yes, sir.

Q And you also found tremolite; correct?

A In some cases, yes.

Q Okay. And you have testified in the past that tremolite is a marker for chrysotile exposure; true?

A That's correct.

Q Because it's your opinion that, especially as it comes from Canada, Canadian chrysotile, for the most part, is contaminated with tremolite; right?

A True.
Q Your testimony is that it's contaminated with about one-tenth of a percent to one percent tremolite; fair?
A That's my understanding, yes, sir.
Q Okay. I want you to assume in this case that the jury has already seen evidence, at least, from one test, that John Crane gaskets had about .15 percent tremolite. Can you assume that?
A Sure.
Q Okay. And that would be right in that range for your testimony regarding Canadian chrysotile for the tremolite contamination; fair?
A True.
Q Okay. I jumped right ahead. Let me back up just a little bit. So since -- my firm has hired you in the past; right?
A Yes.
Q And other plaintiffs firms have, too; true?
A Yes.
Q Since 2000; though, the bulk of your work has been for defendants in asbestos litigation; is that right?
A I would say so, yes, sir.
Q Okay. And you testified that from '05 to the present, you made about $100,000 a year; is that right?
A Yes, sir.

Q Now, that's your net. That's what goes in Victor Roggli's pocket --

A Yes, sir.

Q -- right?

Because your total billings each year in asbestos litigation hover between 300,000 and 400,000; is that fair?

A Yes.

Q Okay. So your total billings would certainly be in the millions; right?

A Sure.

Q Okay. There's a conference called the Defense Research Institute you're familiar with; correct?

A I am.

Q And you have spoken there around a dozen times?

A I think that's correct.

Q Okay. You know that's, The Voice of the Defense Bar that -- that place?

A I've heard it referred to as that, yes.

Q All right. Real quick, smoking does not cause mesothelioma; correct?

A That's my opinion.

Q Okay. And Mr. Seay was a smoker, but that doesn't play any role in the development of his mesothelioma; true?

A That's my opinion, correct.
Q All right. We saw a video yesterday of a doctor named Dr. Crapo. Now, you, actually, know Dr. Crapo; right?
A I do.
Q You worked with him at Duke some years ago; true?
A Yes, until he left there, I think, around '93, something like that.
Q Yeah. Okay. And we heard Dr. Crapo on video yesterday talk about how much asbestos was in water. That in distilled water, there's still asbestos fibers. And in undistilled water, there's even more asbestos fibers. Does asbestos in water cause mesothelioma?
A No.
Q Does it cause asbestosis?
A No.
Q Does it cause pleural plaques?
A No.
Q Does it cause lung cancer?
A No.
Q Any asbestos that may be in water as some sort of contaminant has never been shown to cause any disease; isn't that right?
A That's true.
Q Okay. We've heard some discussion about background

levels in this case. I'm sure you can assume. What is your general opinion as to the general background for a -- what would you call Spartanburg? Is it -- is it -- does it fit all the way in urban, or is it rural plus urban? How would you characterize it?

A Well, I would defer to the guys who do this sort of analysis, say the EPA. But I would think Spartanburg would be classified as one of their urban environments.

Q Okay. So in your book -- and I have -- I have the second edition right here. And I have the digital one on my computer if you need to look at that. This is your book?

A Yes, sir.

Q Second edition. So this was in '90?

A 2004.

Q 2004, right. The first one was '93?

A '92.

Q '92. In this one you have a -- you have a table. It talks about the median. And can you tell us, what does median mean?

A It means that half of the cases have levels below that value, and half of the cases had levels above that value.

Q It's similar to an average, but it's not an average?

A Correct.

Q Okay. And you can see there, this was from -- this is from Dr. Nicholson; correct?
A Yes.
Q This data. And the data that you put in your book was that -- the average of 48 U.S. cities. So that would be urban environment; right?
A Yes, sir.
Q Was .00005 fibers per cc; correct?
A Yes, sir.
Q Okay. Now, if we were going to take that and compare it to a -- can you see this over the computer screen?
A Yes.
Q Sorry. So urban background, .00005 fibers per cc. What would be your opinion as to what you'd expect to find in a rural background?
A Well, the values that I had seen that were talked about by Nicholson for urban was .0001, which is just twice that value.
Q Okay.
A And for rural, it was .00001, so 10 times less.
Q Okay. Four 0s and a one?
A Yes, sir.
Q Okay. That's rural; correct?
A Correct.
Q And, of course, you would expect the urban to be a

little bit higher. You have more use of asbestos products --

A Sure.

Q -- fair?

If a person had a mixed exposure to chrysotile and amosite, you've said in the past that both of those would significantly contribute to a person's mesothelioma; correct?

A It could.

Q Okay. You're not saying chrysotile doesn't cause mesothelioma, are you?

A No, sir.

Q And, in fact, we, also, heard Dr. Crapo yesterday -- let's go ahead and do -- let's go ahead and do this, just so that the jury can -- the jury can see.

Now, first of all, you gave the opinion that for someone to be at risk for mesothelioma from chrysotile -- so chrysotile --

A And I meant to specify Canadian chrysotile.

Q Okay. Do you know who supplied their chrysotile, John Crane?

A I believe it's Canadian.

Q All right. And this is Dr. Roggli's opinion. Dr. Roggli, you say seven to 10 fiber cc years of exposure; right?

A Yes, sir.
Q To be at risk for mesothelioma?
A That's where you double the risk at.
Q All right. And this is your -- this is your personal opinion. Doctors vary on what their opinions are, as far as how much chrysotile you need to induce the risk for mesothelioma; fair?
A Yes.
Q Okay. In fact, Dr. Crapo said you need 100 fiber cc years; right? Or -- or I want you to assume he said that yesterday. Okay.
A Okay.
Q He said you need 100. So your opinion would be that you need, at least, 10 times less exposure to chrysotile than Dr. Crapo to induce risk for mesothelioma --
A If you double the -- yes, sir.
Q Okay. Now, for amosite, what's your testimony on how much amosite exposure someone needs to increase the risk?
A It's about 100 times less. The number I use is 0.075 fiber cc years.
Q Now, you didn't do a dose calculation in this case; right?
A Correct.
Q What you have done is you've -- you've kind of taken the hypotheticals presented to you about Mr. Seay's

exposure. And you've said, I believe that would be enough to put him, for instance, for amosite, in this range; is that fair?

A Yes, sir.

Q Okay. And then based on that, you've said that increased the risk?

A Yes, sir.

Q Right. Okay. And then for crocidolite, what's Dr. Roggli's opinion on how much crocidolite one needs to increase the risk for mesothelioma?

A To double the risk, it's about five times less than amosite, which is 0.015 fiber cc years.

Q So chrysotile, seven to 10. Amosite, .075. Crocidolite, .015?

A Yes, sir.

Q Okay. Now, your book -- let me go back to your book, Page 107. I think this language is still in the -- in the third edition. Correct me if I'm wrong. But it says, A threshold level of exposure below which mesothelioma will not occur has not been -- yet been identified.

And that's still in your third edition; right?

A I believe so.

Q That came out last year?

A They certainly haven't identified it between when this was published and --

Q Okay.
A -- the third edition was published.
Q And that was -- that covered the period where you -- you had this sort of opinion change about chrysotile gaskets, and so forth; right?
A Yes, sir.
Q Okay. This was -- this was published in '04 and it still said that in 2014; true?
A Correct.
Q Now, it would be your opinion that for -- for all asbestos fiber types, there is a threshold below which you don't have a risk for mesothelioma; right?
A I wouldn't call it a threshold, no. I'd refer to it as a level that doubled the risk of mesothelioma.
Q Okay. So these levels, in your opinion, are what's needed to double the risk; right?
A Yes.
Q Because you can have an increased risk that's not doubled; right?
A Yes.
Q You can have one that's one percent increased, or two percent, or three percent, or 10, or 50 percent increased; right?
A Sure. But those would not be distinguishable from the background rate of mesothelioma.

Q I understand. I understand. You're, also, not saying that these are exact numbers, that, in other words -- that, in other words, one person couldn't have .07 fiber cc years and have an increased risk for mesothelioma; right?

A Yeah. I think that's fair.

Q Okay. When it comes to the folks that are at risk for mesothelioma, you had a paper about 1,445 cases of malignant mesothelioma. And this says, Exposure categories in 94 percent of those cases. Can you just explain what you're showing in this table?

A Yeah. What we -- we divided our 1,445 cases into various exposure categories. And we found that 94 percent of them fit into one of twelve occupations, one of -- no -- twelve industries, one of six occupations, and then one nonoccupational exposure group.

Q And would you -- would you agree that Mr. Seay's occupational group, maintenance, is included here?

A Yes. And, in fact, one of his titles was, also, a millwright, which I think is a -- in a footnote to the paper was included under maintenance workers.

Q All right. And that he worked in the chemical industry; correct?

A Yes. That would fit in there.

Q All right. So both the industry he worked in and his

occupation were shown, at least, in your paper to be one of the main exposure categories for people exposed to asbestos who developed mesothelioma; right?

A Yes, sir.

Q Okay. You testified in the past that, in your opinion, for every fiber of tremolite you find in someone's lungs, you would expect that person to have been exposed to 99 chrysotile fibers; correct?

A That's probably a reasonable estimate, yeah.

Q Okay. Now, chrysotile fibers -- well, all asbestos fibers have the ability, when they are deposited into the lung, to translocate or move to the pleura; correct?

A Yes.

Q Okay. Chrysotile moves to the pleura really fast, doesn't it?

A There are some that have claimed that, yes.

Q Okay. We're moving along pretty good here.

Individual susceptibility. For mesothelioma, that's a thing; right? Some people may be more susceptible to exposure to asbestos and others may be less susceptible; correct?

A True.

Q A good example -- and I think it's a good example, but tell me if you don't think it is. Someone who, perhaps, was a lifetime worker in an industry, maybe even

an insulator, who worked every day with asbestos, come home, wife washes their clothes, wife gets mesothelioma, insulator doesn't. That's happened before; correct?

A Sure.

Q And would that be an example of individual susceptibility?

A Probably so, yes.

Q Because on the one hand, one person has a whole lot of direct exposure, and the other person has exposure, but it's less; fair?

A Yes.

Q This is the Helsinki consensus report from 1997. You were a part of that group; right?

A I was.

Q And then there's a new -- new version of it from '14; right?

A Yes.

Q And you were a part of that group?

A I was.

Q Now, this is a group of -- is it still 19 experts?

A Oh, no. There were -- for the 2014 meeting in February of last year, there were four working groups. And I was the chairperson for working group four. But there were, also, many people who came to the conference and just presented findings. So it was much more than the

19 originally.
Q Okay. And, in fact, here's a list of them. There's quite a few; correct?
A Yes, sir.
Q Okay. And this -- would you say that the findings of the Helsinki group are authoritative and reliable?
A Yes.
Q And you gave your input to the group; correct?
A Yes.
Q You spoke freely about your opinions regarding asbestos; true?
A Yes. But at one point, we met independently in different groups. So when group three was meeting and group two was meeting and group one were meeting, I wasn't there. We did have -- we did have meetings where the -- everybody was together in one place.
Q In either '97 or in 2014, did the Helsinki consensus group publish these numbers, say that these were the numbers that you had to have to double the risk for mesothelioma for the exposures to the different fiber types?
A No. The -- and the 1997 meeting did very little to deal with the issue of fiber type. And then -- and part of that was because it was 2000 when Hodgson and Darnton published the -- the paper that gave the numbers that

are -- that are partly responsible for what you see on the board there.

And then in 2014, specifically, the people who ran the conference elected not to deal with the issues of differences in fiber potency.

Q Okay. Now, by 2014, you had held these opinions for six, seven, eight years, at least?

A Oh, you mean what's on the board there?

Q Yes, sir.

A Yes, sir.

Q Okay. And you brought up Hodgson and Darnton. You said they -- that you're relying upon that paper for part of this, at least?

A In part, yes.

Q Okay. And, of course, they've revised their estimates on potency; correct?

A Well, not actually. They said if the Loomis and Dement paper was correct, that would change their -- their ratios by a factor of 10. But we -- we don't believe the Loomis and Dement paper was correct.

Q Oh. So, basically, they said -- at one point, they said crocidolite is 500 times more potent than chrysotile, amosite is 100 times more potent. And then they said if this one additional case bears out, it would change their numbers by a factor of 10 to 50, 10, one; correct?

A Yes.
Q Okay. Now, obviously, the Helsinki consensus report that says -- it says, In general, reliable work histories provide the most practical and useful measure of occupational asbestos exposure. Do you agree with that?
A Yeah. I think the key words are "practical" and "reliable." And that's because you very rarely have tissue for fiber analysis. I mean, in my own series of cases where we, actually, do this fiber analysis, it's one out of six. And most laboratories don't do this sort of analysis. So the exposure history is much more practical and reliable.
Q And, in fact, that's what you did in this case is you relied on the exposure history; correct?
A Correct.
Q All right. And it says, In the absence of such markers. And they're talking about asbestosis and pleural plaques; right?
A Yes, sir.
Q A history of significant occupational, domestic, or environmental exposure will suffice for attribution. And when they say "attribution," they mean attributing a mesothelioma to asbestos exposure; correct?
A Yes, sir.
Q And they said this in '97. And they reiterated it in

2014, Mesotheliomas can occur in cases with low asbestos exposure. However, very low background environmental exposures carry only an extremely low risk; correct?

A Yes.

Q They, also, said in '97, and reiterated it in 2014, Even a brief or low-level exposure should be considered sufficient for mesothelioma to be designated as occupationally-related; correct.

A Yes. But you have to keep that in mind, the context of what they said about it being a significant exposure.

Q Right. You have to -- the physician or whoever is doing the attribution has to determine that it's a -- a sufficient exposure enough to cause the disease --

A Yes.

Q -- right?

In some cases, that can be a brief or low-level exposure?

A Yes, sir.

Q Okay. And then smoking has no influence on the risk of mesothelioma. You agree with that?

A Correct.

Q You stated in 2014 -- you said, I still believe that the overwhelming world consensus is that dust from all three commercial types of asbestos incorporated in the products in the U.S., amosite and crocidolite from South

Africa, and chrysotile from Canada are capable of causing mesothelioma. Do you still agree with that?

A Yes, sir.

Q Okay. Sir, you -- from a medical perspective, you have reviewed the medical literature that was available regarding the development of scientific knowledge of asbestos-related diseases?

A I have.

Q You've testified in the past that in the 1930s, it was published in the medical and scientific literature that products could induce asbestosis; correct?

A Yes.

Q In the 1950s, it was --

MR. TIVIN: I just want to put an objection. There's been no state-of-the-art testimony on direct whatsoever.

MR. YOUNG: And we have the additional objection to this, Your Honor, that -- I don't know if you -- it's in the record.

THE COURT: Okay.

MR. PANATIER: Scope -- scope isn't limited. It's discretionary. It's discretionary with the Court.

THE COURT: Overruled.

MR. PANATIER: All right.

MR. YOUNG: May we have a continuing objection, Your Honor?

THE COURT: Yes, sir.

BY MR. PANATIER:

Q You've testified that lung cancer was firmly established as caused by asbestos in the 1950s; correct?

A Yes, sir.

Q And that you believe that from a medical perspective, it's responsible to test products before they're sold; correct?

A It's reasonable.

Q Okay. You talked about two affidavits. At least, one that you had signed before you kind of had this change of opinion in 2006; right?

A Yes.

Q Okay. Let's just -- I just want to go over these a little bit. This is -- this --

MR. TIVIN: Your Honor, I object to publishing the affidavit to the jury. I don't believe that's proper under 613(b).

THE COURT: You can let him look at it and --

MR. PANATIER: Yeah, sure. I'm sorry.

BY MR. PANATIER:

Q Okay. Can you just verify that that's your affidavit, and that you signed that, and that's a true and accurate copy of your affidavit?

A Let me find the signature page.

Indeed, this is my signature.

Q Okay. I think -- I think there's two copies there. And so, actually, you could --

A 2001, yes.

Q Okay. In fact, I'll leave you with one because it's kind of a rough copy. If you want to just look at it there, instead of the screen.

A Thank you.

MR. TIVIN: Your Honor, I would object to publishing this under 613(b).

THE COURT: I'll sustain that objection.

BY MR. PANATIER:

Q All right. You and I are going to look at it. Okay.

A Sure.

Q On Page 2, in the second paragraph about halfway down, you said, Indeed, the causal relationship between exposure to all forms of asbestos dust and the development of mesothelioma is so firmly established in the medical and scientific literature that it is accepted as scientific fact. Did I read that correctly?

MR. TIVIN: I would object under 613(b).

THE COURT: Overruled.

THE WITNESS: Yes.

BY MR. PANATIER:

Q Okay. And you still agree with that; correct?

A Yes, sir.

Q Okay. While no -- next paragraph. While there is no question among experts in the field that chrysotile dust causes the disease mesothelioma, there is some dispute regarding whether it is chrysotile itself or the tremolite contaminant of the chrysotile dust, or both that causes the mesothelioma. The resolution of that dispute is, however, purely an academic exercise. Over 99 percent of the chrysotile used in the United States was mined in Canada. Every published study addressing the issue indicates that there is some degree of tremolite contaminant in all chrysotile ore mined in Canada. Further, there is no evidence that the tremolite contaminant is removed during processing of the chrysotile ore.

Do you still agree what that, sir?

A The only exception would be that in 2009, I came to understand that there is a mine that -- the Carey Canada mine that was not contaminated with tremolite. Otherwise, I agree with that -- that paragraph.

Q Okay. Sir, down at the bottom, last paragraph --

MR. TIVIN: Prior inconsistent statement.

THE COURT: Overruled.

BY MR. PANATIER:

Q The scientific and medical community has yet to

determine a level of exposure to asbestos below which mesothelioma will not occur. While there is no threshold, there is insufficient evidence to implicate levels of exposure to asbestos that occur as a result of background or ambient air exposure. Very low levels of exposure above background, however, have been demonstrated to cause mesothelioma.

It is, also, my opinion that it is the total dose of asbestos, regardless of fiber type, that the patient experiences that causes the disease. It is further my opinion that each and every exposure to asbestos that an individual with mesothelioma experienced in excess of background level is a substantial contributing factor in the development of disease.

First, did I read that right?

A Yes.

Q And that's what you swore to in 2001 --

A Yes.

Q -- true?

Lastly, this case was a case called -- named -- the man that you were doing this affidavit for was named Boyce Innerarity [phonetic]; right?

A Yes.

Q And he was a man who had industrial exposure to both insulation and chrysotile gaskets; correct?

A Yes.
Q And in this case, you opined that both the gaskets and the insulation were substantial contributing factors to his mesothelioma; correct?
A Yes.
Q All right. You can set that aside, sir.
In 2005 -- let me -- is that a copy -- a fair and accurate copy of the affidavit you signed in 2005?
A It is.
Q And that was signed May 20th, 2005? We're looking at the same one?
A Yes, sir.
Q All right. And that's an under-oath affidavit; right?
A Correct.
Q Okay. In this one, you repeated the paragraph -- again, four years later, you repeated the paragraph, The scientific and medical community have yet to determine a level of exposure to asbestos below which mesothelioma does not occur; correct?
MR. TIVIN: Objection of prior consistent statement, 613(b).
THE COURT: Overruled.
BY MR. PANATIER:
Q While there is no threshold, there is insufficient

evidence to implicate levels of exposure to asbestos that occurs as a result of background or ambient air exposure. You said that; correct?

A Yes.

Q Very low levels of exposure above background, however, have been demonstrated to cause mesothelioma. It is, also, my opinion that it is the total dose of asbestos, regardless of fiber type, that the patient experiences that causes the disease.

It is further my opinion that each and every exposure to asbestos that an individual with mesothelioma experienced in excess of background level is a substantial contributing factor in the development of the disease.

Did I read that correctly?

A Yes.

Q Okay. You can set that aside, sir.

Now, in '06 when you had this change of heart, change of mind, since then, you have been retained, of course, by many companies who manufactured and sold asbestos-containing gaskets; fair?

A Sure.

Q That includes John Crane and numerous others?

A Yes.

Q Okay. From a medical perspective, you testified in 2007 that asbestos products in those circumstances that

release asbestos fibers that are above background and carry no conspicuous warnings are unreasonably dangerous; correct?

MR. TIVIN: Objection. Beyond the scope of the proffer, beyond his expertise, ultimate question.

THE COURT: Overruled.

THE WITNESS: Yes.

BY MR. PANATIER:

Q Okay. Lastly, there's no cure for mesothelioma; correct?

A Correct.

Q Mr. Seay's mesothelioma, of course, followed exactly the course you would have expected it to follow; right?

A Pretty much, yes, sir.

Q It did cause his death; correct?

A That's my understanding.

Q All right. And from a medical perspective, based on the literature you've read, asbestos-related diseases were known to be preventable all the way back in the 1930s; correct?

MR. TIVIN: Objection to form.

MR. YOUNG: Join. Outside the scope.

THE COURT: Overruled.

THE WITNESS: Yes, sir.

MR. PANATIER: Okay. Thank you, sir.

I have no further questions.

THE COURT: Redirect.

MR. TIVIN: May it please the Court.

THE COURT: Yes, sir.

REDIRECT EXAMINATION

BY MR. TIVIN:

Q Well, let's talk about a few things. Dr. Roggli, you were asked about background numbers. Have background numbers ever been associated with a risk of asbestos-related disease?

A No.

Q And what's the high -- and so what background number do you rely on when you testify about what background numbers are?

A Well, I think it's important to point out that that chapter only goes up to the 90th percentile. That is, the levels that 90 percent of the cases are higher -- are that level or lower. So it doesn't tell you what the top 10 percent were.

And they are a number -- a number of different numbers that are out there. The one that I use is similar to what the EPA has used, it's 0.01 fiber per cc is the upper level of background.

The ATSDR, which is the Agency for Toxic Substance Disease Research or something like that, what they did,

they took half that value, 0.005, as the upper limit, multiplied it by 80 years, and said about .4 fiber cc years is the upper limit of what an individual can be exposed to with background.

And then there are some studies that have shown that -- for example, in San Francisco, the levels go up as high as 0.02 fibers per cc.

Q And have any of those levels up to 0.02 ever been shown to increase the risk of mesothelioma?

A No.

Q You were asked a bunch of questions about some affidavits. And those appear to be the opposite of what you testified on direct. Can you explain to the ladies and gentlemen of the jury why that is the case, if it is the case?

A Yeah. What's changed is about my opinion about the level of chrysotile that can contribute to mesothelioma. Actually, prior to -- prior to the 2001 affidavit that -- I still required you to have levels that are above .1 fiber per cc. And if I was asked to assume that levels were below .1 on a time-weighted average, I said that gaskets and packing didn't contribute prior to 2001.

If I was asked -- I'm not an industrial hygienist. So if I was asked to assume it's higher than .1, then at that time I could determine that it was a contributing

factor.

Then after 2006, there was -- it needed to get to seven to 10 fiber cc years for it to be a contributing factor, in my opinion. Then there's no way you can work for 70 to 100 years at those levels to get an exposure that's going to be contributory.

So after 2006, it didn't matter what assumptions I was asked to make. It would not be a contributory factor.

Q So you're saying that the medical knowledge regarding the ability of asbestos to cause mesothelioma has changed over the years?

A Yeah. And part of it -- I mean, the information goes forward. Part of it is putting all the pieces together at one point in time. It's sort of like a perfect storm that came together, which was what we had determined to be the background level of mesothelioma.

And we published that, what the -- what Dr. McDonald had determined was the rate of mesothelioma in his chrysotile miners and millers, what the level of exposure to chrysotile miners and millers got, which was presented somewhere else. And then assuming a linear dose-response line that goes straight back down to zero. Doing those calculations is what gave me the -- it's a fairly simple calculation, but the information was all there. It was

just a matter of taking it and looking at -- determining the level of seven to 10 fiber cc years.

Q Do you believe, in terms of asbestos, that it is a linear dose response back to zero with the causation of mesothelioma?

A Well, once you get down to somewhere around five or nine fiber per cc years, that's the lowest level that's, actually, been measured in the workplace. It's been associated with an increased risk. What, actually, happens below that, nobody knows.

The agencies like the Environmental Protection Agency and OSHA err on the side of the -- protecting the workforce and assume it's a straight line. But it may dip down and be a threshold level. It's just that epidemiology, when you're talking about these low levels of exposure, cannot distinguish between a low level of asbestos-induced mesothelioma and one that's spontaneous and was going to occur anyway.

Q You mentioned the term under questioning about "doubling the risk." And you were asked about risk and doubling the risk. Do you remember that?

A Yes, sir.

Q In terms of causation and epidemiology, is doubling the risk an important concept?

A Sure.

Q And can you, please, explain why it's an important concept?
A If you've got a hundred cases of mesothelioma that are going to occur anyway and you've got 100 cases that are occurring now as a result of this exposure, then you've doubled -- effectively doubled the risk, because now you've got 200 total cases. If you had 100 cases that were going to occur anyway and 50 that resulted from exposure, then out of the 150 cases that occurred, you wouldn't know whether a case -- in fact, more likely the person would belong to the group where it would have occurred anyway.

So until you've got more than 200 total cases, the hundred that would have occurred anyway, plus more than that, do you know that the exposure was really the causative factor -- contributing factor to the disease.
Q So in terms of it's a basic tenant in epidemiology that if you're not doubling the risk, you can't associate that with causation?
A Yes.
Q You were asked questions about tremolite. You've known about tremolite in Canadian chrysotile for quite some time?
A Sure. I mean, that's, actually, incorporated into my seven to 10 fiber cc year calculation. If it's due to the

tremolite, then it's occurring at about a level of 0.07, which is similar to amosite. But it still takes seven to 10 fiber cc years of chrysotile to get that much tremolite.

Q So when you gave your opinions regarding the ability of chrysotile to cause disease, that assumed that there was some tremolite in it?

A Yeah. That's why the -- both of the affidavits mentioned asbestos dust. Because I refer to chrysotile dust, specifically, Canadian chrysotile dust as to be the chrysotile plus whatever contaminant comes along with it, typically tremolite.

Q So when you were asked questions about John -- a test on a John Crane product that had -- may have had some tremolite contamination, that doesn't change any of your opinions?

A No.

Q And you were asked questions on cross-examination where you said that every product was a substantial factor. And, now, you're saying every -- are you -- is it different? Is every product a substantial factor?

A Well, the 2001 affidavit which mentions about every exposure above background being contributory has a reference that is to a paper we wrote about low-level asbestos-related mesotheliomas that were based on fiber

analysis. So in terms of what accumulates in the lung, yeah, anything that's above background is a contributory factor.

In terms of tremolite, what we find is -- well, in amosite, we found that about 89 percent of our cases were asbestos-related when we did fiber analysis, and 86 percent of them had elevated amosite. About 25 percent of them had elevated tremolite. So sometimes tremolite with chrysotile is a contributing factor, but most of the time, it's not.

Q Based upon the facts of -- that were given you in a hypothetical regarding Mr. Seay's exposure to gaskets, does anything -- did anything that happened on cross-examination change your opinion as to whether those gaskets would have been a substantial factor in developing mesothelioma?

A No, sir.

Q Anything in the hypothetical regarding John Crane and possible exposure to John Crane gaskets, did that in any way change your opinion on whether it'd be a factor in causing mesothelioma?

A No, sir.

Q Do you have any opinion as to what John Crane knew or didn't know at any point in time regarding the hazards of asbestos?

A I do not.
Q And do you have -- you don't have any opinion about whether they were reasonable or unreasonable in what they did regarding their asbestos-containing products; correct?
A Correct.
Q Do you -- in any of the articles that you talked about regarding the state of the art, did any of those articles deal with the ability of gaskets to cause any disease?
A Not that I know of.
Q All the articles in the state of the art you were asked about, they were all regarding the ability of asbestos to cause disease?
A Yes.
Q And in your -- the first article regarding -- the first real epidemiologic study regarding the ability of a specific asbestos product to cause a specific asbestos disease would have been Dr. Selikoff in '64, '65 with thermal insulation?
A I think that's reasonable.
Q Anytime before 1980, was there any study that showed that gaskets could cause mesothelioma?
A Not that I'm aware of, no.
MR. TIVIN: Nothing further.

RECROSS-EXAMINATION

BY MR. PANATIER:

Q All right. I was really hoping I was going to get you to change your mind today. But you haven't, to be clear; right, I didn't change your mind?

A Correct.

Q Okay. You talked about background levels and you said, well, that's a mountain -- but it's just the background of my computer. It's not a mountain of tremolite or anything?

A Sure.

Q The -- you said there was some very high background levels, for instance, San Francisco; right?

A Yes.

Q Do you know how much time Mr. Seay spent, if at all, in San Francisco?

A I'm not aware of any.

Q Okay. And you said, well, the high -- the high end for the background was .01; right?

A That's the one I use, yes.

Q But you admit that's the high end. The average is far lower than that --

A True.

Q In fact, your opinion on the average background is three 0s and a 1?

A Yes.
Q Right. So --
A For urban.
Q Right, for urban. So this is what's quoted in your book. So we'll just make that -- this is your book. And then over here we'll do Dr. Roggli. And high background would be .01 fibers per cc; right?
A Yes.
Q But your opinion on average is .0001 fibers per cc; true?
A That's what I've seen from Dr. Nicholson, yes.
Q Okay. How much higher is this one than this one?
A I believe it's a hundred times higher.
Q Okay. Mr. Tivin asked you whether or not -- he just said, did any of those articles that you've seen in the state of the art, in the literature, have to do with gaskets causing disease; right?
A Yes.
Q And you said, no, you hadn't seen any; correct?
A Correct.
Q Have you seen this?
MR. TIVIN: I would object, unless he's going to, actually, give him the article.
MR. PANATIER: I can bring my computer up and show it to him. That's fine.

THE COURT: Go ahead. Go ahead.

MR. PANATIER: Okay.

BY MR. PANATIER:

Q Sir, you're familiar with this article from 1932. This is Merewether and Price; correct?

A Yes.

MR. TIVIN: And I would object to the commentary on the article that it clearly isn't part of it.

BY MR. PANATIER:

Q Oh, there's some -- yeah. Well, we'll get there. It says, Asbestosis associated with steam packings. And I'm going to take you right there, Page 12. This is 1932.

Let me blow this thing up. Make sure it fits.

This part right here -- I'm trying to get this to fit, so -- but, you know, computers. Okay. Here we go.

That first line says, Industries and processes in which asbestosis occurs; right?

A Yes.

Q Okay. Processes involving exposure to asbestos dust which are known to give rise to asbestosis. Now, asbestosis is an asbestos disease; correct?

A Yes.

Q Or in which the conditions are such as to be liable to produce the disease are the breaking, crushing, disintegrating, opening, and grinding of asbestos, and the

mixing or sieving of asbestos or any admixture of asbestos, the manufacture of asbestos textiles, the making of insulating slabs or sections, and the making or repairing of insulating mattresses, composed wholly or partly of asbestos, and of the sawing, grinding, and turning in the dry state of articles composed wholly or partly of asbestos, such as motor car brake and clutch linings, electrical conductors, and packings and jointings.

And you understand jointings to be gaskets, correct?

A Yes.

Q Okay. So this is talking about the -- specifically, with regard to those last products, gaskets, sawing, grinding, and turning in the dry state as a process in which asbestosis occurs; correct?

A That's what he says.

MR. PANATIER: No further questions.

THE COURT: All right. Thank you, Dr. Roggli.

THE WITNESS: Thank you, Your Honor.

THE COURT: All right. Ladies and gentlemen, we'll take a 10-minute break. Don't talk about the case. Continue to keep an open mind.

(WHEREUPON, the jury was excused from open court at approximately 10:46 a.m.)

THE COURT: All right.

(WHEREUPON, a break was taken.)

(WHEREUPON, CNA Exhibit Nos. 1 and 2 were marked for identification only.)

THE COURT: Yes, sir. Mr. Collier.

MR. COLLIER: Your Honor, we were just trying to figure out scheduling of what we've got left. And it sounds like there's about 30 minutes of Dr. Crapo's --

MR. PANATIER: Yeah.

MR. TIVIN: Yep.

MR. COLLIER: -- video that's left. And then we've got Bruce Bowyer, who we're going to be calling.

We were wondering if we could do the 30 minutes or so of Crapo, take an early lunch break, and then put Mr. Bowyer on right after lunch and go straight through and finish him up.

THE COURT: How long is Dr. Bowyer supposed to take?

MR. PANATIER: Dr. Bowyer is the corporate representative for Celanese. He's going to be a fairly long witness for me on cross, probably about two hours. We had a long video. We decided to just do it live, so.

THE COURT: Okay. How long is he going to be on direct?

MR. COLLIER: 45 minutes.

THE COURT: Okay. Hold on one second.

(Pause.)

THE COURT: That's fine. We'll finish up Dr. Crapo and then do lunch.

MR. COLLIER: Thank you, Your Honor.

THE COURT: Okay. You can bring the jury in.

(WHEREUPON, the jury came into open court at approximately 11:00 a.m.)

THE COURT: All right. Ladies and gentlemen, we're going to conclude the deposition of the doctor from yesterday. And then, again, we're going to take an early lunch just due to the fortuitousness of the schedule.

So, yes, sir. You can resume the video.

MR. TIVIN: At this point, we're going to continue the video deposition of Dr. Crapo, which was started yesterday afternoon.

(WHEREUPON, Court's Exhibit No. 8 continued to be played in open court.)

MR. PANATIER: That's it, Your Honor.

THE COURT: Okay. We'll just be back at 1:00. Don't talk about the case. And continue to keep an open mind.

Thank you very much.

(WHEREUPON, the jury was excused from open court at approximately 11:33 a.m.)

THE COURT: All right. We'll see you back at 1:00.

Thank you.

(WHEREUPON, a lunch break was taken.)

THE COURT: Okay. My apologies for that, for being late. So sorry.

Where do we stand? The next witness, is everybody ready for him?

MR. COLLIER: Your Honor, there are two motions in limine that we need to discuss.

THE COURT: Okay.

MR. COLLIER: They're both Celanese motions in limine. The first ones relates to excluding documents related to the National -- the NSC and the IHF. Celanese was a member of these organizations for various years. But it's Celanese's position that Plaintiff should be excluded from showing articles about these -- or from these organizations to Mr. Bowyer without proving that Celanese had actual knowledge of and approved the trade association's actions, which they can't do.

We would argue that they're not relevant as to Celanese, unless Plaintiff's can show actual knowledge of Celanese. And even if they were considered relevant, the probative value is outweighed by the prejudicial effects since there's no evidence that Celanese, actually, received the articles, let alone approved the actions therein.

THE COURT: So that, I'm taking, to you're offering for the purposes of notice?

MR. PANATIER: They're being offered for purposes of notice. And for Celanese, a premises manufacturer, they're being offered for constructive and actual knowledge.

The reason we played the short deposition of Charles Laubly, who is the corporate industrial hygienist, was because he laid the foundation that he personally received the Industrial Hygiene Foundation Digest and read them. And that they would then be passed up to the corporate library. And that Celanese was a corporate member of both the Industrial Hygiene Foundation and the NSC.

So these are periodicals they would have received and read.

MR. COLLIER: And, Your Honor, just in response, I would argue that this, also, relates to the motion in limine that we argued several days ago relative to Celanese not being held to the standard of care of a manufacturer.

THE COURT: Okay. Thank you, Mr. Collier.

I understand the objection and respectfully overrule it. I think, under Player v. Thompson and other similar cases, it would be coming in under notice and would not be hearsay. And it would be of such probative value that it vastly outweighs any tendency for the jury to be unduly confused or have unfair prejudice, or any other

consideration of Rule 403.

What's the next motion?

MR. COLLIER: The other one relates to post-exposure documents. And what we've agreed with Plaintiffs counsel trying -- rather than trying to take it in a vacuum, we'll take those up on a document-by-document basis, if that's agreeable.

MR. PANATIER: That is.

And I've shown them to Mr. Collier. And when I do come to a document that is dated after the exposure, I've got a copy for him. And we'll -- I'll approach before I put it up.

THE COURT: Okay. Thank you, gentlemen.

So are we ready for the jury?

MR. TIVIN: Yes, Your Honor.

Your Honor, although John Crane has finished its presentation of evidence in this case, we're going to hold off on resting until after the Plaintiff does.

THE COURT: Okay, sir.

(WHEREUPON, the jury came into open court at approximately 1:35 p.m.)

THE COURT: All right. Ladies and gentlemen, I apologize for the delay in starting up this afternoon. Although it may surprise you, I was a lawyer once, too, which means I can't estimate time good either. So I

apologize for that inconvenience.

All right. You can call your next witness.

MR. COLLIER: Your Honor, at this point, we'd all Bruce Bowyer on behalf of Celanese.

THE CLERK: Place your left hand on the Bible and raise your right hand.

WHEREUPON,

BRUCE BOWYER,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. COLLIER:

Q Good afternoon, sir.

Could you tell us your full name, please?

A Yes. Bruce Bowyer.

Q And, Mr. Bowyer, where do you live?

A In Roebuck, South Carolina.

Q And do you understand that today you're offering testimony as the corporate representative on behalf of Celanese?

A Yes, I do.

Q Mr. Bowyer, I'd like to share a little bit about your background with the jury. First of all, where did you grow up?

A In St. Petersburg, Florida.

Q And did you attend college?

A I did, at the University of Florida in Gainesville, Florida.
Q Did you get a degree from the University of Florida?
A Yes. A Bachelor of Science in Mechanical Engineering.
Q And can you just briefly describe for us what mechanical engineering is?
A Well, there's many different options in mechanical engineering. What I focused on was the project-related work for processes, chemical processes, and the associated equipment.
Q And when did you graduate from and leave Gator Land?
A March of 1969.
Q What did you do after graduating from Florida?
A I went to work in Orlando, Florida, for Martin Marietta Corporation.
Q And how long were you at Martin Marietta?
A Six months.
Q Where did you go next?
A To Brunswick, Georgia, working for Brunswick Pulp & Paper Company.
Q And what was Brunswick Pulp & Paper?
A They manufactured paper and pulp, but they were all intermediate products. There were no consumer products.
Q And when you say "intermediate products," what do you

mean by that?
A Well, some of their products were used in baby diapers, but it was the diaper company that bought our product and put it into the diapers. We didn't make the actual diapers.
Q How did you -- how long did you work for Brunswick Pulp & Paper?
A Three and a half years.
Q And what did you do while you were employed there? What were your job titles?
A I started off in maintenance. I don't remember my exact title. But I worked in the maintenance department with the maintenance mechanics in, actually, an area of the shop planning their work and identifying what crafts needed to be doing -- needed to be provided for certain jobs.
Q And then did you have another job while you were with Brunswick Pulp & Paper?
A I, eventually, moved into project engineering.
Q And what did your work in project engineering involve?
A It involved identifying maintenance needs and some of the process equipment, helping to solve maintenance problems that may have been identified, doing major project installations, major equipment upgrades, minor

maintenance problems.
Q Did that work as -- in engineering involve interfacing with outside contractors?
A Yes, it did.
Q When did you start working for Celanese?
A In April of 1973.
Q And how long did you work for Celanese?
A Until the end of 2001.
Q At some point during your employment for Celanese, you were working at the plant here in Spartanburg; correct?
A That's correct.
Q And did that plant get purchased by another company?
A Yes, it did. Mid to -- well, probably '87, '88.
Q And was it late '80s or late '90s that it was purchased?
A I'm sorry. Yes. It was '97 or '98 when it was purchased by KoSa.
Q And did you continue to stay employed at that plant working for KoSa?
A Yes, I did.
Q And did you continue working for KoSa until you retired?
A Yes, I did.
Q And when did you retire?

A December 31st, 2001.
Q Did you have any further employment after you left the Spartanburg plant in 2001?
A I formed my own company.
Q And what's the name of that company?
A BTB Consulting, Incorporated.
Q And what does your work with BTB Consulting involve?
A I do environmental safety and health consulting for various organizations.
Q And do you still operate BTB Consulting today?
A I do.
Q Does a portion of your employment with BTB involve legal consulting?
A Yes, it does.
Q And does that include providing testimony as a corporate representative on behalf of Celanese like you're doing here today?
A Yes, it does.
Q And what is the rate that you charge for legal consulting and testimony?
A $112.50 an hour.
Q Mr. Bowyer, let's go back to your work, your employment with Celanese. When you started in 1973, what were you hired in as?
A As a project engineer.

Q And where were you employed?
A In Salisbury, North Carolina.
Q How long did you hold that job as a project engineer?
A Approximately five years.
Q During that time frame of roughly five years, what did your -- what were your job duties as a project engineer?
A It was very similar to what I had done with Brunswick Pulp & Paper, equipment installation, equipment maintenance problem-solving, major maintenance repair, new equipment installations, and process improvements.
Q Were outside contractors hired to perform much of the work that you oversaw as a project manager?
A For everything, except very small projects, yes.
Q And who was the main outside contractor that was hired in Salisbury?
A Daniels.
Q Back in that time frame, who was responsible for training the contractors employees who were working?
A Daniels.
Q And when you were in that role in Salisbury, who was responsible for making sure that the contractors employees complied with all of the rules and regulations in place?
A Daniels.
Q Who was looked at to be responsible for those Daniel

employee -- those Daniel employees safety while they were there at the Salisbury plant?

A Daniels.

Q So in 1978, approximately, it sounds like you changed jobs. Can you tell us what happened at that point?

A Yes. I had an opportunity to go to work in the environmental safety and health department, and became responsible for environmental programs, as well as industrial hygiene.

Q And how long did you stay in that role?

A A little over five years.

Q So until approximately 1983?

A 1983, yes.

Q What were your job responsibilities as an environmental control engineer in the environmental safety and health department?

A I was responsible for environmental permitting, emission reports, what we emitted into the environment, waste water treatment, solid waste, hazardous waste, industrial hygiene, exposure monitoring, noise, radiation, things of that sort.

Q As an environmental control engineer, were your responsibilities project-related for plant-wide?

A Oh, plant-wide.

Q With respect to the industrial hygiene

responsibilities, did that include the protection of Celanese employees?

A Yes, it did.

Q Did you interface with any Daniel employees in that role?

A Yes.

Q Who was responsible for the safety of Daniel employees on site in Salisbury during that period of time?

A Daniels management.

Q So in 1983, what happened?

A Oh, in 1983 I became a certified industrial hygienist. And I got promoted to the corporate industrial hygienist position at the corporate office in New York City.

Q And what did you do in that position?

A I was responsible for industrial hygiene auditing of all the Celanese facilities in the U.S. and abroad.

Q What sort of work did you do to audit these facilities?

A I would do a site visit, interface with the environmental safety and health contact. And together with that contact, we would identify items of concern that we think -- thought needed to be monitored. And then I would arrange for a consultant to come in and, actually, conduct that monitoring.

Q And where did you go next in your employment with Celanese?
A To Charlotte, North Carolina.
Q What position did you hold in Charlotte?
A I was the manager of industrial hygiene for the fibers and film group.
Q And explain to us what that involved.
A It was overseeing the activities related to industrial hygiene at all the fibers and film group facilities to ensure that they had policies and procedures that complied with regulation, as well as corporate policy.
Q How did your work as an industrial hygiene manager for the fibers division differ from the work that you did previously as the corporate industrial hygienist?
A The corporate industrial hygienist was very much an overseer, kind of a, I want to look and see what you're doing. I have no authority over what you're doing, but I can make recommendations on what might need to be changed.

The manager of the fiber and film group, industrial hygiene for the fiber and film group had direct responsibilities with all of those plants, and all of the industrial hygiene personnel in the plants.
Q While you were in Charlotte, did you have responsibility for the Spartanburg plant?

A Yes, I did.
Q And how long were you in that position in Charlotte?
A From 1984 to 1990.
Q Where did you go in 1990?
A To Spartanburg.
Q How long were you employed at the Spartanburg plant?
A Until I retired at the end of 2001.
Q What was your job title here at the Spartanburg plant?
A Manager of environmental safety and health.
Q Were you the head of that department?
A I was.
Q What did your daily job duties entail at Spartanburg?
A Well, as a member of the plant staff, I helped in managing the entire plant and the various issues that might arise from that, as well as providing direction to the industrial -- or the environmental safety and health staff, which included anywhere from five to 10 personnel at various times.
Q Did any of your work in Spartanburg involve interfacing with contractors?
A Yes.
Q Was Daniel one of the contractors that you interacted or interfaced with?
A Yes, it was.

Q When you were working at the Spartanburg plant, how would you describe it in terms of its size?
A Employee-wise, I would guess when I went there, it was probably 1,800 employees, or around there. Physical size, we talk about number of acres under roof. And I don't remember, but 40, 50, or more acres under roof. The site size was over 100 acres.
Q Would it have been considered one of the larger employers back in that time frame?
A Yes. I believe the hospital, Spartanburg Regional, was the only larger employer in the area.
Q In your role in this case as a corporate representative, your personal knowledge only dates back to 1973; correct?
A That's correct.
Q But have you undertaken other efforts to familiarize yourself with how Celanese operated or how the different plants operated before you were, actually, employed at them?
A Yes, I have.
Q And what have you done in that regard?
A I've reviewed documents, depositions, procedures, policies, contracts, engineering progress reports.
Q And so, for instance, even though you didn't start at the Spartanburg plant until 1990, have you reviewed

documents and deposition testimony to familiarize yourself with operations at the plant before you arrived?
A Yes, I have.
Q Mr. Bowyer, are you a certified industrial hygienist?
A I am.
Q When did you become a certified industrial hygienist?
A In 1983.
Q And the jury has already heard a little bit about what industrial hygiene is. So let me just ask you, why would an industrial hygienist like yourself be important to a company like Celanese?
A Well, to have the knowledge and ability to be able to monitor various exposures that employees might be exposed to, to ensure that they have a safe environment.
Q In the course of your work as an industrial hygienist for Celanese, did you have occasion to read the OSHA regulations?
A Yes, many times.
Q Did you regularly deal with OSHA requirements?
A Yes, on a daily basis.
Q Did part of your job with Celanese involve determining compliance with OSHA regulations regarding asbestos?
A Yes, it did.
Q Mr. Bowyer, you were provided with some materials to

review in connection with this case; correct?
A Yes, I was.
Q What were you provided?
A Well, contract documents between Celanese and Daniels, various depositions: Dr. Dixon, who was the corporate medical director; and Charles Laubly, who was the corporate industrial hygienist early on; Mr. Seay and Mr. Thompson's depositions; and there may be some others.
Q In reviewing the testimony of Mr. Seay, did you consider that testimony to be fairly reasonable, based on the maintenance activities that you observed at Spartanburg and at other industrial locations?
A It sounded like a typical maintenance person's millwright's work.
Q Did you see any Celanese records or documents in this case that referenced Mr. Seay?
A No. He was a Daniels employee.
Q Do you recall when the original construction of the Spartanburg plant began?
A Probably around mid-1960s.
Q And do you know who was hired to initially construct that facility?
A Daniels Construction.
Q And how do you know that?
A Based on contract documents that I've reviewed.

Q Over the years, was that plant expanded or remodeled?
A Yes, many times.
Q And who was hired to perform those expansions or remodels, at least, during the time frame relevant to Mr. Seay's lawsuit?
A Daniels.
Q And how do you know that?
A Based on contract documents.
Q Why was Daniel hired to perform this work, as opposed to Celanese doing it themselves?
A Well, they're a qualified, capable contractor that can do the expert work that we needed done, both in construction and maintenance.
Q And why was Daniel hired, as opposed to another contractor?
A There may have been other comparable contractors out there. And there are a lot of reasons that go into the selection of one over another. And I really don't have the detailed information for that, other than they were expert.
Q Was Daniel highly regarded in the industry?
A Yes, it was.
Q During the time frame that Mr. Seay was working at the Spartanburg plant, what products were being made there?

A Polyester.
Q And are there different processes for polyester manufacturing?
A Yes, there are.
Q Which process or processes were used at Spartanburg?
A There were two processes -- basic processes. One was the batch process. And the other one's a continuous polymerization process.
Q And just briefly, can you describe what those two processes involve?
A The batch process is you put everything into a vessel, you mix it, you heat it, you dump it into another vessel, and you do more processing to it. And then you dump it out and you have polyester.
The continuous process is you continuously feed the raw materials in. They go through various stages of different parameters. And after going through, I believe, it's four vessels, it comes out the other end as polyester.
Q Regardless of how it's made, it's still polyester; correct?
A Yes, it is.
Q Does that polyester ever contain asbestos?
A No.
Q Were there any asbestos-containing products that were

made at Spartanburg?
A No.
Q Celanese isn't denying that there were pipes, pumps, valves, and other equipment out at the Spartanburg plant, are they?
A No, we're not.
Q In fact, was that type of equipment necessary to support the production of the polyester material that was being made there?
A Yes, absolutely.
Q And did the production of the polyester material require the use of heat?
A Yes.
Q How was heat used in the production process?
A Well, the polyester melts at roughly 300 degrees C, which is probably around 500 degrees Fahrenheit. In order to keep it moving through the pipe, you have to maintain it at that temperature. And that's what it was -- it was, also, used to make the reaction occur.
Q We've heard some about Dowtherm. What is Dowtherm?
A Dowtherm is a heat medium to -- that transfers heat to the product. It's similar to steam, except it has different properties that allows much higher temperatures at much lower pressures.
Q How was the heat or Dowtherm supplied or transported

to the production process?
A With pumps and steel pipes.
Q And were those piping systems insulated?
A Yes, they were.
Q Why were those piping systems insulated?
A Well, for two main reasons. One is the heat loss would be very significant if there wasn't insulation. And it probably wouldn't be feasible to make polyester because of all the heat loss. The other one is that if you had people working around pipes that had a temperature of 300 degrees Centigrade, just a very minor touch would create severe burns to that individual.
Q Celanese isn't denying that there were asbestos-containing insulation materials, gaskets, and packing at its plant in Spartanburg in the early 1970s, are they?
A No.
Q Who installed those materials originally during the plant's initial construction and during additions throughout the 1970s?
A Daniels.
Q And how do you know that?
A Based on contract documents and progress reports I've reviewed.
Q Would all of the insulation materials in the

Spartanburg plant have been asbestos-containing in the 1970s?

A Excuse me. No.

Q What other kinds of insulation were used at Spartanburg, even when asbestos-containing insulation might have been used in the early 1970s?

A We had fiberglass. We had what's called Foamglas. There may have been others.

Q Why were there different types of insulation in use, even at the same time?

A It was based on the heat properties of the material that had to be insulated, what the temperature ranges were.

Q Did there come a time when asbestos-containing insulation was no longer installed at Celanese's plants?

A Yes.

Q Do you know when that occurred?

A Around 1973.

Q Do you know why that change was made?

A Because of the OSHA regulation.

Q Was that change communicated by Celanese to Daniel, who was, actually, doing the insulation installation?

A Yes.

Q Do you know how that -- or how do you know that that information was communicated to Daniel?

A Based on documentation that I've reviewed.
Q And in the 1970s, were there, also, efforts being made by Celanese to investigate replacement or substitution materials for asbestos-containing gaskets, and equipment, and piping systems?
A Yes, there were.
Q In your various roles with Celanese over the years, did you become familiar with the maintenance practices and procedures that were used on Celanese premises?
A Yes.
Q In order to keep the production in the Spartanburg plant running, did routine maintenance and preventative maintenance have to be performed on the equipment and process systems?
A Yes. If it wasn't done, we wouldn't make product.
Q From the late 1960s until the 1980s and even beyond, who performed the maintenance on the equipment and the process systems at Spartanburg?
A Daniels.
Q And in the course of your work for Celanese and in this case, have you seen the maintenance contracts between Celanese and Daniel?
A Yes, I have.
Q Are you familiar with the terms contained in those contracts between Celanese and Daniel?

A Yes.
Q I'd like to show you two documents that have been marked as Celanese Exhibit Nos. 1 and 2.
A Okay.
Q Can you tell me what those documents are?
A The Exhibit No. 1 is the March 1972 maintenance services contract between Daniels and Celanese.
Exhibit No. 2 is the 1975 maintenance services contract.
Q And do those documents accurately depict the maintenance contracts that you're familiar with that would govern Mr. Seay's work for Daniel at the Spartanburg plant?
A Yes.
Q And were those maintenance contracts created and maintained in the ordinary course of Celanese's business?
A Yes.
Q Why did Celanese hire Daniel to perform maintenance work at the Spartanburg plant?
A Because they had qualified people with the technical expertise to be able to maintain the equipment appropriately.
Q And did the work that the Daniel employees were performing under these maintenance contracts require specialized skill, as opposed to just general labor?

A Yes, it did.
Q What trades did Daniel employees consist of at the Spartanburg plant in terms of maintenance?
A There were several. I may miss a few, but electrical, instrumentation, millwright, insulation, pipe fitting, welding, structural. And there may be others.
Q Were Daniels employees in charge of maintaining and fixing all of the equipment and process systems?
A Yes, they were.
Q Did Celanese have any of its own maintenance workers at all during that time period?
A No, they did not.
Q Celanese had employees working at the plant, though, during that time frame, didn't they?
A Yes, they did.
Q And what were Celanese employees in charge of during that time?
A They were responsible for making polyester and the related products.
Q Did you see any testimony in Mr. Seay's or Mr. Thompson's depositions that Mr. Seay ever worked around any Celanese employees?
A No, I did not.
Q Going back to the maintenance employees who performed the day-to-day oversight of those -- strike that.

Going back to these maintenance contracts, who performed the day-to-day oversight of those Daniel maintenance employees like Mr. Seay?

A Daniels management.

Q Who provided the Daniel maintenance employees with their daily assignments or tasks?

A Daniels management.

Q Who was in charge of hiring and firing those Daniel maintenance employees such as Mr. Seay?

A Daniels management.

Q And how do you know that?

A It's in the contract.

Q And is that what's shown here in Section 15F of the maintenance contract?

A Yes.

Q Did Daniel have full and complete control over its employees?

A Yes, it did.

Q And how do you know that?

A It's based on the contract.

Q And is -- that's what's shown in Section 11 of the maintenance contract?

A 11F? Is that what that is?

Q I think it's another -- it's another section.

A Sorry.

Q There we go. Section 11.
A Oh, okay. Yes. Yes.
Q Were Daniel employees like Mr. Seay responsible for abiding by all of Celanese's safety regulations?
A Yes.
Q And how do you know that?
A That's, also, in the contract.
Q And is that what's shown here further down in Section 11 of the contract?
A Yes.
Q Did those maintenance contracts indicate who was in charge of training the Daniel maintenance employees such as Mr. Seay?
A Yes, Daniels management.
Q And is that what's shown here in Section 15G of the maintenance contract?
A Yes.
Q Why was it important that the Daniel employees, such as Mr. Seay, be trained and fully qualified?
A If they weren't trained and qualified, then they wouldn't maintain the equipment properly. It would break down, and the process would shut down.
Q And did that training require specific knowledge about the equipment they were going to be working on?
A Yes, it did.

Q Who was responsible for providing safety information and conducting safety meetings with Daniels employees such as Mr. Seay?
A Daniels management.
Q And how do you know that?
A Based on reviewing documents and contracts.
Q If a citation or a penalty were to be assessed due to a safety violation by a Daniels employee, who was responsible for paying for that violation?
A Daniels.
Q And how do you know that?
A It's in the contract.
Q Is that what's shown here in Section 15H --actually, let me move on.

Was Daniel, also, required by the maintenance contract to comply with OSHA?
A Yes, they were.
Q And is that what's shown here in Section 15H?
A Yes, it is.
Q Did Daniel -- or did Celanese rely on Daniel to be in compliance with OSHA as far as its operations and its employees were concerned?
A Yes, it did.
Q Mr. Bowyer, if there were warnings to be provided to Mr. Seay relative to the work that he and the other Daniel

employees were performing at Celanese, who was in the best position to provide those warnings to them?

A Daniels management.

Q When you came into an industrial hygiene role in 1978, were there already processes in place regarding the removal and control of asbestos?

A Yes, there were.

Q So at some point between 1973, when you said that asbestos-containing insulation was no longer used, and 1978, there would have been some high-temperature lines that were insulated with asbestos-containing insulation and some that would have been insulated with asbestos-free insulation; correct?

A That's correct.

Q And when evaluating whether a high-temperature process line was insulated with asbestos-containing materials versus asbestos-free materials, what was Celanese's policy or procedure?

A We would always assume that it contains asbestos until we could sample it and confirm whether it was or wasn't.

Q And was Daniel responsible for following that policy or procedure of Celanese?

A Yes, they were.

Q And if it was presumed to be asbestos-containing,

were there then certain procedures that Daniel had to put in place when working on those lines?

A Yes, there were.

Q Are there certain inherent hazards associated with manufacturing polyester and other fibers?

A Yes, there are.

Q And was it the responsibility of Celanese to know about those hazards associated with the products that Celanese was making?

A Yes, we did.

Q And was it the company's responsibility, and later your responsibility, to protect those Celanese employees and others who were on its premises from possible hazards relative to the products that Celanese was making?

A Yes.

Q Now, was the Spartanburg plant mining or making -- was it mining asbestos or making asbestos-containing products?

A No, it was not.

Q So was the use of asbestos at Spartanburg just that it was present in some materials that were purchased from other companies?

A That's correct.

Q And at Spartanburg, were any Celanese employees working with products or materials that contained

asbestos?
A No, they weren't.
Q Who was it that was working with those materials?
A It was Daniels.
Q Mr. Bowyer, how would you describe Celanese's approach to safety?
A I would -- they were proactive. They tried to stay ahead of the regulations, if they were aware of what was going on or found out information about potential hazards that weren't being regulated.
Q Was safety important to Celanese's corporate management?
A Yes, it was.
Q Was safety consolidated in one particular area or were there corporate-level safety people, as well as plant-level safety people?
A There was both, plant and corporate.
Q And why was there -- why were there those two levels?
A Well, the corporate level focused on new initiatives and developing policies. And the plant people focused on the conditions that existed at the plant, the hazards that might be there in that plant, and what specific policies and procedures might need to be written for that particular plant and operation.
Q We spoke a little earlier about OSHA. And the jury

has heard other witnesses speak about OSHA and its passage in the early 1970s. Did OSHA require Celanese to provide its employees with a safe and healthy workplace?

A Yes, it did.

Q Whose responsibility was it to communicate to Celanese employees about Celanese -- about hazards that Celanese employees might encounter on a particular job?

A Celanese management.

Q And how did Celanese communicate about safety to its employees?

A There were multiple ways. Safety meetings, one-on-one conversations, bulletin board notices, handbooks, procedure development. It could be one or a combination of all those.

Q And in your career at Celanese, did you, actually, conduct some of those safety meetings?

A Yes, I did.

Q Did OSHA require Celanese to protect other workers on its premises from possible consequences of Celanese employees actions?

A Yes.

Q But were any Celanese employees working with asbestos-containing products during this time frame?

A No.

Q Did Celanese have a contractor safety program?

A Yes, they did.
Q And generally, what did that program cover?
A It covered all aspects of safety that a contractor would have to comply with, Hard hat safety, fire, welding and burning permits, lock-out/tag-out, confined entry, chemical introduction into the workplace, welding safety. The list goes on and on.
Q Did a contractor have to meet the different requirements in these areas before bidding on a construction or maintenance job at Celanese?
A Yes. The contractors were evaluated -- if they wanted to bid, they were evaluated on all aspects of that contractor safety program before they would be qualified to bid.
Q And if they were then, ultimately, awarded the contract, were they then required to comply with the rules and regulations of the program while performing work on Celanese's premises?
A Yes.
Q Who did OSHA require to provide a safe and healthy workplace for Daniel employees working at the Spartanburg plant?
A Daniels management.
Q And is that consistent with the language of the maintenance contracts that you previously discussed?

A Yes, it is.
Q And is that consistent with the contractor safety program?
A Yes, it is.
Q Did Celanese and Daniel safety personnel interface or interact on issues related to safety?
A Yes, we did.
Q In what regard?
A Well, there was the formal process where you might have a memo or a meeting to discuss a specific issue. There was, also, the informal where you met in the hallway or out in the plant just to talk about what's going on, and what might be happening, and what questions either one of us might have.
Q Did Daniel have on-site safety personnel who were responsible for Daniels employees safety under the maintenance contracts?
A Yes.
Q Whose responsibility was it to communicate to Daniel employees about hazards that Daniel employees might encounter on a particular job?
A Daniels.
Q And would that include informing Daniel employees about the presence of asbestos that they might be working with or around on a job?

A Yes.
Q If a Daniel maintenance employee were removing asbestos-containing insulation from a pipe, whose responsibility was it to establish a safe perimeter around that work?
A Daniels.
Q And how do you know that?
A It was a regulatory requirement, as well as in the contract.
Q Since its inception in the early 1970s, has OSHA had a permissible exposure level with respect to asbestos?
A Yes.
Q And has that exposure level decreased over time?
A Yes.
Q Today, does OSHA have a permissible exposure level related to asbestos?
A Yes, they do.
Q And that's something above zero; correct?
A It is.
Q And are dose and duration two of the criteria that the OSHA standard takes into consideration?
A Yes, it is.
Q For operations that Daniel was performing, whose responsibility was it to ensure that any exposure level was below that permitted by OSHA?

A That was Daniels.
Q And how would Daniel go about determining that operations that its employees were performing were below the level permitted by OSHA?
A They would have to do exposure monitoring.
Q And when you say "exposure monitoring," what do you mean by that?
A Well, the process involves a personal pump that the individual would wear on their belt. And it has a tube that comes up into what we call the breathing zone. And there would be a filter that would capture the fibers that would exist in that breathing zone environment. And then that sample would have to be analyzed for the concentration of fibers.
Q And who was responsible for performing that air monitoring of Daniels operations and employees?
A Daniels.
Q If there were levels of exposure that were above those permitted by OSHA at the time, did Daniel then have any further responsibilities?
A They would have to take action to lower that exposure, as well as provide personal protective equipment such as respirators.
Q And who would be responsible for providing that personal protective equipment such as respirators to

Daniel employees?
A Daniels management.
Q If a warning was necessary, whose responsibility would it have been to warn Mr. Seay with regard to his work for Daniel or around other Daniel employees?
A Daniels.
Q Would those responsibilities to warn pertain to the Daniel employees who were performing the work themselves such as Mr. Seay?
A Yes.
Q And would Daniel have any responsibility for other Daniel employees who might be working around Mr. Seay and disturbing asbestos-containing materials?
A Yes.
Q And what responsibility would Daniel have in that regard?
A They would be responsible to warn Mr. Seay, as well as to take action with the other folks working in that area, you know, the other Daniels employees.
Q Who did the ultimate responsibility for the health and safety of Daniel employees lie with?
A With Daniels.
Q Was that your understanding throughout your employment with Celanese?
A Yes, it was.

Q Did Celanese rely on Daniel to comply with OSHA?
A It did.
Q Did Celanese expect Daniel to protect its workers?
A It did.
Q Did Celanese have any reason to believe that Daniel wouldn't provide a safe workplace for its employees?
A No, we didn't.
MR. COLLIER: Thank you, Mr. Bowyer.
THE COURT: Cross-examination.
MR. TIVIN: We have no questions, Your Honor.
MR. PANATIER: Yes, Your Honor.

CROSS-EXAMINATION

BY MR. PANATIER:
Q Good afternoon.
A Hello.
Q I'm Chris Panatier. We've never met before; right?
A Right.
Q As far as you know. Okay. So you are the -- you're the corporate representative today for Celanese; correct?
A Yes.
Q Okay. And that means that you are speaking as the company today. Do you understand that?
A Yes.
Q This is something that you've done a few times. I don't know. Have you ever done it at trial?

A No.
Q Okay. This is the first time at trial; right?
A Yes.
Q You've done it a few times in depositions; correct?
A That's correct.
Q Now, a little bit of background. What was the highest title that you held at Celanese?
A The manager, title both in Charlotte and Spartanburg.
Q Just manager or manager of what?
A Well, one was manager of industrial hygiene in Charlotte, and then manager environment safety and health in Spartanburg.
Q Fair enough.
A They were comparable levels.
Q Okay. Now, you have not been an employee of Celanese -- or it went through several name changes, but the Celanese company since 2001?
A I have not.
Q Okay. Now, when you were there, were you an executive?
A I don't know what you mean by that.
Q Well, someone -- someone -- I don't know the organization of the company. I didn't work there. But --
A I was not an officer.
Q Okay. You weren't like on the board of directors?

A No.
Q Weren't a president, a vice president, one of those?
A No.
Q Did you -- were you the final word on health and safety policy at Celanese?
A No. Not for the corporation, no.
Q Okay. Who would that have been?
A Well, it was probably the president of the corporation.
Q Okay. And so would it be fair to say that throughout your time at Celanese, you were not a corporate decision maker on health and safety policy? Is that fair?
A I -- that's true.
Q Okay. Now, you implemented some policies at plant level; is that fair?
A Yes.
Q Okay. Did you get your directives on the overarching philosophy of health and safety from corporate?
A Yes.
Q During the '70s, corporate was based in New York City; correct?
A Yes.
Q Was it 1112 Avenue of the Americas?
A 1211.
Q 1211 Avenue of the America in New York City; right?

A Yes.
Q All right. Let's get this easel.
You're a -- you happen to be an industrial hygienist; right?
A I do.
Q Okay.
A Can I move this?
Q Yeah, absolutely --
MR. PANATIER: Is that okay, Your Honor?
THE WITNESS: Yeah. I can do it.
BY MR. PANATIER:
Q You can probably count yourself lucky, but you weren't retained as an expert to testify in this case; right?
A No, I wasn't.
Q All right. I want to ask you about some of the things -- you gave a deposition in this case almost a year ago; fair?
A I don't recall the time frame, but that's probably been that long.
Q Now, I want to write down just a few things that you -- that you said and -- because I want to be able to come back to these -- okay -- as we talk today.
The first thing you said was that -- did you say management was proactive with regard to safety?

A Yes.
Q As opposed to reactive; right?
A Yes.
Q So proactive would mean that Celanese made an effort to go out, investigate hazards, and then set up policies to protect people, generally?
A We weren't responding just to regulations.
Q Okay. And this is -- I'm going to write -- Mr. Bowyer, not doctor; right?
A That's correct.
Q Okay. And this is your -- this is your testimony. I'm not putting words in your mouth; right?
A Right.
Q Okay. You, also, said that safety was important to management?
A Yes.
Q I don't think there's an "e" there, is there?
You, also, said, we got ahead -- and I think this is -- goes up here. You got ahead of regulations. Is that what you said?
A In some cases, yes.
Q When did you become an industrial hygienist?
A I became certified in 1983.
Q Okay. When would you have considered yourself to be an industrial hygienist?

A Well, a couple years before that.
Q Okay. And to be fair, the first time you ever had any responsibilities for health and safety at Spartanburg was 1990?
A 1978.
Q Okay. You had health and safety responsibilities, but you were working out of Charlotte; right?
A 1978, I was in Salisbury.
Q Salisbury. When did you go to Charlotte?
A 1984.
Q Okay. When were you, actually, stationed at Spartanburg?
A 1990 to 2001.
Q All right. Prior to that point, any of your activities at Spartanburg would have been a visit; is that fair?
A From 1984 -- well, actually, during my time in New York, I could have visited Spartanburg. I really don't remember.
Q Do you remember if you did?
A No, I don't. I do not remember.
Q Were you -- and I'm sorry. You were in New York from '73 to '78?
A '83 to '84.
Q Okay. This is my fault. I'm screwing up the dates.

'83 to '84 you were in New York?
A Nine months.
Q Got it.
Now, let's talk about -- you talked extensively about the relationship between the contractor in this case Daniel?
A Right.
Q Is it Daniel or Daniels?
A I think it's, actually, Daniels.
Q Okay. I think we've heard it both ways one million times. But we know who we're talking about; right?
A Right.
Q Okay. Now, you would agree, would you not, sir, that in order to ensure the safety of all the workers, both contractor and the workers who worked for the owner, in this case Celanese, there has to be cooperation between the owner and the contractor; correct?
A Yes.
Q Okay. And you have said that Celanese, as it pertained to where Mr. Seay worked, had a responsibility in the maintenance work because they determined what work was done, when it was done, and how it was done; correct?
MR. COLLIER: Objection, Your Honor. I think that misstates the testimony.
THE COURT: Overruled.

THE WITNESS: Not the how.
BY MR. PANATIER:
Q While I'm looking for this, each day or whenever it became relevant to Celanese, what would you call the title of the person who interfaced with the contractors?
A It probably would be a maintenance engineer.
Q Okay. And that would be a Celanese employee; correct?
A Yes.
Q And that person would decide, on a regular basis, where to send the different contractor groups, whether that be a maintenance group or an insulator group; correct?
A Yes.
Q So Daniel didn't decide where the insulator group would go, Celanese did?
A Celanese decided what insulation work might need to be done that day. Daniels decided which insulators went and where they went.
Q But Celanese said -- Celanese would control what needed to be insulated and say, Daniel, you have to go insulate this; correct?
A You provide the employees to go insulate that.
Q Okay.
A That pipe.

Q All right. Let me go ahead and give you a copy of your deposition in this case.
A In this case?
Q Yes, sir.
A Okay.
Q I think so. Let me see. Yep, right there.
A Okay.
Q Dennis and Linda Seay. Do you see that at the top?
A I do.
Q And I'll direct you to Page 288. There's four pages per page.
A Right. 288.
Q 288. Okay. You were asked this question: And so I don't dispute that there is always this oversight when coming onto a Celanese premises. Their safety regulations had to be abided by. But in terms of how the work was done and where it was done, do you dispute that this indicates the contractor has full and complete control over their employees and their job tenure?

And what your answer was: They have control over their employees, but the owner determines when the work is to be done, where it's to be done, correct, and how it's to be done.

That was your testimony, right?
A That's what it says, yes.

Q Okay. You can set that aside, sir.
And we can add onto here where. Because certainly the -- controlled where, per your testimony; correct?
A (There was no response.)
Q Correct, sir?
A I'm sorry.
Q Per your testimony you just read, Celanese, also, controlled where the work was done; correct?
A If that's what I said. I -- I can go back and read it again.
Q If you need to, take all the time you need. That's totally fine. I know it was a year ago. Just tell me when you are ready and we'll --
A Okay.
Q You've got it?
A Yes.
Q Okay. You don't dispute any of Mr. Seay's testimony; correct?
A No, not really.
Q Okay. Well, just to be clear, is it -- you say "not really," is there --
A There's nothing that I can recollect that I dispute.
Q Okay. Fair enough. Did you know Fred Toca?
A I did.
Q He testified yesterday that he was the first director

of industrial hygiene at Celanese; is that true?
A That's not my recollection, but --
Q What's your recollection?
A That Joe Stelluto was.
Q Okay. And when was he the corporate director?
A That would have been before Fred Toca.
Q Before Fred Toca?
A Yes.
Q Fred may have thought he was, but, perhaps, he wasn't?
A I didn't hear Fred's testimony.
Q Okay. You testified that Celanese was a large company that started back in the 1930s; correct?
A Yes.
Q It probably wasn't super large when it started, but it became a large company; right?
A (There was no response.)
Q Is that fair?
A Probably.
Q Spartanburg, I think you said, during the 1970s did have just under 2,000 employees, Celanese employees?
A I didn't testify to that. When I was there in 1990, I think they had around 1,800 employees.
Q Generally speaking, was it more or less in the '70s?
A Before that, it had been more.

Q Okay. Let's look at a couple of these contracts. Okay. This is the one from 1975. Do you see that, the 24th day of June, 1975?
A Uh-huh.
Q And that's the maintenance services contract between Daniel and Celanese; correct?
A Yes.
Q Now, these would have to be renewed every few years; fair?
A That's correct.
Q So that's why we've got one in '72, and we have one in '75?
A They usually had automatic extension clauses.
Q Okay. So I've got a few questions about this. The first is: Do you know what "ungultig" means?
A No. I'm not German.
Q Okay. The company was -- had some German parts to it somewhere; right?
A Yes.
Q Okay. So that's probably what that means. It probably means attention.
Okay. Here it says, Contractors accounts. And it says, The owner -- now, that would be Celanese; right?
A Yes.
Q The owner and the owner's representative shall be

afforded access to the work, which means that any work Daniels was doing, Celanese had complete access to; correct?

A Yes.

Q And to all of the contractors accounting records, receipts, vouchers relating to the performance of the work; right?

A Yes.

Q It wasn't like Celanese was operating in a vacuum, was it?

A No.

Q I mean -- or Daniel; correct?

A No.

Q Okay. And, in fact, we've heard this. I don't know where it comes from. But I've heard this expression, Chinese wall, where something is totally sealed off, from one activity from the other. That's not how it was at Celanese as it pertains to Daniel; correct?

A I've never heard that term before.

Q Okay. They were not sealed off from each other so one side didn't know what the other was doing; correct?

A We had frequent contact with Daniels.

Q In terms of ordering materials, it says, Purchase orders shall be issued in the name of the owner, Celanese; correct?

A Yes.
Q Okay. In the event the contract is terminated, the owner shall have the right to hire any of contractor's on-site employees, if it so desires; correct?
A That's what it says.
Q So if -- if Daniel is working there and they get rid of the contract and Daniel is leaving, Celanese gets to go, I want you, you, you, and you; right?
A That's what I think that means to me.
Q Okay. The contractor's employees and subcontractor employees will abide by all of the owner's safety regulations; right?
A Yes.
Q So if Celanese had safety regulations pertaining to asbestos, the Daniel employees would have to follow that --
A That's correct.
Q -- correct?
If they had regulations that said, You may work in Area A, but you may not work in Area B, the contractor's employees would have to follow that; correct.
A That's correct.
Q And, in fact, Celanese had some pretty strong rules for -- the contractors are not to operate any of our equipment; right?

A I haven't seen that, but that probably existed.
Q Okay. Because, basically, the operation of the equipment, the production was Celanese's job; right?
A That's correct.
Q Okay. So if Celanese wanted to keep something off limits from the contractors, they certainly could do it; correct?
A Sure.
Q Safety. The owner and contractor agree to comply with the Occupational Safety and Health Act, as well as all other industrial safety codes and regulations. The contractor agrees to comply with the owner's safety handbooks and supplements thereto. Now, for Spartanburg, have you seen the owner's safety handbook?
A No, I have not.
Q Okay. There's not a whole lot of records because that company was sold. All the paper went with that company; right?
A It went with the site.
Q Okay.
A So to the new owner.
Q So do you have any personal knowledge that Celanese conducted any airborne measurements for asbestos during the 1970s at Spartanburg?
A No, I do not.

Q Okay. And you personally did not do any; right?
A No, I did not.
Q Okay.
A Not during that time fame.
Q Yes, sir. It says the contractor agrees -- we already had that.

The contractor may survey the work conditions of his employees at his own expense and in a manner not to conflict with the production activities of the owner. Now --

A I'm sorry. I lost where you are.
Q I'm sorry. It's the one with, The contractor, third highlighted from the bottom.
A Oh, okay.
Q Okay. Now, at this facility, the contractor's employees and the Celanese employees were working often -- quite often in close proximity to each other; correct?
A I haven't seen any testimony to that.
Q Well, I'm asking you because you were at the company so long. The people who were doing maintenance are going to be working around the 1,800 different Celanese employees; right?
A Not necessarily.
Q Okay. I'm not asking you in a vacuum. I'm asking you from your experience --

A Right.
Q -- if that happened; right?
A Typically, if maintenance is done, the equipment is shut down and the operators are not in the area.
Q The owner's central facility's area engineers. So who is that?
A "Central facilities" was a term used for a position for someone that kind of had oversight.
Q And that would be a Celanese person; right?
A Yes.
Q Okay. The contractors were to report to that person?
A I don't see what the reference is to that, but --
Q I can show you. I think it's here. The project engineer.
A You're above my monitor.
Q Oh, oops.
A Sorry.
Q Project engineer. That would be -- my understanding -- is that a Daniel person?
A Can you let me read?
Q Sure. Of course.
A Yeah. You're going to have to go further, because I still don't see what the "reports to" relates to.
Q Sure. Sure. Here we'll go --
A I'm sorry.

Q -- back here. Here it is right here.
A Oh, okay. The general project engineer, Yes.
Q Right. And that fellow made 1,500 to 2,300 a month, right?
A That's what it says.
Q And that is -- that's a Daniel person?
A Yes.
Q Okay. So that person would be the contact person with the Celanese person; fair?
A That situation -- that relationship certainly existed, yes.
Q Who owned the property at the Spartanburg plant? Who owned it?
A Celanese Corporation.
Q Okay. Who owned the equipment?
A Celanese Corporation.
Q Who owned the lines that went from one piece of equipment to another?
A Celanese Corporation.
Q Who owned the insulation?
A Celanese Corporation.
Q Who owned the gaskets?
A Celanese.
Q Who owned the packing?
A Celanese.

Q Who owned the walls that held up the ceiling?
A Celanese.
Q Okay. If Daniel had wanted to put signs up on the walls, it would have had to get Celanese's permission to do that; right?
A That's correct.
Q Okay. If Celanese wanted to put signs up on the walls, it could give itself permission; right?
A Yes.
Q Okay. One of the things you have said, sir, in your -- I'm going to ask you now -- keep in mind I'm asking you sort of as an industrial hygienist, too, since that's your training. You have said that prior to OSHA in 1970, the act -- the passage of the act, asbestos was regarded as a nuisance dust, haven't you?
A Yes.
Q Is that still your testimony?
A Yes.
Q Okay. What I'd like to do is talk to you a little bit about what Celanese knew and what they had available to them with regard to asbestos hazards. Are you ready to talk about that?
A Sure.
Q Okay. And that's something you've talked about in the past in depositions; true?

A Probably.
Q Okay. Well, you've talked about the National Safety Council and the Industrial Hygiene Foundation; correct?
A It's been a long time since I've done this, so.
Q I understand. I understand. Let me ask you a general question. Do you agree that Celanese would have -- first of all, from a corporate policy, would have made sure to be aware of all of the laws and regulations that apply to its places of work?
A Yes.
Q Okay. And that includes state laws, federal laws; right?
A State laws in the state where they had operations.
Q Certainly, Celanese knew on a corporate level in New York and on a plant level in Spartanburg about the OSHA standards in the early 1970s; correct?
A Yes.
Q They read them; right?
A Yes.
Q During this time -- during the '70s and before the '70s, Celanese had a plant in Bishop, Texas; correct?
A Yes.
Q Okay. And have you seen this? This is --
MR. PANATIER: I have a copy for you if you want, Chris. I'm sorry.

BY MR. PANATIER:
Q This is the State of Texas Occupational Health Regulations. Can you see that? That's July 1st, 1958.
A I see it. I don't know that I've ever seen it before.
Q Okay. And it says, Maximum permissible concentrations of atmospheric contaminants in places of employment; correct?
MR. COLLIER: Objection, Your Honor. Relevance.
THE COURT: Overruled.
MR. COLLIER: Can I get a continuing objection to this line of questioning?
THE COURT: You may.
MR. COLLIER: Thank you.
BY MR. PANATIER:
Q Is that what it says, sir?
A Yes, it does.
Q Okay. Just real quickly, you know what a threshold limit value is, or a maximum allowable concentration; right?
A That says, MPP. Is that what you're referring to?
Q I'm asking you a general question. You understand what a maximum allowable concentration refers to?
A Oh, yes.
Q Okay. And the MPP would be?

A (There was no response.)
Q As an industrial hygienist, what does that mean?
A Probably a million particles per cubic foot.
Q Exactly. And so they had a standard in Texas, where Celanese had a plant, for asbestos of five million particles per cubic foot as of '58; correct?
A I see that.
Q Do you see they, also, had a separate standard for nuisance dust right below it of 50 million?
A I do.
Q So in -- as of '58, the State of Texas, where Celanese had a plant, had a lower standard for asbestos than the higher one of nuisance dust; correct?
A It appears they did, yes.
Q Okay. Same type of document. This is from the State of New York.

MR. COLLIER: Your Honor, same objection. Relevance.

THE COURT: Overruled.

MR. COLLIER: May I get a continuing objection to this one?

THE COURT: Yes, sir.

BY MR. PANATIER:
Q Okay. Do you see this is Industrial Code Rule Number 12, Control of air contaminants, sir?
A Yes.

Q Okay. And here again, we see that reference to maximum allowable concentration -- oh, maybe I should read the date. 1958. Do you see that?
A Yes.
Q Okay. The same year as Texas. New York says, Maximum allowable concentrations, evidence of dangerous air contaminants. Do you see that, sir?
A Yes.
Q Okay. And then if we turn just a few more pages, there's asbestos again. And then nuisance dust two below it; true?
A Yes.
Q So, again, here in 1958 -- in '58, was the headquarters in New York?
A I can't answer that.
Q Okay. Here in '58, of course, State of New York, as you can see, has a separate standard for asbestos and nuisance dust; correct?
A Yes.
Q All right. National Safety Council. Celanese was a member of the National Safety Council; correct?
A Yes.
Q From the early 1950s; true?
A Probably.
Q Okay.

A I can't testify to that.
Q I think you did testify to it in your deposition, but I don't think we have to haggle. Your recollection is that Celanese was a member in the 1950s of the NSC?
A If I testified to it, then I had some reason to say that.
Q Okay. Well, here. This might help us. Do you see this is the transactions for the National Safety Council in 1951?
A Yes.
Q Okay. And we have a gentleman here, S.D. Saltonstall, Celanese Corporation of America. And he's in Bishop; right?
A Okay --
MR. COLLIER: Your Honor, we'd object again to the relevance.
THE COURT: All right. Overruled.
BY MR. PANATIER:
Q Does that help refresh your recollection, sir?
A Well, he's on some committee. I can't tell which one.
Q Sure. Sure.
MR. COLLIER: Your Honor, may I get a continuing objection to this document?
THE COURT: Yes, sir.

BY MR. PANATIER:
Q Do you see he's an officer of the chemical section?
A He's on a committee, which is listed down below, but the full committee's name is not there.
Q Membership committee?
A It could be.
Q Well, what we have is "embership" committee.
A Right.
Q It's probably membership; right?
A It could be.
Q Okay. Does that refresh your recollection, sir --
A About --
Q -- about Celanese having people who are members of the NSC in the early '50s?
A Yes. That would be the case, Somebody was.
Q All right. Same document. I just want to show you one little paragraph from an article there. Whoa. At the present time, it is generally agreed that the most important sources of industrial disease of the lungs are free or uncombined silica and asbestos. Did I read that right?
A You did.
Q That's in 1951. So that certainly doesn't say that it's a nuisance dust; correct?
A I can't conclude -- I'm not qualified. I'm not a

doctor or a toxicologist.
Q And so you -- as an industrial hygienist, you don't think you're qualified on that?
A No. I'm not qualified to interpret that statement.
Q In fairness, do you think that statement needs interpretation?
A Yeah. I mean, there's -- there's got to be data that backs it up. What -- where is the research that was done related to that statement?
Q Well, you've testified that Celanese didn't do any research on asbestos; correct?
A Right. We didn't.
Q Okay.
A To my knowledge.
Q Nevertheless, this was --
A To my knowledge.
Q To your knowledge. Okay.
A Right.
Q Nevertheless, this was available to them, obviously; correct?
A Yes.
Q Okay. And you've testified that the -- the periodicals of the National Safety Council and the Industrial Hygiene Foundation were available to Celanese; true?

A They could have been, yes.
Q Okay. This is a publication of the chemical section, 1957, '58. Do you see that?
A Yes.
Q And you were asked about this one in your deposition. That was Exhibit 5 in your deposition.
MR. COLLIER: Objection, Your Honor, relevance. Can I get a continuing objection?
THE COURT: You may.
Overruled.
MR. PANATIER: I'll stipulate to an objection -- a running objection to the whole line of questioning, Your Honor, if it helps speed it up. Just as a --
THE COURT: No. It's fine.
MR. PANATIER: Okay. Thank you, Your Honor.
THE COURT: Everybody's just doing their job.
MR. PANATIER: Okay.
BY MR. PANATIER:
Q There's a portion here called, secrets prevail in industry. And I just want to ask you about one section. It says -- first, up at the top, Industry actively opposes objective research and free interchange of information on occupational diseases. Because it is more afraid of the possibility of paying compensation benefits than it is that workers will die from lack of proper information and

adequate precaution.

My question for you, sir, as the Celanese corporate representative is, did Celanese ever have any policies where it would hide information from the workers?

A No.

Q Okay. Much the same situation holds true in the asbestos industry. There appears to be a decide -- to be decided aftereffects on workers who produce asbestos, in that there is a marked correlation between asbestos employment and lung cancer. Here again, the industry has been traditionally reluctant to cooperate in a full-scale scientific study of this curious correlation. This reluctance to do research in health hazards recurs in industry after industry.

You were shown this at your deposition. Do you recall seeing this one?

A It seems familiar, yes.

Q Okay. And did -- you said Celanese never researched asbestos; true?

A True.

MR. TIVIN: Your Honor, may I approach?

THE COURT: You may.

(WHEREUPON, a bench conference was held.)

BY MR. PANATIER:

Q All right, sir. This is the National Safety Council

Accident Prevention Manual for Industrial Operations. And, again, these are old documents, so the copies are rough. But this one is 1950 -- I think that's '9 or '6. Can you see that, sir?

A Yes.

Q All right --

MR. COLLIER: Objection, Your Honor. Same objection.

THE COURT: Okay.

MR. COLLIER: We'd like a --

THE COURT: Overruled.

MR. COLLIER: -- continuing objection.

THE COURT: Yes, sir.

MR. COLLIER: Thank you.

BY MR. PANATIER:

Q They say here in the '50s, Asbestos is a hydrated magnesium silicate found in the minerals chrysotile, amianthus, actinolite, and tremolite. Practically all the commercial asbestos is either chrysotile or amianthus. And about 90 percent of that used in this country is chrysotile. It is used almost exclusively for heat insulation or for textiles, which must resist high temperature such as heat-resistant clothing and brake lines.

Inhalation of excessive quantities of asbestos fiber can produce a fibrosis in the lungs similar to that found

in silicosis, but somewhat milder and usually not so rapidly progressive. Like silicosis, the condition develops slowly and advances slowly and is equally resistant to treatment.

Prevention is, essentially, dust control. A maximum acceptable dust concentration of five million particles per cubic foot has been suggested precisely as for pure free silica.

First, did I read that correctly?

A Yes.

Q All right. So, again, the NSC is reporting on asbestos disease and the maximum allowable concentrations; right?

A Yes.

Q 1965, National Safety Congress, Transactions. You can see --

MR. COLLIER: Objection, Your Honor.

THE COURT: All right. Overruled.

MR. COLLIER: May I have a continuing objection?

THE COURT: You may.

MR. COLLIER: Thank you.

BY MR. PANATIER:

Q This is an annual meeting of the members, Safety Congress banquet. And I just want to show you here, under "members" --

A What was -- what -- I'm sorry. What was the date on that?

Q '65, '66. Do you see under "members," the chairman of Celanese is a member, Harold Blancke; correct?

A He was a member, but not necessarily present.

Q Okay.

A Well, I'm just asking. I -- this is not attendees at this congress, I assume.

Q Right. I'm just listing that he was a member, that Celanese's chairman was a member in '65; correct?

A Okay.

Q And at that point, was chairman the highest executive?

A I would presume it is.

Q Okay. Celanese was a member of the Industrial Hygiene Foundation from 1952 to 1976; correct?

A I don't know the dates.

Q Okay. I think in your deposition on Page 231, if you want to look at it, you were shown the membership documentation. I think you agreed with it there, but I just want to make sure before we move forward.

The bottom of Page 231, you were asked: I brought this document to show you on both Page 2, which is Page 32 of their actual list, Celanese Corporation is listed as joining in '52 and resigning in '76. And then at Page 3,

which is a 1968 membership list, they show that they joined in '52. Do you see those?

Yes.

Any basis -- any basis to dispute that?

No, I don't.

Correct?

A Right.

Q Okay. And you've read the deposition of Charles Laubly; correct?

A Yes, I have.

Q Who started, I think, in 1966 as one of the corporate industrial hygienists; true?

A It was around that time, yes.

Q Okay. And he testified that he received the Industrial Hygiene Foundation Digest; correct?

A Yes.

Q And that he, actually, forwarded it to the corporate office when he was done; true?

A I think he -- didn't he say he put it in the library, or something?

Q He put it in the library; right?

A That's what I recall. I'd -- I'd have to review it.

Q All right. Now, the Industrial Hygiene Digest was a monthly, and even sometimes weekly, magazine put out by the Industrial Hygiene Foundation; correct?

MR. COLLIER: Objection, Your Honor --
THE WITNESS: It appears to be --
MR. COLLIER: -- to relevance.
THE COURT: Sustained -- I mean overruled.
MR. COLLIER: May I have a continuing objection, please?
THE COURT: You may.
MR. COLLIER: Thank you.
BY MR. PANATIER:
Q Okay. This is 1953. And what they did in these digests was they mailed out to their members lists of medical abstracts for -- for new articles that were coming out; right?
A I -- I don't know.
Q Okay. I can show you.
A Are you saying this is a list of abstracts?
Q That's correct.
A Okay.
Q Okay. And, see, they have a section called, industrial dusts?
A Yes.
Q Okay. And in 1953, they send out an abstract called, dust diseases. This brief paper gives advice to family physicians to whom X-ray films from a mass survey have been referred when pneumoconiosis is indicated.

Now, first of all, pneumoconiosis is dust disease; right?

A It's a disease of the lung.

Q Okay. And then it gives some examples. Anthracosis, silicosis, siderosis, berylliosis, and asbestosis -- and it goes on; right?

A Uh-huh.

Q Okay. So there's an abstract, one abstract, that talks about asbestosis; correct?

A Yes.

Q Right below it, The clinical picture and pathology of asbestosis; correct?

A Yes.

Q It even -- even says, The special mention is made of the association of asbestosis with carcinoma, which is much more frequent than all of the silicosis; correct?

Than all -- than that of silicosis --

A Yes.

Q -- correct?

Right below that, Lung carcinoma caused by asbestos inhalation. Carcinoma means cancer; right?

A Yes.

Q The relation between fibrotic changes caused by asbestos deposits in the lung and carcinoma is discussed. The lower lobe is the site of the predilection.

Characteristic are the multicenter developments of flat epithelium carcinoma.

So they give a little blurb about what each article is about; right?

A Yes.

Q And in this one -- just this one digest from the Industrial Hygiene Foundation in '53. There's three articles on asbestos; true?

A There's three listed there, yes.

Q Okay. September 1955 --

MR. COLLIER: Objection, Your Honor. Relevance.

THE COURT: Overruled.

MR. COLLIER: May I have a continuing objection to this one as well?

THE COURT: You may.

BY MR. PANATIER:

Q Mortality from lung cancer in asbestos workers, by Richard Doll, 1955; correct?

A Yes.

Q Okay. In necropsies of -- and that's an autopsy, basically -- of 105 persons who had been employed at an asbestos works, lung cancer was found in 18 cases. In 15 cases, asbestosis was, also, found. From the data, it is concluded that lung cancer is a specific hazard of asbestos workers. And that the average risk among men

employed for 20 years or more has been of the order of 10 times that experienced by the general population.

Did I read that right?

A It appears to be. You read it pretty fast.

Q And if -- and I am -- I'm sorry. I've got a bunch to go through, and sometimes I go fast. But, please, tell me to slow down if --

A No. I'm trying to keep up.

Q All right. Just let me know if I need to slow down.

And I apologize to our court reporters, too.

1955, sir, September. This is another abstract dealing with asbestos and cancer that goes out to the members of the IHF; correct?

A I -- I presume that's where they sent it to.

Q Okay. February of 1956 --

MR. COLLIER: Objection, Your Honor, relevance.

Can I get a continuing objection?

THE COURT: Yes, sir, you may.

Overruled.

BY MR. PANATIER:

Q Carcinoma of the lung in asbestosis, a report of two additional cases. Do you see that, sir?

A Yes.

Q Okay. Next page, Asbestosis and pulmonary carcinoma in an asbestos spinner, notes on the induction of lung

cancer by asbestos fibers. Did I read that right, sir?
A Yes.
Q So already in the '50s, the Industrial Hygiene Foundation, of which Celanese was a member, is providing to its members the abstracts for articles on asbestos, asbestosis, and cancer; true?
A Yeah, for asbestos workers. We were polyester manufacturers.
Q Well, I understand. We're going to -- we're going to get there.
A Okay.
Q To your knowledge, did Celanese, actually, look up any of these full articles? Do you have any information about that?
A I do not.
Q Okay. You say you were polyester manufacturers. But Celanese made an asbestos product called Celanex; correct?
MR. COLLIER: I object, Your Honor. Relevance.
THE COURT: Overruled.
THE WITNESS: Yes, one plant, one location in Texas --
BY MR. PANATIER:
Q Okay.
A -- made it for a period of time.
Q Starting in 1971, Celanese made an asbestos-based

plastic in Texas for about eight or nine -- actually, about 11 years, at least; correct?

A Asbestos can be handled safely.

Q Okay. That wasn't the question I asked. I understand. But you said, We made polyester. The truth is --

A At the Spartanburg plant, we made polyester.

Q Celanese is a company with many plants; right?

A Yes.

Q Okay. And you said Celanese made polyester.

A Okay.

Q Celanese --

A At Spartanburg, we made polyester.

Q Okay. Celanese, the company, also, was an asbestos product manufacturer; correct?

A We in Bishop, Texas, made a product that contained asbestos.

Q All right. Industrial Hygiene Foundation -- oh, wait. I already did that one.

April 1957, Industrial Hygiene Digest --

MR. COLLIER: Objection, Your Honor. Relevance.

THE COURT: Overruled.

MR. COLLIER: Can I get a continuing objection to that?

THE COURT: Yes, sir.

BY MR. PANATIER:
Q They're reporting on experiments with asbestos in mice; correct? Pulmonary tumors in mice exposed to asbestos dust; right?
A Yes.
Q 1964, Industrial Hygiene Digest --
MR. COLLIER: Objection, Your Honor. Relevance and cumulative.
THE COURT: Overruled.
MR. COLLIER: May I have a continuing objection to this one as well?
THE COURT: Yes, sir.
BY MR. PANATIER:
Q This article is by Dr. Selikoff, who we've heard about, Asbestos Exposure and Neoplasia. Building trades insulation workers have relatively light intermittent exposure to asbestos. Of 632 insulation workers who entered the trade before 1943 and who were traced through 1962, 45 died of cancer of the lung or pleura, whereas only 6.6 such deaths were expected. Three of the pleural tumors were mesotheliomas. There was, also, one peritoneal mesothelioma.
So they've got four mesotheliomas here that they're reporting in 1964; correct, sir?
A I'm sorry. I wasn't adding up. Four -- you said

four mesotheliomas?
Q Yes, sir.
A And a total of 205 during this study.
Q Yes, sir.
A Yes. That's what it says.
Q And it, actually, goes on to say that, Four mesotheliomas in a total of 255 deaths is an exceedingly high incidence for such a rare tumor; correct, sir?
A That's what it says, yes.
Q In addition, an unexpectedly large number of men died of cancer of the stomach, colon, or rectum, 29 compared with 9.4 expected. Other cancers were not increased, et cetera. Twelve men died of asbestosis.

So, sir, this is an article that Celanese had access to by virtue of the Industrial Hygiene Foundation; correct?
A It -- it's put out by the Industrial Hygiene Foundation, yes.
Q 1964 is seven years before Mr. Seay's started at Spartanburg; right?
A Yes.
Q Okay. I'm going to move through these a little quicker now. This one is from 1966, still the Industrial Hygiene Digest; correct?
A Yes.

MR. COLLIER: Objection, Your Honor. Cumulative and relevance.

THE COURT: All right. Overruled.

MR. COLLIER: May I get a continuing objection to this one?

THE COURT: Yes, sir.

BY MR. PANATIER:

Q Do you see this one? Mesothelioma of pleura and peritoneum following exposure to asbestos in the London area, 1965.

A Yes.

Q About halfway down, it says, There was, also, evidence that neighborhood exposures may be important among those with no evidence of occupational or domestic exposures. 30.6 percent of the mesothelioma patients and 7.6 percent of the inpatients with other diseases lived within half a mile of an asbestos factory. Out of the 31 patients with occupational exposures, only 10 were in jobs scheduled under the asbestos regulations. The interval between the first exposure and the development of the terminal illness of mesothelioma ranged between 16 and 55 years.

And, sir, does Celanese acknowledge that mesothelioma is a latent disease?

A Meaning? What do you mean by "latent"?

Q Sure. Sure. One that -- where the exposure happens at one point and then the disease doesn't develop for many, many years.

A Yes.

Q Okay. And Celanese agrees with that?

A Yes.

Q All right. Right below it, two more articles, both on mesothelioma; correct?

A Yes.

Q And, in fact, the bottom one says, Relation between exposure to asbestos and mesothelioma. 10 deaths due to mesothelioma were found in a study of 307 consecutive deaths among asbestos insulation workers in New York and New Jersey. There were four pleural mesotheliomas and six peritoneal mesotheliomas. This is probably an underestimate of the true incidence since of the remaining 29 -- 297 deaths only 110 cases were autopsied.

So you see that. You acknowledge that that was available to Celanese; correct?

A It was produced by the Industrial Hygiene Foundation.

Q And Celanese had access to this; correct?

A They may have received it.

Q May 1966, same publication --

MR. COLLIER: Objection, Your Honor. Relevance. Can I get a continuing objection?

THE COURT: You may.

BY MR. PANATIER:

Q Mesothelioma associated with asbestosis: A report of three cases. I'm not going to read all this. But you see there's another article that was made available through the Industrial Hygiene Foundation, sir?

A Yes.

Q Okay. That's 1966, May. So I'm not showing the same one. That's May. The next one is August 1966.

MR. COLLIER: Your Honor, same objections.

THE COURT: Okay. So your intent is to object to all articles from this point forward in this line of inquiry; is that fair?

MR. COLLIER: Yes, Your Honor.

THE COURT: Okay. And I understand the basis for the objection. You've stated it clearly repeatedly. And for purposes of the record, that's, perhaps, what you had to do. And I overrule the objection. But I do think we can continue now with your continuing objections to all of these to go forward.

Thank you.

MR. COLLIER: Thank you, Your Honor.

BY MR. PANATIER:

Q All right. Sir, we've got two more articles here, Neoplasia among insulation workers in the United States

with special reference to intra-abdominal neoplasia.

Does Celanese understand that neoplasia is cancer?

A Yes.

Q Malignant neoplasms produced by exposure to chemical agents or ionizing radiation, typically, have a long latent period. And there is a long delay between first exposure and the appearance of the neoplasm.

Let me just get to the asbestos.

The early reports apparently concerned workers who were heavily exposed to asbestos dust. Pulmonary diseases, including tuberculosis and pneumonia, were among the leading causes of death.

Do you see that, sir?

A Yes.

Q The next one, Asbestosis as an urban air contaminant.

Do you see that's another article, sir?

A Yes.

Q September, 1966. This is so boring. I'm so sorry. I'm going to move through it as quickly as I can.

Do you see here, sir, there are four different articles pertaining to asbestos and cancer. One, Cancer of the lungs and other diseases after exposure to asbestos dust; two, Asbestos-related disease; three, Chemical studies of asbestos; and four, Some observations of the dust content and composition in lungs with asbestosis,

made during work on coal miners pneumoconiosis; correct?
A I see all that, yes.
Q All right. October 1966. In the section under, Industrial Dust, A comparison of impinger and membrane filter techniques for the evaluation of air samples in asbestos plants.
And you understand, sir, as an industrial hygienist, impinger and membrane filter techniques were two different techniques for collecting dust; right?
A Yes.
Q Okay. And, here, they're talking about its use in asbestos plants; true?
A Yes.
Q Certainly you understand from an industrial hygiene perspective that in the '50s -- '40s, '50s, '60s, and certainly the '70s, there were different methods for collecting asbestos in the air; correct?
A There were methods for collecting particles in the air.
Q All right. Then there's another one, Developments in dust sampling and counting techniques in the asbestos industry. So here there's two articles on how to, actually, collect samples; correct?
A I'm sorry. Could you repeat your question?
Q Yeah. It's a general question. I've just shown you

two articles from 1966 in the Industrial Hygiene Foundation Digest that address how asbestos can be measured in the air.

A How dust can be measured.

Q Okay. With specific reference to asbestos; correct?

A Yes. But I don't believe that the method differentiates between one dust and another.

Q Okay. I appreciate that.

Did you know there was something called farmer's lung?

A I'm sorry.

Q Did you know there was something called farmer's lung? It's right below it.

A No.

Q February 1967, four more articles. Rheumatoid factor in serum of individuals exposed to asbestos, Occupational hazards of pipe insulators.

You know, by the way, there certainly were contractors employed as insulators and pipe insulators at Spartanburg; correct?

A As insulators, yes.

Q Okay. The next one, Malignancies in asbestos workers, "Exposure to asbestos and malignancy; correct?

A Yes. I'm sorry. I nodded.

Q All right. Sorry. I just -- I ask you to say "yes"

for the record.
A Yes. No, I understand. I forget sometimes. . .
Q That's okay. 1967. 1967 is four years before Mr. Seay started at Celanese; right?
A Yes.
Q Two more articles, Mesothelioma and asbestos exposure, Asbestos bodies in the lungs of inhabitants of Milan. Do you see that?
A Yes.
Q Sir, would you agree that there was a lot of research before OSHA about the hazards of asbestos that was out there and certainly available to Celanese?
A There was a lot of research available about all kinds of exposures, including asbestos, both negative and positive.
Q Okay. So far, what we've seen is many articles saying that asbestos could cause asbestosis, lung cancer, and mesothelioma; right?
A Yes. You've shown me a bunch.
Q And have any of those things ever been disproved, that asbestos causes asbestosis, lung cancer, and mesothelioma?
A I'm not saying they have. But they haven't necessarily had time to be proved.
Q Are you saying -- are you saying it wasn't proven at

that time that asbestos caused disease of any type?
A No. I didn't say that. Cancer, I did -- I didn't agree that at that time it was proven that it caused cancer.
Q Are you familiar with the Wagner article in 1960?
A Not off the top of my head.
Q Is it still your opinion -- after seeing these, is it still your opinion and your representation as the corporate representative for Celanese that, prior to OSHA, asbestos was regarded as a nuisance dust?
A I believe that was the term from Dr. Dixon's deposition.
Q Dr. Dixon was the medical director of --
A He was the medical director.
Q -- of Celanese; right?
A Yes.
Q And you know that Dr. Dixon spoke at Dr. -- actually, it was at Dr. Selikoff's conference in 1964; right?
A Yes.
Q And this entire conference was devoted to asbestos; right?
A I don't know that.
Q Do you see the title there, Biological Effects of Asbestos?
A Okay.

Q Have you -- as the corporate representative, have you even just paged through this book to see what it talks about?

A No, I have not.

Q Okay. Last couple of digests. 1967. There's an article called, Experimental asbestosis, The development of lung cancer in rats with pulmonary deposits of chrysotile asbestos dust. And there's one, Asbestosis in Neoplasia, by Dr. Selikoff, whose book we have here. Do you see that, sir?

A Right.

Q Last one, thank God. March 1969, Industrial Hygiene Foundation Digest. There's one called, Asbestos or Ferruginous Bodies. Do you know what a ferruginous body is?

A I do not.

Q It's a fiber coated in iron in the body.

Then there's this one, The Community Hazards of Asbestos. It says, The inhalation of asbestos is far more dangerous than is generally recognized by the public since even a transient period of exposure can lead to disease, interstitial fibrosis of the lung, lung cancer, mesothelioma, endothelioma of the pleura and peritoneum, painful thermal warts, and death many years later.

Electron microscopic studies have shown that for

every asbestos fiber recognizable under an ordinary light microscope, there are hundreds of tiny unrecognized particles which dust experiments with guinea pigs have shown to be just as deadly as larger fibers.

While the asbestos industry has taken energetic measures toward the prevention of classical forms of asbestosis by dust elimination in its plants, vacuum removal of the dust, use of gas masks, automation of manufacturing processes, such prophylactic measures have not prevented the gradual, long-term development of cancer in persons who come into occasional light or temporary contact with asbestos.

Now, I'm going to stop there. It goes to the next page.

What this says is that it's not just insulators or pipe coverers, but people with transient periods of exposure that can lead to disease; correct?

A That's what it says.

Q And this certainly would have been helpful for Celanese to know; correct?

A I don't know.

Q Okay. This group certainly includes wives of asbestos workers and all persons living within 1.5 kilometers of an asbestos plant. These persons tend to succumb to mesothelioma after many years of such contact.

A number of examples are given, including those of carpenters and construction workers who do not realize that their relatively brief contact in sawing or handling asbestos materials can lead to lung cancer many years later.

The great increase in asbestos production and in asbestosis in recent years is tabulated. The need for utilization of alternate materials in industry and for further research on biological effects is emphasized.

Now, they're talking about the need for utilization of substitute materials, nonasbestos materials; correct?

A That's what it sounds like, yes.

Q All right. And then there's two other articles -- well, actually, right below it, Asbestos exposure and pleural mesothelioma. Prevalence of asbestos bodies in basal lung smears. Pathological symptoms due to inhalation of asbestos dust. Asbestos bodies in the lungs and mesothelioma, A retrospective examination of a 10-year-autopsy material.

And it goes onto the next page. So this one had six different articles on asbestos and disease; correct, sir?

A I didn't count them, but I'll take your word for it.

Q That's two years before Mr. Seay ever set foot at Spartanburg; right?

A Yes.

MR. PANATIER: That's it for the industrial hygiene digest, Your Honor. I can keep going, or if you want to break, whatever works.

THE COURT: All right. Yeah. We'll take about a 10-minute break. Don't talk about the case.

Thank you.

(WHEREUPON, the jury was excused from open court at approximately 3:10 p.m.)

THE COURT: Okay. We'll take about a 10-minute break.

MR. TIVIN: Your Honor.

THE COURT: Yes, sir, Mr. Tivin.

MR. TIVIN: You were going to -- I was just going to put on the record --

THE COURT: Oh, sure.

MR. TIVIN: -- the objection we had at the sidebar.

THE COURT: Yeah. Go ahead.

MR. TIVIN: Mark Tivin on behalf of John Crane, Inc.

John Crane objected to the publication of articles that were used in the examination with Mr. Bowyer as being admitted against John Crane as they were never members of any of these organizations. And the Plaintiff had stipulated that we would have a running objection to the use of any of these articles.

We understand the Court's ruling that -- overruling

our objection. We don't think that the introduction of these articles from private trade organizations from which we were not a member should be introduced against John Crane.

Thank you, Your Honor.

THE COURT: Do you want to put your opposition to that on the record?

MR. PANATIER: Yes, Your Honor. Yes, Your Honor.

While these are certainly, specifically, being offered against Celanese because of their membership in both organizations, the general state of the art, whether or not a defendant -- in this case a product defendant, John Crane, was a member or not is relevant. And, in fact, when we went over all of the different published studies with Dr. Holstein last week, well, we didn't -- we need not prove that John Crane received those, but that they were available.

And so this -- this certainly -- the jury could consider the NSC and IHF publications as what was generally available. In fact, I think that the IHF is very probative on that because it's a republication of abstracts of the scientific literature. So it's just additional state-of-the-art evidence, Your Honor.

MR. TIVIN: And I would just say -- just to respond -- and I realize Your Honor's ruling. And --

exactly, it's whether it was generally available. And these are private organizations that -- which John Crane wasn't a member of. To say that this was generally available is -- there's no foundation that these were generally available. They're available to its members, as he's been questioning the witness. And we weren't members.

So thank you, Your Honor.

THE COURT: Thank you.

I think -- I think it was admissible. All right.

MR. COLLIER: Your Honor, with respect to Celanese, we would just reiterate what we argued with respect to the motion in limine before we got started and, again, argue the prejudicial nature of those articles far outweighs any probative value. But we understand your rulings.

THE COURT: Thank you, Mr. Collier.

MR. COLLIER: Thank you.

THE COURT: Okay. We'll take about a 10-minute break.

(WHEREUPON, a break was taken.)

THE COURT: All right. Anything else before we bring the jury in?

MR. PANATIER: No, Your Honor.

THE COURT: How much more have you got, do you think, Mr. Panatier?

MR. PANATIER: I'm through the hardest part. Maybe -- maybe another hour or so.

THE COURT: All right. Yes, sir, you can bring the jury in.

(WHEREUPON, the jury came into open court at approximately 3:27 p.m.)

THE COURT: All right. Yes, sir.

MR. PANATIER: Thank you, Your Honor.

BY MR. PANATIER:

Q All right. Sir, what I'd like to do now is to take you through some company documents, some Celanese Corporation documents. Okay.

A Okay.

Q All right. The first one is Plaintiff's Exhibit 722. I've got some highlights on here. And you know what? I've got a copy for you, if you want to hold on to it.

A It's easier.

Q Yeah. Can you see this is dated December 7th, 1949?

A Give me a minute.

Q It's under the stamp up top.

A Oh, yes, I got it.

Q And it says, Celanese Corporation of America Chemcel plant operating technical report; right?

A Yes.

Q And the subject is, Corrosive tests of various gasket

materials; true?
A (There was no response.)
Q Top left.
A Yeah. I -- yeah, I got it. Okay.
Q Okay. And it says, Purpose, to determine the reaction of various gasket materials when used with stainless steels under specific conditions; right?
A Yes.
Q And it said, Crane 888 tested best, or, at least, among the best, in each of the separate exposures; right?
A Yes.
Q Then if you turn the page, please, sir, to the Page marked 4 at the top. Have you found it?
A Yes.
Q You see where it says, Teflon was found to be the best overall material in this service, with Durabla, Crane 888, and Ankorite 425 all being only slightly better than unsatisfactory. Of the three tests reported on, only Teflon was consistently rated good. However, as an all-purpose gasket material, it cannot be recommended because of the price of approximately $14 per pound. Teflon should be used, therefore, only in services where it can be economically justified.
Did I read that correctly?
A Yes.

Q Okay. The results obtained from this test indicate that Crane 888 tested best, or, at least, among the best, in each of the separate exposures. Thus, if one material were to be recommended for use in all of the three services tested, Crane 888 would be the logical choice. However, there's insufficient data on these test reqs to definitely state that other neoprene asbestos sheets are all inferior to Crane 888.

Did I read that right?

A Yes.

Q Now, they have a table, and that is -- it's on Page 8, but the page number is on the side because there's a sideways table. At the bottom of the page, it's marked 1,557.

A Yeah. Give me a minute. Let me get there.

Q I'm just trying to give you another data point.

A No, you did.

Q Okay. And you can see for 11 and 12, they report what Crane 888 is, Neoprene asbestos component or composite sheet, right?

A Yes.

Q And it's for a reboiler. What's a reboiler?

A It's where liquid is reheated using some other heat medium.

Q Okay. And then, sir, if you turn to the page marked

at the bottom 1,560, you'll see, again, they've tested different types of sheet gaskets. And one of them is, again, Crane 888 neoprene asbestos composite sheet gasket; right?

A Yes, at the bottom.

MR. TIVIN: Your Honor, I just want to object. There's no evidence of that product in this -- in Mr. Seay's case.

MR. PANATIER: Well, there is now.

MR. TIVIN: Well, no, there isn't, Your Honor. This isn't from the Spartanburg plant. And the -- the identification of the product by the witnesses in this case is 333 and others, never 888.

THE COURT: Okay.

MR. PANATIER: And, Your Honor --

MR. TIVIN: There has to be a nexus with --

MR. PANATIER: The model numbers -- some of the model numbers were identified. There was never any restriction on -- those are the only John Crane gaskets that were there. This is evidence that the company picked another type of John Crane gasket.

MR. TIVIN: There has to be a nexus with the Plaintiff.

THE COURT: Why don't you lay additional foundation, if you can.

MR. PANATIER: Sure.

BY MR. PANATIER:

Q The company routinely tested materials as to whether or not they would work or not work in their facilities; correct?

A I don't know that "routinely" is the word. If they had a need for testing a material, they would.

Q And they clearly were testing gaskets here; right?

A That's what it appears to be.

Q The operate -- the Chemcel plant, what's that?

A It's part of the chemical division, I believe.

Q Okay. And, obviously, they are cc'ing a lot of people, including the engineering department; right?

A If that would be -- if this is chemical division, it would be the chemical division engineering department.

Q Was Spartanburg part of the -- the chemical company?

A No.

Q Okay. What was Spartanburg?

A Fibers.

Q Okay. The Chemcel plant, where was it located?

A I don't know. You'd have to tell me because I'm not familiar with this document.

Q Okay. I --

MR. COLLIER: Objection, Your Honor.

THE COURT: Hold on.

BY MR. PANATIER:

Q I only ask you because you're the company. You don't know where the Chemcel plant is?

A I have known in the past. I'm sorry. I don't remember.

Q Okay. Going back to another issue. Celanese -- here's all I want to ask. Celanese chose to use an asbestos composite sheet instead of Teflon because of the cost; correct?

A That's what this report states --

MR. COLLIER: Objection, Your Honor.

THE COURT: Overruled.

MR. TIVIN: Your Honor, I would renew my objection regarding John Crane. There was no foundation laid.

THE COURT: Okay. Overruled.

BY MR. PANATIER:

Q The next I'll show you is -- this is Plaintiff's 728. This is Celanese -- it's kind of thick, but I'm only going to ask you about one page. Celanese's accident and fire prevention reference for new and existing plants and laboratories, Celanese Corporation of America.

Do you see that, sir?

A Yes.

MR. COLLIER: Your Honor, I'd just like to object to the relevance and the time frame of this document.

THE COURT: All right. Overruled.
BY MR. PANATIER:
Q Sir, you can see this -- this administrative procedures sheet is dated June 1st, 1962; correct?
A Yes.
Q And what's being proposed here is -- it says, outside contractors. Now, was Daniels an outside contractor?
A It was.
Q All right. It says, Another practice at some of the plants is to have contractors employees attend the regular plant safety meetings, as well as holding separate safety meetings for contractors employees; correct?
A That's what it says.
Q Okay. Now, do you know whether or not, at Spartanburg between '71 and '80, the Daniels contractor employees were part of the safety meetings that Celanese was putting on?
A It was not typical to have it that way, no.
Q It was something that Celanese could have insisted upon; correct?
A They could have insisted upon it, but they don't normally do that.
Q I hear you. But, of course, we see that about 10 years earlier, Celanese was, actually, proposing that as something that could be done and said some plants did it;

correct?

MR. COLLIER: Objection, Your Honor.

THE COURT: Overruled.

THE WITNESS: I -- I don't read that as saying that they should or could. It just says some do. Not all do. Not all should.

BY MR. PANATIER:

Q Okay. Let me just ask you, does Celanese agree that if you want to get on the same page with the contractors with regard to health and safety, it would be a good idea to have the contractors employees as part of the overall plant safety meetings?

A No.

Q Okay. This will be Plaintiff's Exhibit 729. Sir, this is the, Engineering standard for fittings, gaskets, bolting materials, selection charts, by Celanese Corporation of America; and it's from Central Engineering in Charlotte; right?

MR. COLLIER: Objection, Your Honor.

THE WITNESS: Yes --

BY MR. PANATIER:

Q This one --

MR. PANATIER: Sorry.

MR. COLLIER: We'd just object again to the relevance and the time frame.

THE COURT: Overruled.

BY MR. PANATIER:

Q Okay. This one's June 5th, 1962; right?

A Yes.

Q Okay. Now, that says Central Engineering, Charlotte. Was that the Central Engineering that would have been over Salisbury, Spartanburg, Cell River, and Shelby?

A Yes.

Q Okay. So whatever they decided would be applicable to those four plants; is that fair?

MR. COLLIER: Object to the form.

THE WITNESS: Yeah. I'm not sure I understand. There are usually alternatives within engineering specs, so it's not a, you do this and not that, normally.

BY MR. PANATIER:

Q Sure. It might be, here's what -- here's what we recommend from an engineering perspective, you may need a variance based on your specific procedures that you guys are following?

A Or, here are the three choices you have for using in this particular application.

Q Yeah. Okay. Now, Celanese specified what materials were to be used or what categories of materials were to be used for insulation and for -- for insulation and for gasketing; correct?

A Typically, yes.
Q Okay. Now, this -- we've already established this would cover the Spartanburg plant, correct?
A Yes.
Q Okay. Do you see here where it says, Engineering standard, gasket specification, Crane 888, Belmont 585, or Crane 888?
MR. COLLIER: Objection, Your Honor. Relevance and time frame.
MR. TIVIN: Objection. Join, Your Honor.
THE COURT: Okay. Overruled.
MR. COLLIER: And could I get a continuing objection to this -- lines of questioning on this document?
THE COURT: Yes, sir.
THE WITNESS: I see where it says that, yes.
BY MR. PANATIER:
Q Right. And then it says -- so it's got two preferred, and then it gives the plants the ability to use Garlock 8748 or Anchor 451, true?
A Yes.
Q Okay. It, also, has the specifications for -- and this is, specifically, the Bishop plant, just to be clear. I'm going to show you that.
A Is this a different document?
Q It's all part of the same one, but I'm just calling

out for you that this specific page refers to the Celanese plant -- okay -- in Bishop.

A In Bishop.

Q And I'm going to ask you a general question. Did the plants -- did each specific plant specify what type of insulating materials were to be used for their processes that they had, or was it a -- more of a corporate decision?

A Generally, there were corporate engineering recommendations with variability allowed, or multiple recommendations.

Q Okay.

A It depends upon the process conditions.

Q And as we've seen, that went for both gaskets and insulation, true?

A Could I see that for insulation?

Q Yeah, sure.

A I'm sorry. I didn't get that from what you put up there. Let me see it again, please.

Q Oh, sure, of course.

And -- but let me ask, it was Celanese who decided whether it was plant or corporate, what insulation to use, right.

A It was the engineering department.

Q Not a contractor?

A Right.
Q Okay. And there it is. That's just the one from Bishop where it had insulating materials.
A Oh, and it's got multiple types of insulation. I see that, yeah.
Q Yeah. Okay. And, in fact, you said the calcium silicate asbestos insulation was the type that was used on the Dowtherm lines; right?
A In those years prior to 1973, yes.
Q In the years Mr. Seay was working; correct?
A There was some that existed on the pipeline after he was employed there. It was not installed after that.
Q It was installed for the first two years of his employment; correct?
A I don't know exactly what date they stopped. But it was sometime in 1973.
Q So -- so we can -- so we can kind of get this straight. So at the plant -- I'm going to do -- try to do a little diagram here.
So you've got -- you've got the plant. And as a -- just as a function of different equipment -- let's say you've got some equipment here and here. You've just got different equipment in different places, and you've got pipes. And let's make one that looks like that. Okay. Some of these have to use asbestos insulation; correct?

A Insulation containing asbestos.
Q Okay. Asbestos-containing insulation. Can we agree on that -- that term?
A Sure.
Q Okay. And so you might have -- have an area that's asbestos. Another area that has asbestos; is that fair?
A Yes.
Q And then some areas -- and we'll say -- we'll use green for this. Some areas may have other types of insulating materials where asbestos is not required; right?
A It could be.
Q So you might have no asbestos over here, no asbestos over here; fair?
A That's possible.
Q Okay. And that was the truth from the day Mr. Seay started out there; right?
A Yes.
Q Okay. Was there anything stopping Celanese from -- from day one, even before Mr. Seay got there, from flagging the asbestos-containing insulation -- the areas where they needed asbestos-containing insulation versus nonasbestos?
A Well, yes, because you'd have to sample to be able to determine where it was. And the process of sampling,

actually, creates exposure.
Q Okay. So the reason that Celanese couldn't flag it for the workers of asbestos versus nonasbestos is they would have to sample it?
A Well, if Daniels didn't identify it when they installed it. We would've had to go back or hire a contractor to go back in and sample every little bit of insulation that existed that could potentially contain asbestos.
Q And that would've cost money?
A Well, sure. But that's not the reason not to do it. You don't want to create the exposure.
Q Sir, you understand -- okay. You understand that all you have to do to find out if something has asbestos in it is walk up with tweezers and take some?
A I'm sorry. That's not the criteria that I use when I sample it.
Q Okay. How do you sample it? Do you drill into it, or something?
A You take a plug of it, yes.
Q Do you, actually, drill into it?
A No. You take a core sample of it.
Q Okay. If you want to know -- how many -- how many asbestos fibers would be in a little tweezer full of asbestos insulation?

A I have no way of knowing. I don't -- I can't quantify that.
Q There would be millions, wouldn't there?
A I can't quantify it. I -- I really don't know.
Q So you're saying from an industrial hygiene perspective, the only way to know whether or not this was asbestos, or this was asbestos, or this would be to go in, and then you would have to create all this dust that might expose other people?
A You'd have --
MR. COLLIER: Objection, Your Honor. Argumentative.
THE COURT: Overruled.
THE WITNESS: You'd have to disturb the insulation in order to sample it. Disturbing it creates the potential for exposure.
BY MR. PANATIER:
Q Let me ask you this. The Daniels employees were working on all this equipment; right?
A I'm sorry. All what equipment?
Q The equipment at the plant. When it went down and needed to be serviced, they serviced it; right?
A They maintained the equipment, yes.
Q Couldn't you have gone out while they were servicing it and taken a little sample?
A It -- it was sampled. We assumed all the calcium

silicate was asbestos until it was sampled to prove it wasn't. And we did not disturb it until it had been sampled.

Q So at some point, you did sample it?

A Well, what was going to be disturbed, yes.

Q When?

A Not the whole plant.

Q When?

A When it was going to be disturbed for maintenance.

Q I'm asking you for Spartanburg. When was it sampled to be able to say this line is nonasbestos and this one has asbestos?

A It was associated with the maintenance work, whenever that maintenance work occurred.

Q I'm just asking you, do you know when it was sampled to delineate asbestos versus nonasbestos --

A Do I remember a specific date? Is that what you're asking me?

Q A year.

A Well, sure. I was there from 1990 to 2001. There -- throughout my tenure there, it was sampled many times.

Q But not, to your knowledge, before 1980?

MR. COLLIER: Objection.

THE COURT: Overruled.

THE WITNESS: It was the procedure of the plant,

prior to my arriving there, to assume all calcium silicate was asbestos-containing insulation until it was sampled and proven otherwise.

BY MR. PANATIER:

Q What about the nonasbestos? What about the non-calcium silicate? Because there were many other types. There was Foamglas, fiberglass; correct?

A But they didn't contain asbestos.

Q I understand that. What --

A We did not sample them. We only sampled calcium silicate. Because that was the only asbestos-containing insulation we had on-site.

Q How much would it have cost in the 1970s -- you're an industrial hygienist -- to sample the lines to determine which ones were asbestos and which ones weren't?

A I'm --

MR. COLLIER: Objection, Your Honor.

THE WITNESS: I'm an industrial hygienist --

THE COURT: Overruled.

THE WITNESS: -- but I'm not an estimator. I -- it would take years.

BY MR. PANATIER:

Q It would take years?

A Yes.

Q Okay. And so the sooner you start, the better;

right?
A Why would you need to do that? I'm sorry. I'm not allowed to ask you questions.
Q That's okay.
A You don't need to sample it, unless you're going to disturb it.
Q Right. And there were people disturbing it on a daily basis, those contract workers; right?
A Not before it was sampled.
Q So you're saying -- you're saying that the Daniels workers were told an area was clear versus an area is not clear?
A No.
Q Okay. Let me show you another document. This is Exhibit 731. Some of these I'm going to be able to skip because we've already covered an issue.
Okay. This will be 744. Here you go, sir.
A Thank you.
MR. COLLIER: Your Honor, we're going to have an objection to the relevance of this document, as well as the content.
MR. PANATIER: I'll show it to you.
(WHEREUPON, a bench conference was held.)
THE COURT: Overruled.
MR. PANATIER: Thank you, Your Honor.

BY MR. PANATIER:

Q Sir, do you see that this is correspondence from Union Carbide to William Freed at Celanese Plastics in New Jersey; right?

A Yes, I see that.

MR. COLLIER: Your Honor, may I have a continuing objection to --

THE COURT: Yes, sir.

MR. COLLIER: Thank you.

BY MR. PANATIER:

Q Do you see that -- oh, and the date December 16, 1970, that's the year before Mr. Seay arrived; correct?

A Yes.

Q And they -- Union Carbide sends an asbestos toxicology report to Celanese and they say, It has been known for years that some persons working in asbestos production were prone to develop a disabling lung disease. In time, this condition became known as asbestosis and was related to exposure to high concentrations of asbestos dust. With further experience, it was found that men could work with asbestos without development of lung disease, if dust concentrations were kept below a certain level.

And you see below he's talking about the different TLVs?

A I see the five million, and then there's a two million.
Q Yeah. Okay. That's just for context.
A Okay.
Q Next page, top paragraph, Usually the dust concentration must be from eight to 10 million particles per cubic foot before its presence is visible in average lighting conditions.

And, sir, as an industrial hygienist, do you acknowledge that you can have very high levels of dust in the air that includes asbestos up to eight to 10 million particles per cubic foot before your visible eye -- your naked eye can even see it?
A No.
Q Oh.
A I don't. I've never had any training in that area. And I've never done any studies trying to quantify that.
Q So you don't disagree. You just --
A No. I have no knowledge of that.
Q All right. They go on. A type of cancer named mesothelioma has been noted to be associated with asbestos exposure in recent years. These tumors, while rather few in number to date, may occur in individuals with histories of only slight exposures, and that as much as 20 to 40 years earlier. There is considerable evidence that

crocidolite is most frequently associated with mesotheliomas.

From the data available, it appears that the TLV of five million particles per cubic foot is not low enough to protect against mesothelioma. And it is quite possible that two million particles per cubic foot is not either. Research on the problem continues.

So this was something that was provided to Celanese in 1970; correct, sir?

A Yes.

Q All right. That's all I have on that one. Whenever I put it in that stack, that's good news.

Okay. This will be Exhibit 768. I have a copy for you, sir.

Sir, do you see this is a document dated September 19th, 1977?

A Yes.

Q Okay. And these -- the subject is, Proposed policy statements; right?

MR. COLLIER: Objection, Your Honor.

May we approach.

THE COURT: Okay.

(WHEREUPON, a bench conference was held.)

BY MR. PANATIER:

Q Up top, sir. -- first of all, CCCTC, that's Celanese

Corpus Christi Technical Center; correct?
A I believe, yeah, it could be, or Celanese Chemical Company Technical Center.
Q Okay. And that's all a part of Celanese; correct?
A It's part of the chemical division, yes.
Q The chemical division of the overall company Celanese; right?
A Yes.
MR. COLLIER: Your Honor, may I have a continuing objection to the use of this document?
THE COURT: Yes, sir.
BY MR. PANATIER:
Q If you go down, it says, The use of human carcinogens and suspected cancer-producing agents. And I want to go to part two.
And it says, The basic premise -- a basic premise of industrial hygiene is that almost all chemicals can be used safely under properly designed and controlled conditions. The company has operated under this assumption with proven success for many years. However, research studies in the last 10 years -- now, 10 years would take us back to '67; right? Because this is a '77 document; correct, sir?
A Yes.
Q Okay. Have raised serious questions concerning human

exposure to cancer-producing agents. Some reachers supporting a single-hit theory have argued that there is no safe exposure to a human carcinogen. Others have argued that carcinogens behave much like other chemicals and exhibit a typical dose-response curve with a no-effect or safe level of human exposure.

Although present cancer research is inconclusive, OSHA has adopted a legislative policy that assumes that there is no safe level of exposure. This government policy, along with our own desire to protect employees against any cancer risk, requires that we formulate a special policy concerning the use of known or suspected human cancer producing agents.

My question for you, sir, is, first, as an industrial hygienist, as someone who dealt with OSHA at Celanese, do you know whether or not OSHA has ever changed their policy that there is no known safe level of exposure?

A I'm sorry. You asked too many questions at once.

Q There were at least 300 words in that sentence.

A Yeah. As an industrial hygienist?

Q As a industrial hygienist and someone who dealt with OSHA --

A Yes.

Q -- at Celanese, do you -- are you aware as to whether or not OSHA has now disagreed with their statement here

that there is no known safe level of exposure to asbestos?
A I am not aware.
Q Okay.
A Sorry.
Q No. That's fine. You can set that aside. Sir, that's a February 13th, 1978, memo; correct?
A Yes, it is.
Q Okay. You were at the company during this time; right?
A Yes.
Q Okay. Do you see its subject is, Occupational Health Policies and Guidelines?
A I do.
Q Okay. I just want to ask you about one part of it. Again, we're talking Celanese Chemical Company and its general policy statements on occupational health; right?
MR. COLLIER: Objection, Your Honor. Same reasons previously stated.
THE COURT: Overruled.
MR. COLLIER: Okay. May I have a continuing objection?
THE COURT: You may.
MR. COLLIER: Thank you.
BY MR. PANATIER:
Q It says, When information is developed on the

potential health hazards of a substance and if this hazard is considered to present a significant risk, the company will communicate this information as soon as it is feasible to all employees, customers, and carriers, along with recommendations for its safe handling and use.

Does Celanese agree today that that's a good policy?

A Yes.

Q And does Celanese agree that, to the extent that information on hazards was developed for any substance that used -- being used on its premises, it shouldn't just be customer, carriers, and so forth. It should, also, include contractors being told about those hazards?

A It was our practice to communicate hazards to our contractors.

Q Okay. This will be Exhibit 772. I'm going to go to the second page. Go to the second page, sir.

MR. COLLIER: Your Honor, we would have the same objections to this document as the previous two documents.

THE COURT: Okay.

MR. COLLIER: May I have a continuing objection?

THE COURT: Yes.

BY MR. PANATIER:

Q April 18th, 1978, Informing employees of monitoring results. It said, At the industrial hygiene meeting -- at the recent industrial hygiene meeting in Houston, there

was considerable discussion concerning the best methods for informing employees of monitoring results. Since the meeting, we have discussed this subject on several occasions.

Were you involved in this meeting at all?

A I was not.

Q Okay. As I'm sure we all agree, both management and hourly employees need to be kept well informed of air monitoring results. They need to have the answers to such questions as, Do chemical exposures pose acute or immediate hazards? Do they pose long-term or chronic hazards? What corrective action is required? Are we in compliance with OSHA?

All of these questions could be boiled down to one overriding concern, Is the job safe? And if not, what should be done to make it safe? Sounds like a simple question until you try to answer it.

And I want to skip down here. It says, Guideline for management employee notification of monitoring results.

Now, when you talk about asbestos, you take -- you could take samples. You go and analyze them. And let's say you get a sample that says two fibers per cc; right? And that's your result of the exposure --

A That's not a -- that's not what you do with a bulk sample.

Q I'm not asking bulk sample. I'm asking air monitoring.
A You're talking about an air exposure sample.
Q Because a bulk sample wouldn't really have a lot of relevance to monitoring results for an employee. You're talking an air sample; right?
A Okay. I understand your question now.
Q All right. And so you get that. You get that result, two fibers per cc. Now, you can give that result to the person who was sampled and say, There's your result, two fibers per cc. But unless you interpret it for them and tell them what that means, it doesn't really mean much to that person; right?
A I understand.
Q Okay. And so -- well, am I correct about that?
A Yes.
Q Okay. And so here it says that, The plant manager will always receive interpretive monitoring information before it is disseminated to the employees; right?
A But Mr. Seay was not our employee. We would not have monitored him.
Q I understand. I understand.
A Okay.
Q I'm going to another issue here.
A Are you done with this document?

Q Yeah.
A Okay.
Q Now, you said --
MR. COLLIER: Your Honor, may we approach --
MR. PANATIER: Your Honor, we'll approach on this one.
(WHEREUPON, a bench conference was held.)
BY MR. PANATIER:
Q So that document that I have up there, that one is '78. And I asked you at the beginning, I said --
A I'm sorry. You're going back?
Q I just wanted it reference. The one that we had up was 1978.
A Okay.
Q The one I just handed you is '88; correct?
A Okay.
Q And I asked you at the beginning, I said, Did Celanese ever conceal health and safety information? You said, No; correct?
A Right.
Q Okay. This is a document dated April 11th, 1988, authored by yourself; correct?
A You, finally, got to me, didn't you?
MR. COLLIER: Objection, Your Honor.
THE COURT: Okay. It's overruled.

BY MR. PANATIER:
Q I'm sorry. What did you say, sir?
A I said you, finally, got to me --
MR. COLLIER: Your Honor, 403.
THE COURT: 403. I do find the probative value vastly outweighs any danger of unfair prejudice under the 403 consideration.
Go ahead.
BY MR. PANATIER:
Q And it's sort of on the same issue as the '78 document. There's the same, as the '78 document, informing employees of monitoring results --
A Right.
Q -- and this one is interpretive statements on industrial hygiene sampling results; correct?
MR. COLLIER: Your Honor, I'd object to this being published to the jury at this point in time.
MR. PANATIER: It's directly on this issue, Your Honor.
THE COURT: Is it going into evidence?
MR. PANATIER: I can. But with most of it, I've just -- I'm just showing him.
MR. COLLIER: Your Honor, further, I don't think it's on Plaintiff's exhibit list in this case.
MR. PANATIER: It's impeachment, Your Honor. And it

is. It's Exhibit 817.

THE COURT: All right. Well --

MR. PANATIER: I'll just --

THE COURT: Yeah.

MR. PANATIER: I can just read it.

THE COURT: He's got a copy of it?

MR. PANATIER: Yes. He's got a copy.

THE COURT: All right. You can ask him about it.

BY MR. PANATIER:

Q All right, sir. So just for -- so we kind of understand where we are. First paragraph, At our recent industrial hygiene meeting in Rock Hill, the issue of whether or not interpretive statements were required on the actual employee communication of sampling results was discussed. There was several people at the meeting who felt that corporate policy required an interpretive statement be included on the dissemination of sampling results to employees. This was based on the opinion that providing interpretive statement was good practice.

Did I read that right, sir?

A Yes.

Q Okay.

MR. COLLIER: Your Honor, may I have a continuing objection to this document?

THE COURT: Yes, sir.

MR. COLLIER: Thank you.

BY MR. PANATIER:

Q In reviewing the core elements industrial hygiene program, the proposed industrial hygiene policy for Hoechst Celanese fibers business units and the industrial hygiene protocol for audits, I was unable to determine that an interpretive statement is, specifically, required on the sampling result communication. The protocol requires that an interpretation of the sampling results be made.

However, the next statement in the protocol is, Are the sampling results communicated to the employees? The protocol does not, specifically, state that an interpretation is required on that communication.

The protocol you're talking about in this memo, sir, is a corporate policy; correct?

A It's a guideline, yes.

Q That you're interpreting?

A Yes.

Q Okay. Because the protocol was not clear, I contacted Joe Stelluto, director of environmental health and safety audit programs for Hoechst Celanese. In reviewing this issue with him, it was determined that, although interpretive statements may be considered to be good practice by some, these statements are not,

specifically, required as a result of the audit protocol or corporate policy, even though good practice requires that the results be interpreted by a qualified professional. However, the interpretation does not have to be included in employee communications.

So what you're saying is we have to interpret monitoring results, but they need not be communicated to the employee; correct?

A Well, you're oversimplifying it. But you -- keep going.

Q Okay. You are free to do so if you believe it is appropriate. If we as a group feel that an interpretation of sampling results should be communicated to employees, we can decide and define that as good practice for the film and fibers group. Until such time, it is not considered to be a requirement to communicate the interpretation to employees.

Did I read that right?

A You did.

Q Okay. So you can set that aside.

The next is a May 21st, 1979, document. This one has to do with dissemination of test results. It says, Confidential. Let's go down to the bottom. In the case where --

MR. COLLIER: Your Honor, we would object to this

document on relevance grounds and, also, post-exposure.

MR. PANATIER: It's 1979. The records go to --

THE COURT: All right. Overruled.

MR. PANATIER: -- 1980.

MR. COLLIER: Your Honor, may I have a continuing objection?

THE COURT: Yes, sir.

MR. COLLIER: Thank you.

BY MR. PANATIER:

Q In the case where an employee requests information on suspect material, a backup statement should be prepared for use by the plant supervisors. This statement should emphasize that data is inconclusive and will be verified or refuted by further, more refined testing. It should, also, be emphasized that exposures are being monitored and controlled below appropriate limits.

Did I read that right?

A Yes, you did.

Q Okay. And this is -- if an employee has -- wants information or has a question about a material, there should be a statement available for the plant supervisors to give to the employee; right?

A Yes.

Q And that statement -- and this isn't talking about any particular substance; correct?

A Correct.
Q But it still says the statement should emphasize that data is inconclusive and that -- and will be verified or refuted by further, more refined testing; right?
A If we receive one -- results of one test that indicate one particular instance of disease in animals, it would not be appropriate to communicate that information to all the employees.
Q You were testing for disease in animals?
A At some point, yes, back -- let's see. This was '78? '79? There was testing going on for our products and raw materials.
Q And certainly Celanese then had the resources to conduct testing on materials; correct?
A On our products and raw materials.
Q Well, you had resources to test and take samples. Because you said you did take samples; right, at some point of asbestos?
A Samples. We did exposure sampling. We did sampling of bulk materials when they were going to be disturbed.
Q By the way, did Celanese require that any time the Daniel employees were doing work on an asbestos-containing line that the area -- for the '70s, the 1970s -- that the area be cordoned off with plastic and have negative -- negative pressure, and all of that?

A They had to meet OSHA requirements.
Q Well, that's not what I asked you --
A OSHA requirements changed over time.
Q I understand.
A Okay.
Q So what I'm asking is --
A They followed OSHA requirements at our site and company policies.
Q All right. So my question is, did -- at any point, did Celanese in the 1970s require that when Daniel was working on an area that had asbestos on the lines or on the equipment -- okay -- asbestos insulation or gaskets -- that the area, actually, be plasticked off so that no other workers would be exposed?
A If during that time it was required by OSHA regulation or our policy. I cannot, specifically, state whether that time frame it was or was not.
Q Okay. And, obviously, I'm asking you as the company. And what your testimony is is you don't, actually, know for Spartanburg in the '70s; correct?
A Because I can't remember.
Q Okay. And whatever the reason, that's fine.
A I was dealing with asbestos abatement in the late '70s. And I can't remember.
Q By the way, asbestos abatement is where you hire a

contractor to come in that is specially trained in asbestos; correct?

A Abatement is the removal of asbestos-containing insulation. It may or may not be a contractor.

Q Okay. If you were going to do asbestos abatement to remove old insulation or old materials that have asbestos in them, the best practice is to hire a professionally trained abatement contractor to come and do that work; correct?

A You have to have trained people doing it.

Q Trained in abatement procedures; right?

A Yes.

Q At what point in the 1970s did Spartanburg do that?

A We utilized Daniels.

Q You, actually, hired Daniels as asbestos abatement contractors?

A Yes, during some period of time.

Q Do you have that document with you?

A No, I don't. It would be at the plant site.

Q So the -- so you're saying the plant has a document where Celanese hired Daniel to do asbestos abatement work? Is that what you're saying?

A Yes.

Q Okay. And when was the last time you saw this document?

A When I worked there.
Q And at what year did it start?
A I can't answer that.
Q Certainly having a professional abatement crew, whether it's Daniels or somebody else, was something that Celanese could have done in 1970, '71, '72, '73; right?
A Prior to OSHA, probably -- there probably weren't any.
Q You're saying that if they had wanted to, they couldn't have taken procedures like wet-down, plasticking off the area, using -- using negative pressure to get rid of the asbestos?
A There probably weren't any abatement contractors available doing that.
Q Well, you're telling me you guys didn't even use an abatement contractor. You just had Daniels do it; right?
A Daniels was an abatement contractor.
Q Daniels was an asbestos abatement contractor?
A They were trained, yes.
Q Did either of these contracts that you showed the jury say "asbestos abatement contract"?
A No.
Q They were maintenance contracts; right?
A Right.
Q Have you seen an asbestos abatement contract in this

case for Daniel at the Spartanburg facility?
A I have not seen one, no.
Q Sir, this as an August 1980 document. Sir, can you see that that's a Celanese document? General administration on health and safety affairs, from 1980; correct?
A It's related to Celanese. I don't know if it's a corporate document or a division document. But, yes, it's 1980.
Q Okay --
MR. COLLIER: Your Honor, we'd object to the relevance of this document, as well as the time frame of it.
THE COURT: Okay. Overruled.
MR. COLLIER: May I get a continuing objection?
THE COURT: Yes, sir.
MR. COLLIER: Thank you.
BY MR. PANATIER:
Q Here's what it says -- and it says, "Celanese Corporation" at the top. You're just saying you don't know whether it came from one of the divisions or the actual corporate guys at the top; right?
A It sounds like a corporate, but I can't --
Q Okay.
A -- say for sure it is.

Q It says, To meet its environmental health and safety responsibilities, Celanese is committed to -- and it's got several things. But the second one is, communicate promptly and accurately significant toxicity and risk information to employees, customers, and others who may come into contact with Celanese operations and products.

Did I read that right?

A Yes.

Q Okay. If you turn the page, it says, It is Celanese policy to attempt to assert protection of the health and safety not only of its employees, but, also, of the employees of operations or maintenance --

A I'm sorry. Excuse me. I'm apparently missing a page.

Q Are you really?

A I don't know. I didn't see an introduction.

Q Yeah. Let me --

A So maybe -- did you say skip two pages?

Q You may be right. Let me take a look at it.

There it is.

A There it is. Three pages over.

Q Health and safety not only of its employees, but, also, of the employees of operations or maintenance contractors or other contractors, where appropriate, who routinely perform services at Celanese facilities.

Now, how long had that been Celanese's policy at this point in 1980, sir?

A Well, I can't state how long this policy was in existence before this, if at all.

Q Okay.

A It was our practice to ensure that our contractors followed our safety procedures --

Q So --

A -- and met OSHA requirements.

Q So would it be the case then that Celanese audited to make sure that its contractors were abiding by OSHA?

A We had periodic safety audits which included contractors.

Q So what you're saying is that Celanese would have audited Daniels to make sure that they were complying with OSHA requirements; right?

A Sure.

Q All right. And, to your knowledge, did Daniels ever come up bad or fail one of those audits at Spartanburg?

A I wouldn't call it failure. There were always recommendations made from audits, both for our employees and Daniels employees, if something was noticed that wasn't quite right.

Q I'm not asking about a general thing that may have happened. Do you know that this, actually, happened? Do

you have documentation of it?
A No. Do I have documentation? No. It would be at the plant.
Q Okay. And you don't have any personal knowledge that Daniels failed any audit for OSHA compliance in the 1970s, do you?
A Yes, when I was at Salisbury.
Q I'm sorry. At Spartanburg, sir?
A No. I don't have any documentation. And I wasn't there to be involved in it.
Q And do you agree that this is a good policy, for Celanese to work with contractors, to work with employees to ensure safety of all those individuals?
A And we did work with contractors.
Q Okay. But do you agree it's a good policy?
A Yes. Today, sitting here, it's a good policy.
Q This policy shall be implemented by the operating companies through careful selection of contractors, dissemination of health and safety information to contractors, review of the contractor's health and safety program, and by insisting on compliance with applicable state and federal OSHA regulations and Celanese standards of performance.
Did I read that right?
A And we did that with our contractor safety program.

Q All right. And it says, The ultimate responsibility for health and safety of the contractor rests with the contractor, but -- but necessary -- but where necessary or appropriate, Celanese may provide assistance; correct?
A Sure.
Q Okay. Was Daniels a long-term contractor?
A Yes, they were.
Q It says -- well, first, right above it, Safety and health input. Operating companies are encouraged to involve their health and safety departments in the selection of contractors, particularly where contractors will be performing high-hazard activities; right?
A And we were.
Q Okay. Long-term contractors, where contractors perform long-term services for Celanese. Adequacy of the contractor's health and safety program should be reviewed periodically by the operating company; right?
A Yes.
Q And you're saying Celanese would have done that for Daniel in the 1970s?
A We did it.
Q Okay. One more on this document. Hazard communication. The operating company shall provide prospective and current off-site contractors --
Now, what's off-site versus on-site?

A It's where we want to do some contract manufacturing, where we want them to make a product for us.
Q Okay. And it says, With the same environmental health and safety information about the products, processes, wastes, and other materials involved that Celanese would provide to its own facility or operation if such facility or operation were performed -- performing the services of the off-site contractor. The operating company will maintain a permanent written record identifying the information transferred and the fact of transfer.

And to the extent that any contractor was working with any hazardous material that Celanese was aware of, Celanese was in the position to communicate that to those contractors; correct?
A To the -- according to this, the off-site toller --
Q Uh-huh.
A -- we communicated with them before they got the job of manufacturing that product.
Q And there would be no reason to treat on-site contractors any different in terms of hazard communication; right?
A Right.
Q Okay.
A And we communicated to Daniels the hazards of our

process that they might be exposed to.
Q When did Celanese start to look for substitutes for asbestos-containing gaskets on a corporate level?
A 1972, '73.
Q How do you know that?
A That I know of.
Q Are you -- I hate to ask this. Are you guessing?
A No.
Q Okay.
A When I went to work in 1973, I was told that the Salisbury plant no longer purchases insulation-containing asbestos.
Q I'm sorry. I asked gaskets.
A Oh, I'm sorry.
Q Gaskets?
A There was a process ongoing at that time to identify substitutes.
Q Okay. Is it true that substitutes for all asbestos-containing gaskets, that substitution wasn't finished even in the mid-1980s?
A I really don't know the status of it.
Q In 1973, when -- Celanese started requiring that installation of nonasbestos insulation go in any time you substitute -- you pulled off old stuff, right? Over the years then, you would have a procedure -- you would have a

situation where whenever a repair was done, you'd put a nonasbestos where asbestos had been; fair?
A Yes.
Q And as repairs were done all over the plant, you would have little patches of nonasbestos all through the asbestos; right?
A That's correct.
Q Okay. Did Celanese tell Daniel at any point, hey, look, if you install new asbestos that's asbestos-free, either we, Celanese, or we would like you to tag it as nonasbestos?
A At some point in time they did, yes. I don't remember when that started.
Q Okay. Can you testify under oath that it happened at Spartanburg in the 1970s?
A I can't tell you when it started.
Q Okay. That's, obviously, good policy, though; right?
A I don't disagree with it. We started it at some point.
Q Okay. Is it your testimony that at some point during the 1970s, it was the policy of Celanese already to require that anyone removing asbestos be trained in asbestos abatement in the 1970s?
A Any time in the 1970s?
Q Sure. If you have a specific date.

A I don't have a specific date, but the OSHA standard required people to be trained at some point in time in the '70s.

Q But not as asbestos abatement contractors. You understand that; right?

A No. I don't understand the difference. Removal of insulation containing asbestos is disturbing insulation containing asbestos, and the same rules would apply.

Q Is it your testimony then that complying with the OSHA standards for asbestos is the exact same thing as having a trained asbestos abatement contractor?

A You have to be trained -- you have to be trained to comply.

Q And that's all asbestos abatement contractor means, is that you're trained to follow the OSHA requirements?

A There are training requirements in the OSHA standard. You have to comply with the training requirements.

MR. COLLIER: Your Honor, this next exhibit we would object to on relevance and on time frame grounds as well.

(WHEREUPON, a bench conference was held.)

BY MR. PANATIER:

Q Sir, do you agree that it would be good corporate policy as a matter of -- as a condition of employment that the contractors and the employees share responsibility for worker safety, not just with things dropping on your foot,

hard hats, stuff like that, but with health hazards like asbestos, or other toxins?

A They have the same individual responsibility related to those individual hazards.

Q Okay.

A Is that what you're asking?

Q Yeah.

A Okay.

MR. COLLIER: Your Honor, we'd have the same objection to this exhibit, relevance and post-exposure time frame.

(WHEREUPON, a bench conference was held.)

BY MR. PANATIER:

Q Sir, this document, it's from Celanese. It's dated November 7th, 1988. Do you see it's called, Asbestos Gaskets?

A Yes.

Q Okay. And it says --

A I'm sorry. Put it back down so I can see the date.

Q Yes, sir, of course.

A Yeah. Okay.

MR. COLLIER: Your Honor, can we have a continuing objection to the use of this document?

THE COURT: All right. Overruled.

BY MR. PANATIER:

Q And it says, November 7th, '88; right?

A Yes.

Q It says, Asbestos gaskets continue to be used by industry in many applications requiring extreme heat-resistance capacity and is, also, approved by Hoechst Celanese for such uses. So asbestos gaskets were still being approved in 1988; correct?

A It says -- yeah.

Q Okay. Such asbestos gaskets must be preformed or precut and not modified by our personnel, i.e., blank gasket material stock containing asbestos must not be bought. Now, they were buying sheet gasket or blanks in the 1970s that you would then -- you could then make a gasket from; right?

A They were buying that, as well as precut.

Q Right. And now the policy is, only buy precut; true?

A That's the policy for this plant, I guess, in 1988.

Q Well, which plant is that?

A I don't know. I -- I could guess, but I'm not going to.

Q Well, it's a corporate document; correct?

A But its, also, a plant document.

Q I understand. Now, certainly if Celanese had wanted to in the 1970s, they could have said, let's only buy the

precut gaskets so no one has to make the gaskets out of the -- the blank material, the big sheets; correct?
A If they were available.
Q I want you to assume they were. If they were available, there was nothing stopping Celanese from only purchasing the precut gaskets; right?
A So you want me to speculate that they were available, therefore --
Q I don't want you to speculate. They probably weren't available.
A I don't know.
Q Okay. If preformed gaskets are removed from service, special precautions must be taken by maintenance personnel as not to release any fibers, i.e., no grinding, wire-brushing, or the like. Now, they could have had a rule that said that in the 1970s for those workers; correct?
A They could have.
Q To your knowledge, they did not; right?
A I don't know.
Q You're not aware of one?
A I don't know of one.
Q Okay.
A I don't know one way or the other.
Q Okay. So as you sit here today, sir, you do not have

any evidence that Celanese, at Spartanburg, had a policy that you were not to grind, wire-brush, or the like gaskets?

A I have no knowledge.

Q Okay. If the gasket cannot be removed without the potential release of fibers, then a nonasbestos substitute should be sought, or the environmental engineer consulted in order to evaluate the exposure potential. And that's something they could have done in the '70s, too; correct?

A Yes.

Q Lastly, I recommend that nonasbestos gasket and packing substitutes be sought for all applications currently containing asbestos. And this is '88. They could have been seeking those in '72; correct?

A My experience was they were evaluating alternatives in '73. I can't remember whether any were found or not.

Q To asbestos gaskets?

A Yes.

Q At Spartanburg?

A At Salisbury where I was.

Q Okay. Sir, do you agree that as a general corporate principle, owners and contractors need to provide safe workplaces, and to protect the safety and health of their workforces and the general public?

A Yes.

Q Do you agree that when they work together to improve the safety and health of contractors, both benefit?
A I'm sorry. Back up and repeat that, please.
Q When they work together to improve the safety and health of contractors, both benefit?
A Yes.
Q Okay. I want to show you a 1963 document from Celanese.
And I'm almost finished, sir. So I appreciate your patience.
A Good. Because I'm going to need a break shortly if you're not.
Q Okay. Do you need one right now?
A I can wait a few minutes.
Q All right. I'll just give this to you. This is a document you have seen before. You were shown this in your deposition.
MR. COLLIER: Your Honor, we would just object to this document on relevance grounds and time frame.
(WHEREUPON, a bench conference was held.)
THE COURT: All right. Overruled.
MR. COLLIER: Your Honor, could we have a continuing objection?
THE COURT: Yes, sir.
MR. COLLIER: Thank you.

BY MR. PANATIER:

Q All right. Sir, this will be one of the last documents I'll show you. Celanese Corporation of America, administrative procedures. Do you see that, 1963?

A Yes.

Q Okay. There's a commercial hazards committee. Do you see that?

A Yes.

Q It is the function of the commercial hazards committee to decide what action the corporation should take to safeguard itself, its employees, and others against hazards brought to the attention of the committee and relating to the manufacture and sale of the corporation's products. Now, did you ever sit on this committee?

A It was called something differently, but much later, yes.

Q When did you sit on it?

A Well, after 1978 and up until 1990.

Q Yes, sir.

Provisions as to internal communications relating to hazardous products. The corporation finds it necessary from time to time to conduct tests and investigations concerning the possibility of hazards involved in the use, handling, or sale of chemicals or other products. This

may occur when new or changed products are under consideration, when complaints are received from customers or others regarding hazards or injuries, or if the injuries occur within the corporation.

By the way, '63 was about eight years before Mr. Seay arrived; correct?

A Yes.

Q Okay. As research and testing work is performed in the above situations, interim reports are written, often based on incomplete information and containing conclusions which will be modified as the studies progress. These reports occasionally result in a substantial amount of controversy expressed in correspondence, which is rather generally circulated. This presents a serious legal hazard.

In the event that claims or suits against the corporation should later be brought involving the product in question, plaintiffs could serve subpoenas on the corporation requiring the production of all documents bearing on such a situation. And statements regarding the hazardous nature of the product, even though incorrect, could be used against the corporation. For these reasons, it is most desirable to keep interim reports and correspondence on such subjects to a minimum and to avoid all general correspondence relating to such matters.

I'm going to skip ahead.

Written communications concerning hazards to person or property will be confined to the minimum absolutely necessary, and will be in the form of confidential memoranda. Preferably communications will be conducted orally whenever feasible.

Orally means spoken; correct, sir?

A Yes.

Q Such communications as must be written will be confined to factual data and statements of their inevitable significance, and will omit all opinions and -- or speculation. The latter will be communicated orally.

So it's saying any opinions, you communicate that verbally, you write down facts; right?

A Yes.

Q Such communications concerning hazards to person or property, as are necessary, will be issued by the department performing the work on which the report is based, and will be directed through channels to the corporation's medical department and legal department. And no other copy except that of the issuing department will be made. It will be the responsibility of the department manager orally to advise and consult with interested members of other departments.

First, did I read that right, sir?

A Yes.
Q Okay. Now, look, I want to show you -- if you go to the page at the bottom, 2,229 -- I'm sorry. Next page. Very last page.
A Okay.
Q Do you see who signed this document?
A Yes.
Q Harold Blanche. He was the president --
A Blancke.
Q Oh, Blancke.
A Yes.
Q I'm sorry.
A It's all right.
Q Harold Blancke, he was the president of the company at the time, right.
A Yes.
Q Did you know him?
A I never met him, no. I think he died before I...
Q When you sat on this committee, was this still Celanese's policy about research?
A Relative to what?
Q Well --
A I mean, what particular part of this are you talking about?
Q This policy that I just read to you. Was that still

in effect when you sat on the committee in '78?
A No. The policies were updated several times before '78.
Q Okay. Do you know whether or not any of this that I just read had been taken out or was still included?
A I -- no. I don't recall.
MR. PANATIER: Your Honor, I have probably five or six more minutes, but I want to give the witness an opportunity and the jury an opportunity to take a break, if we need it.
THE COURT: What do you estimate your redirect?
MR. COLLIER: Not long, Your Honor. Five minutes, 10 minutes.
THE COURT: Are you okay?
THE WITNESS: I can hold it.
THE COURT: How about -- is everybody okay?
(WHEREUPON, the jury indicated in the affirmative.)
MR. PANATIER: You're good. Okay.
All right. I'll try to finish up.
THE WITNESS: I'm older than you all.
BY MR. PANATIER:
Q If you feel like you can't hold it, you run right out. Okay.
A Just get up and run out, huh?
Q I hope you get up and run out.

A Yeah, me, too.
Q Okay. Sir, let me ask you whether or not Celanese agrees this would be a good corporate policy for handling asbestos by contractors.
The contractor must not remove any insulation before finding out from Celanese that the insulation is asbestos free. Is that good corporate policy?
A Yes.
Q Celanese would be responsible for evaluating the insulation and determining how and who will remove it. Is that good corporate policy?
A Yes.
Q Insulation containing asbestos will be removed according to plant asbestos removal procedure. Is that good policy?
A Yes.
Q Okay. Under no circumstances will a contractor remove any asbestos insulation which has not been, specifically, identified and cleared for removal by Celanese. Is that a good corporate policy?
A Yes. And that was our practice.
Q In '91 that was your practice; correct?
A Well, I didn't know -- I didn't see the document. I don't know what the date was.
Q Right. Right there, that's 1991; right?

A Yeah. That's our contractor safety program.
Q This, what I just read -- and so you can see that section that I just read, the host is Celanese. You understand that?
A The host?
Q The host is Celanese.
A Of the contractor?
Q Sorry?
A You're talking about at the site?
Q That's right.
A Yes.
Q The contractor's the contractor, the host is the owner?
A Right.
Q Right. Okay.
A Well, actually, in this terminology the host is the engineer or other personnel who is responsible for that particular contractor.
Q And that's a Celanese employee?
A Yes.
Q Okay. And this specific policy that I just showed you from '91, that could have been the policy in '71 or '61; correct?
A There was a policy that existed before that one dated '92.

Q I understand. Now, about these big Post-it notes -- and I wrote some -- I wrote some signs. And I just want to ask you if these signs --

MR. PANATIER: And, Your Honor, these are just sticky. Can I set them on the wall next to the witness?

THE COURT: What are they now?

MR. PANATIER: They're just Post-it notes.

MR. COLLIER: Objection, Your Honor.

THE COURT: Yeah. I would sustain that.

MR. PANATIER: Okay. Well, here, I'll put them on my easel.

MR. COLLIER: I would object to them being used at all --

THE COURT: Wait. Those are something you wrote?

MR. PANATIER: Yeah. I'm writing them. It's just as if I wrote them on an easel. I'm -- but I'm sticking them --

THE COURT: What are you going to ask him about that?

MR. PANATIER: If this could have been a warning that they could have used at Celanese.

THE COURT: Has he ever seen a Post-it note that big is my question.

BY MR. PANATIER:

Q Have you ever seen a Post-it note this big?

A I am in a minute.

Q Have you ever seen a Post-it note that big? Probably not.
A No, I haven't.
THE COURT: Yeah. I think you can do that. I mean, I understand.
BY MR. PANATIER:
Q Here's what I'm asking. These are Chris homemade warning signs. Okay.
MR. COLLIER: Your Honor, could we have a continuing objection to this line of questioning as well?
THE COURT: Yes, sir.
BY MR. PANATIER:
Q Okay. Celanese could have had a sign that said, Tag lines and equipment contain asbestos. Do not touch; right?
A If they had sampled it, they could have.
Q Right. They could have had a sign up that said, Tag lines and equipment contain asbestos and are off limits to contractors; right?
A I don't know why they'd do that, but okay.
Q They did it in '91. We just read that; right?
A I didn't hear what you read saying that.
Q Okay. They could have said, Do not touch tagged areas. Asbestos hazard can cause cancer, disability, and death; right?

A Could they have done that?
Q Yeah.
A Sure.
Q They could have put up a sign that said, Warning. Insulation in gaskets may contain asbestos. Do not begin work until cleared by Celanese; correct?
A They could have done that.
Q They could have put one up that said, Warning. Asbestos can kill you. Always wet down, use a HEPA vacuum, and wear a respirator; right?
A Yeah. They could have done that.
Q The only -- the only party that had permission to put anything on Celanese's walls was Celanese; right?
A Without permission, yes.
MR. PANATIER: All right. At the risk of not asking a bunch of other questions, I'll be done.
Pass the witness.
Thank you, sir.
THE COURT: All right. Redirect?

REDIRECT EXAMINATION

BY MR. COLLIER:
Q Mr. Bowyer, Chris Collier. I've got just a few follow-up questions for you.
I believe you testified on direct examination that Daniel constructed the Spartanburg plant back in the mid

to late 1960s; correct?
A That's when it started, yes.
Q Okay. And in connection with that, did Daniel install all of the insulation that was installed in that plant?
A Yes.
Q Okay. And so would Daniel have known what insulation contained asbestos -- strike that.
And did Daniel continue to do the maintenance on the insulation throughout, up until the -- at least, the 1980s if not the 1990s at Spartanburg?
A Yes.
Q So then would Daniel have known which insulation contained asbestos and which insulation did not contain asbestos?
A They should have known, if they kept the records.
Q You were asked some questions -- a lot of questions about Celanese. Celanese was protecting its employees and Daniel's employees from any potential hazards associated with the manufacturing of polyester fiber; correct?
A Yes.
Q And Daniel then was responsible for protecting its employees, as well as Celanese's employees for any activities that Daniel was doing on site; correct?
A Yes. If it was Daniels work, Daniels was

responsible.
Q OSHA started in the -- OSHA came into effect in the early 1970s; correct?
A Correct.
Q In fact, it was in 1971, which is the same time when Mr. Seay started working out at the Spartanburg plant; correct?
A I don't know exactly, but around that time frame.
Q In 1971, when Mr. Seay started working at the Spartanburg plant, given that OSHA was in effect, did Celanese have any -- at that point in time, did Celanese still consider asbestos to be a nuisance dust?
A In -- before OSHA?
Q No. After OSHA, in 1971.
A No, we did not.
Q Going back to the maintenance contracts. Under the maintenance contracts, one of those sections -- I believe it was Section 15(h) -- Daniel was required to follow OSHA; correct?
A That's correct.
Q And Celanese expected Daniel to follow OSHA; correct?
A That's correct.
Q And there's no evidence that's been -- that you've seen that Daniel did not follow OSHA; is that correct?
A That's correct.

MR. COLLIER: Thank you, Mr. Bowyer.

THE WITNESS: Thank you.

CROSS-EXAMINATION

BY MR. TIVIN:

Q Mr. Bowyer --

A Oh, no, another one.

Q Yeah.

MR. TIVIN: May it please the Court.

BY MR. TIVIN:

Q My name is Mark Tivin. I represent a company called John Crane, Inc.

A Yes.

Q You were shown this a long time ago. It's fittings, gaskets, and bolting material --

A Is that something he showed me?

Q Do you still have that up there?

A I don't know.

Q I don't know if he gave you a copy.

MR. TIVIN: May I approach the witness?

THE COURT: Sure.

BY MR. TIVIN:

Q This from 1962.

A Uh-huh.

Q And then it says, gaskets selection Page 3 and then 4 and 5?

A Right.
Q You were shown that -- they talked about Crane 888. Do you see that?
A Yes, I do.
Q Does it, also, list Belmont 585?
A It does.
Q Garlock 8748?
A Yes.
Q Or Anchor 451?
A Yes.
Q Those are all acceptable at Celanese?
A Yes.
Q And then right below that, there's a Flexitallic asbestos gasket?
A Yes.
Q And then it lists Teflon gaskets; right?
A Yes.
Q Teflon, Teflon. Anywhere in this gasket selection chart, does it ever mention the number 333?
A I didn't see it.
Q Well, you can look.
A Yeah, I know. I've looked. And I didn't see it. Sorry.
Q Does it ever mention the Style 2112?
A No.

Q How about John Crane 2012?
A No.
Q Or Garlock 750?
A No.
MR. TIVIN: Thank you.
THE COURT: Yes, sir.
MR. PANATIER: Yeah.

RECROSS-EXAMINATION

BY MR. PANATIER:

Q For this -- for the -- for this one was '63 -- or '62. Have you seen -- or did it go with the plant when it was sold -- the specifications for the Spartanburg plant for the later years, '72 through '80?
A Over time, that would be -- had been revised.
Q Okay.
A And whatever the final product was is still at the plant.
Q Does Celanese have in its possession now any of the purchase orders for any of the insulation or any of the gaskets?
A I don't believe so.
Q Okay.
A Again, that would have been a site document.
MR. PANATIER: Site specific.
All right. Thank you, sir.

No further questions.

THE COURT: All right. Thank you.

THE WITNESS: I'm done?

THE COURT: Yes, sir.

THE WITNESS: Okay. Thank you.

THE COURT: Thank you for your time, sir.

THE WITNESS: Sure.

THE COURT: No more witnesses today; right? Is that correct?

MR. TIVIN: Correct, Your Honor.

MR. YOUNG: Not from the Defendants, Your Honor.

THE COURT: So we have one more witness left. It'll be in the morning; is that right?

MR. YOUNG: That's correct, Your Honor.

MR. PANATIER: There's -- I thought we had an agreement on a 10-minute read-in of a witness. We can do that tomorrow morning.

THE COURT: Oh, yeah. You did mention that.

MR. PANATIER: Yeah. Apparently, there's -- we may have to hash something out. But it would be 10 minutes of reading in a deposition. But that's the only thing.

THE COURT: So no further need for the jury today; correct?

MR. PANATIER: No, sir.

THE COURT: All right. So just be back at 9:15 in