COMMONWEALTH OF KENTUCKY
HANCOCK CIRCUIT COURT

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SHIRLEY H. McGLENON and)
TERRY L. PARKER,)
CO-EXECUTORS OF THE)
ESTATE OF LEON FISCHER,)
Plaintiffs,)
vs.) Case No. 08-CI-00022
SECO/WARWICK)
CORPORATION, et al.,)
Defendants.)

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Videotaped deposition of ERNEST W. DeMARSE, a Witness herein, called by the Plaintiffs for cross-examination pursuant to the Kentucky Rules of Civil Procedure, taken before me, the undersigned, Lori K. Phillips, an RMR and Notary Public in and for the State of Ohio, at the offices of Vorys, Sater, Seymour and Pease, 1100 FirstMerit Tower, Akron, Ohio, on Thursday, the 5th day of February, 2009, at 11:15 o'clock a.m.

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ERNEST W. DeMARSE
of lawful age, a Witness herein, having been first duly sworn, as hereinafter certified, deposed and said as follows:

CROSS-EXAMINATION

BY MR. JOHNSON:

Q. Please state your name, please.

A. Earnest William DeMarse, D-e-M-a-r-s-e.

Q. Okay. And, Mr. DeMarse, what name do you generally go by professionally? Do you go by initials or by Ernest or William or all of them?

A. About all of that. Sometimes it's E.W., sometimes I do use my first name Ernest and more commonly I go by Bill.

Q. Also go by Bill?

A. Yeah.

Q. Okay. Any other names that you've been known by?

A. No, I can't think of anything else. That's enough I think.

Q. Okay. Where do you live?

A. I live here in Tallmadge, which is a suburb of Akron, Ohio.

Q. And what is that address?

A. 546 Woodland Drive.

Q. Are you currently employed?

A. No.

Q. Okay. When did you become an employee of Goodyear Tire & Rubber Company?

A. As soon as I got my degree from Washington University in St. Louis, chemical engineering degree. I hired in within a week to Goodyear. That would be in February of 1952.

Q. Okay. And how long did you continue to be an employee of Goodyear?

A. My official retirement date was September the 1st, 1951.

Q. 19 --

MR. TAGGART: 1951? Bill, retirement.

THE WITNESS: 1991.

BY MR. JOHNSON:

Q. 1991?

A. Yes, I'm sorry.

Q. Okay. Okay. So that's what, almost 40 years if my math's right?

A. Yes.

Q. And were you a continuous employee of Goodyear during that time?

A. Yes.

Q. And since you retired in 1991 have you worked for anyone else?

A. No, I haven't.

Q. Have you been involved in consulting work?

A. Just with this law firm Vorys here for Goodyear.

Q. Okay. So just in relation to Goodyear?

A. Yes, that's all.

Q. When did your role as a consultant in relation to Goodyear begin? Was it right after your retirement in '91 or later?

A. Yes, I would say shortly after I retired in '91.

Q. And how would you describe that role; what type of consultant to Goodyear are you?

A. Primarily to answer questions about the manufacture and use of compressed asbestos sheet and also of answering questions relating to any asbestos or non asbestos related host products.

Q. Did you spend your entire almost 40 year career at the same location for Goodyear?

A. Almost but not quite. I did have a -- about a four year span late in my career that I was located at the Goodyear Greensburg, Ohio air spring plant as the development manager.

Q. What position were you originally hired at in 1952?

A. Well, basically was as a rubber formulation compounder.

Q. What did that --

A. In training to begin with.

Q. Okay. And what did your training involve?

A. Working closely with more experienced people doing the same type of formulation or compounding work.

Q. Now, was this a product control aspect or product development or combination?

A. Development.

Q. Product development. What type of products were you involved in developing in 1952?

A. '52 was a year that I spent really

just in training. Part of it was before I hired in to the industrial products, about half of it, the first half of it, was before I hired in to the Industrial Products Department and I was on what Goodyear referred to as a squadron training where we were given two week to four week assignments in various different divisions of the Goodyear Akron company.

Q. After you completed your training, were you involved in developing any particular products?

A. Still I would say an additional six months after I hired in to the Industrial Products Department that I still spent that six months in training and working with different product groups in that department.

Q. Okay.

A. Not doing any real development work on my own but just learning.

Q. So after about a year were you involved more in development work on your own?

A. Still had short assignments with the -- there was about five or six different product groups within the Industrial Products Division there and I spent usually about three

month assignments at each one of those groups learning about all the products of our department.

Q. So that took another year and a half or so?

A. That's more training more -- learning more about formulating rubber compounds.

Q. Okay. So would it be fair to say about what, three years or so into your employment you had completed various aspects of that training?

A. Yes, that's somewhere in that neighborhood. Too maybe I ought to mention that the one document I have with me in front of me here is a -- sort of a -- not really a resume but it's a compilation of where I worked and how long I spent in the various different aspects of it.

Q. Okay.

A. And I pass this out in previous depositions.

Q. Thank you.

A. That would help a lot. Helps me remembering after all these years just exactly where I worked and when.

MR. JOHNSON: It will be helpful. I appreciate it and we would ask that it be marked as Exhibit 1.

(Plaintiff's Exhibit 1 was marked for identification.)

THE WITNESS: As you can see from this my -- what became really my first permanent assignment to a product group within industrial products it really occurred in 1955 and at that point I became a member of the Special Products Group within the Industrial Products Department.

BY MR. JOHNSON:

Q. And can you tell me what was included within this Special Products Group?

A. The listing here pretty well states most of them, although there were probably a total of 15 or 20 altogether.

But the major products within that Special Products Group consisted of extruded dock fenders, often 18 inches in diameter and 10 to 15 feet long. Large products. Tank linings, which are rubber coverings that go inside of tanks and protect the tank from corrosion, acids, for instance. Rubber

covered rollers, which were used in a lot of companies to, for instance, to support conveyors, abrasion-resistant sheet rubber. I think that's kind of self-explanatory.

Also we were involved with sheet rubber gaskets including the compressed rubber asbestos sheet.

Q. Now, as you probably know we're -- I'm here with interest in asbestos containing products.

The specific reference there that you have on Plaintiff's Exhibit 1 to sheet rubber gaskets including compressed rubber asbestos sheets, can I read that to mean that these other listings of products that you have did not include asbestos?

A. That's correct.

Q. And you continued in the Special Products Group for about three years from 1955 to 1958?

A. That's about correct, that's about the time.

Q. Okay. And can you tell me in some more detail what involvement you had in product development and testing of

asbestos-containing products during that time?
A. Other than the compressed asbestos sheet?
Q. Well, no, including that.
A. Including that?
Q. Including that, yes.
A. What function I performed in that?
Q. Yes, sir.
A. Well, I had responsibility for updating formulations of the various different types of compressed asbestos sheet. We made those in a couple of different colors and to meet specific physical property requirements. And I also worked closely in the production operation overseeing some of the manufacturing procedures that was used in producing that product.
Q. When you make reference to physical property requirements, I assume among those would be heat, exposure to chemicals, certain acids, things of that nature?
A. And compression set properties, which is very important for a compressed gasket.
Q. Compression. Any other factors: Compression, heat?

A. I think we ran tear resistance properties, tensile strength and elongation.
Q. Where was the compressed rubber asbestos sheet being manufactured during that time period 1955-1958?
A. During the whole time that I worked at Goodyear that product was made in one area of the plant, which was located on the first floor of one of the two buildings that we had all of our industrial products in.
Q. In Akron?
A. Yes, in Akron.
Q. What aspect of the development of the requirements of the compressed rubber sheets, asbestos rubber sheets did the asbestos play; in other words, what was the purpose of the asbestos ingredient?
A. The compressed asbestos sheet that we produced really had two main components. Approximately 80 to 85 percent of the product were -- were the asbestos fibers. The remainder was a liquefied rubber component that was mixed in with the asbestos fibers during the first stage of processing.
Q. What type of asbestos fibers were

those?
A. They were -- I can't remember the name with them. Chrysolite I think it is and we obtained them from mines in Quebec, Canada. The length of the fibers they were spec -- as we brought them into the plant or as we ordered the product, actually we specified the length of the fibers for each specific type. We brought in, as I recall, about four different codes or types of asbestos fibers. The longest of which were approximately -- had an average of one inch length fibers and the shortest ones were down around one-fourth of an inch.
Q. And would there be employees in the laboratory that would test for that, microscopic examinations to test for that?
A. That wasn't really verified or tested in-house. It was sold on the basis of meeting those average fiber lengths and I don't recall -- I know we didn't do any testing, but I can't recall. I think our purchasing department may have had some specification testing done originally when we first started buying these fibers and I'm not sure if it was

done periodically after that.
Q. Now, in your involvement in developing these formulas would you be directly involved in prescribing the mixture that would be tested? Is that not a good question?
A. I don't understand it.
Q. Okay. I believe that you testified that part of your job responsibilities in the product development was testing different formulas to meet the demands that the product was expected to fulfill?
A. Well, I would be responsible for having the product tested in our laboratory. We had a separate laboratory where all the testing was done.
Q. Okay.
A. By people who were trained to do the testing.
Q. Okay. So as early in your career as 1955 through 1958 were you in a supervisory position at that point where there --
A. No, I wasn't.
Q. Okay.
A. I was at that point an engineer and I

worked under the chief engineer of that specific product group, reported to him.

Q. Okay. Can you give me an example of what you would do in the development of that compressed rubber asbestos sheet? What you, yourself, did in your role during that 1955 through 1958?

A. Well, mainly I would keep reviewing the formulation that was used in these various different products and then acquainting myself with the production procedures for making the compressed asbestos sheet and in addition, and in addition to that, I would be given assignments at times to attempt to come up with new products.

Sometimes those were this compressed asbestos sheet area, but while working in that department I also had responsibility for developing and formulating the other products that we mentioned earlier especially -- well, in fact, just about every one of those I worked on at the same time that I was working on compressed asbestos sheet. I would say the time I spent on compressed asbestos sheet was more like maybe ten percent

of my workweek.

Q. And if you could provide me a little more detail, sir, about what you would do as far as the formulation. What exactly as a chemical engineer were you doing?

A. Well, there were usually two or three different types of the asbestos fibers that were used in each of the compressed asbestos sheets and those differed from each other mainly in the average fiber length. The longer fibers produced a more tear resistant and somewhat firmer, tougher gasket than the shorter fibers did.

So we wound up usually trying to get the best benefits of both types of fibers by putting a blend into the formulation and each type of compressed asbestos sheet we had and at any one time we were making probably between six and ten different types. They all varied in the percentages and the types of fibers that were contained.

In addition to that, the rubber component that went into this product, which was added in a liquid form, but was originally mixed in a solid state in a rubber mixers that

we had in the plant and the rubber -- to the rubber was added curing component such as sulfur and organic accelerators.

And there were also some processing aides added to the formula and sometimes processing oils slight amount would be added for -- to incorporate the dry materials better and then finally the solid rubber part that we made, compound that we made was added -- was put into a cement mixer and to which solvent was added and the rubber at that point was changed into a liquid form.

Q. Now, the six to ten different types of compressed asbestos sheets that you were formulating, they had different applications I assume?

A. Well, they were all used really for about the same thing in the field. They were all used as gaskets and normally installed between flat steel flanges --

Q. Okay.

A. -- at the ends of pipes usually.

Q. What was the purpose for having so many different types if they included pretty much the same formula?

A. Well, as we -- as the business increased within Goodyear we developed new customers and often customers would want white or black, but one or the other and they chose the color that they wanted so that was one requirement we had to meet.

And then at other times they would describe the type of gasket properties that had to be met, the size of the flanges or the pipes that they were being used for, how much compression they would normally apply to these gaskets by the means of bolts, located through the holes in the flanges. And the length of service life that they expected to achieve, what kinds of pressure of a material that was inside the plant -- pipe, usually liquid materials.

And all those things went into it and then we would work with the customer on sometimes developing a new product if his requirements seemed out of the ordinary. If they weren't out of the ordinary, we would select one of our existing compressed asbestos sheet products and recommend that that be used especially as a first trial.

Q. I believe you indicated earlier that other employees working in the laboratory they would be involved in the process through the examination that they would conduct in the laboratory?

A. As compounders we people with the chemists and chemistry and chemical engineering degrees we would specify to the lab what tests were to be run and help select the -- help select the samples from production that would then be sent to the lab.

Q. Okay. What length of service life were you -- was Goodyear attempting to provide its customers at that time for these?

A. Service life of the gasket?

Q. Yes, sir.

A. That was back quite awhile and I would -- it's hard to remember that exactly and it did vary from time to time and with different customers.

And my recollection is that the gaskets were usually expected to perform anywhere from as short a period as two years to as long a period as perhaps six or eight years.

Q. Who were some of the major customers that you were dealing with at that time?

A. Well, we had one really major one and that was a company called Durabla, Canadian company I believe.

MRS. PHILLIPS: Can you spell that, please.

THE WITNESS: D-u-r-a-b-l-a.

BY MR. JOHNSON:

Q. What business were they in?

A. Well, we sold them the compressed asbestos sheet and they in turn -- I believe some of it might have been used internally in some operations they had, but I think they also supplied -- resold the sheet to other companies.

Q. So do you know if Goodyear manufactured these compressed asbestos gasket sheets that were sold under other trade names?

A. Yes. We did have a few customers who preferred instead of having a sheet with the name Goodyear or a Goodyear trademark on the surface of it they preferred to have their own name enclosed in a logo which we printed on the surface of the compressed asbestos sheets

we sold to specific customers such as that.

Q. Do you remember who those were?

A. Well, incidentally the name Durabla was imprinted on the surface of the sheets sold to them. Cranite was someone that I certainly remember very well. It was a white -- we made that one as a white or off white color for them.

It's really hard for me to remember those names these days. I can usually if there were names involved I could recall usually whether we did make it for that company or not, but it's hard to pick them out of the air now and think of them. I have a hard time remembering that right now.

Q. I want to make sure I'm clear on my question because I think that the answer that you gave and I won't try to pronounce it, the Canadian company was that some of that your understanding was for production use and some of it may have been for resale?

A. I'm not sure of that. I frankly my position with Durabla was the orders came in to our plant on a regular basis specifying their product that we made for them and it

just went through ordinary procedures within our plant.

And unless there was a problem occurring with the plant in the field we, as engineers in the Special Products Group, had little contact with most of these customers.

Q. Okay. And make sure I'm clear, you don't have a specific recollection of a gasket distributor or retailer that Goodyear made it for them and they put their name on it?

A. I know there were at least a half a dozen or perhaps 10 or 12 that we had orders from during those approximately 18 years that I had some contact with the compressed asbestos product and it -- most of those were relatively minor compared to Durabla and also minor compared to the general purpose product that we made with -- that had the Goodyear name on the front which we sold to a variety of different gasket cutters who, in turn, sold it to their customers.

Q. Okay. Who were Goodyear's primary rivals in the manufacturing aspect of the asbestos sheet gaskets during that time period?

A. Oh, well, there were certainly several of them. I think B.F. Goodrich was in the business and let me think. Garlock rings a bell. I know there were others but I --

Q. Anchor?

A. Anchor is a very familiar to me. I think we did -- I don't -- they may have even been a customer of ours, though, I think I remember more as a possible customer than a competitor, but they may have been both.

Q. Okay. I understand. Now, in dealing with the asbestos formulation at -- your involvement what practices did you have in place from a safety consideration in dealing with the asbestos just, you know, in your department?

A. Well, let me think about that a little bit because we're talking about the 1950s and 1960s. We did have in our plant a safety engineer who occasionally came into the plant and tested for dust in various parts of our operation.

And I don't specifically remember him in the asbestos department, but I probably wouldn't since I wasn't there. I wasn't a

regular production worker there most of the time and I -- but he went around testing for dust in various parts of the plant.

Q. Okay. Now, and you're answering that on the more broad sense, you said production also, right?

A. Yes.

Q. Okay. And now from a physical standpoint the engineering department you were working in it was at the same building location as the production, correct?

A. Yes. We were on one of the floors, yes.

Q. Okay. And you I believe testified that part of your job responsibilities involved at times input as far as the production process; is that right?

A. Well, we had to work closely with the production people, make sure our products ran satisfactorily in production. So we spent a good part of our time in the production area watching the product being made and sometimes assisting the production supervisor and some of the factory workers if they were running into a problem, we would assist them in

solving it.

Q. And was there a time period during -- and we've got a lot more years to cover here -- but so I can get it in perspective there was a time period that you can recall where the safety practices in handling the asbestos-containing product changed?

A. Not on handling the asbestos product specifically. We also had so many other products in our plant that the safety aspects were all done by someone who handled all the products in the plant, not just one particular area.

Q. Do you recall who that person was when you first began?

A. No, I'm sure I can't.

Q. Okay. You familiar with Joseph Holtshouser?

A. Yes. I met him. That's the one person -- one name that I guess if I thought hard enough I could probably have come up with because I have met him within the last three or four years.

Q. Okay. Do you know him to be a former employee of Goodyear?

A. Yes.

Q. Is also a consultant with Goodyear?

A. Yes. I think he retired and is also a consultant.

Q. Did you know him as an industrial hygienist when he was at Goodyear?

A. That's the way I kind of remember it, yes. We had -- we used a lot of solvents within Goodyear both in our department in industrial products and of course they used a great deal of solvents where synthetic rubber was made.

And it's my recollection of him is that he -- his main -- his expertise mainly was in the area of testing for solvents and making sure the use of our solvents was safe.

Q. Do you recall air sample studies being conducted in the production departments that you were working with?

A. The only thing I remember about that is is testing of dust that I mentioned before. They had some kind of a little piece of equipment that they would put in a specific location and leave it there for quite a long time and then they would pick it up and

analyze the results later.
Q. And you recall that going back as early as this 1955 to 1958 time frame?
A. I'm not a hundred percent sure of that.
Q. Okay.
A. It goes back sometime I think in the '50s and '60s because that's the main time we were running many of these products there. And a good part of the testing that was done was done in the mixing part of our industrial products operation where we used a great deal of carbon black.
Carbon black is one of the main fillers that was added to rubber during the mixing operation and it is a type of material that is very lightweight and is apt to fly around the plant that particular area.
Q. Okay. Were you involved in the decision to no longer use asbestos as an ingredient in gasket manufacturing?
A. Yeah, that goes back to 196 -- well, really started in 1968, although we had a few warnings a year or two before that I can recall. At that time I was the chief engineer

of that group.
And I know the plant manager, I think it was probably in 1966 or '7, once or twice had called me and my manager above me and we usually had the marketing manager, sales manager and marketing manager in that meeting also and he sometimes went through the -- our profit and loss situation for the various different products that were made in industrial products.
And at that time we did receive kind of a warning that our profit situation wasn't very healthy and we all needed to take steps to try to improve that situation.
Q. And how would that relate to not using the asbestos?
A. To not using the asbestos?
Q. Yes, sir.
A. Well, what it caused us to do is to look at all the aspects that went into the cost of producing our compressed asbestos sheet and we then tried to determine where we could make the operations more efficient and less costly.
Q. And did that involve not using

asbestos or using asbestos?
A. No, it didn't really effect the amount of asbestos that was in our formulation for compressed asbestos sheet was absolutely essential in order to produce the properties that were needed for installing between flanges. So it didn't really involve -- I can't recall that it ever involved us making a formulation change.
What we did try to do was to change some of the production procedures so that they would be more efficient.
We also had meetings with the union workers, with the union organization to see if they would agree to take a cut in pay, that type of thing or reduce pay that -- we tried every way we could to take cost out of the product without causing any harm to the product itself.
Q. Okay. When Goodyear stopped manufacturing the asbestos-containing gaskets, did -- was there a new formulation that was used; in other words, did they manufacture a gasket that did not contain asbestos at a different formula?

MR. TAGGART: Objection. Go ahead.
THE WITNESS: Well, we had always made other gaskets than this compressed asbestos gasket. We made a host of other sheet rubber type materials that did not contain asbestos but which were formulated to perform in an optimal way as a gasket.
BY MR. JOHNSON:
Q. Okay. Let me -- I didn't ask it very well. When the decision was made to stop using the asbestos in manufacturing of gaskets, was there a substitute? Was there a different formulation in relation to, you know, that particular product that allowed you to continue to make the product that was designed to function as the previous asbestos-containing product was designed?
A. I would have to say, no, there wasn't. When we -- when that decision was made, our marketing department -- we had meetings on it to decide just exactly how to terminate this product from existence at Goodyear.
And our marketing department had

the responsibility of notifying each customer that we had for that compressed asbestos sheet and we -- they informed them of the date that we would be ceasing the manufacture of that product.

And the customers were given an option or choice of buying additional quantities to see them through the shutdown period and it was up to them to find another source for those, for that type of gasket, that specific type of gasket.

Q. Do you know if competitors that continued to manufacture that type of gasket with asbestos got a greater part of the customer base because they were continuing to manufacture the asbestos gasket?

A. I don't know that for certain, but I would assume that would be the case.

Q. Were you involved in the discussions then of no longer using the asbestos in the formula for the gaskets?

A. Well, I --

MR. TAGGART: Objection. Go ahead.

THE WITNESS: -- I took part in

one final meeting that we had with the plant manager where the decision was told to us that the -- I think the final decision was made at like a vice president level within Goodyear to cease operation of that product.

BY MR. JOHNSON:

Q. Okay. Do you know what the reason for that decision was?

A. It was -- we were informed that it was a -- because of the lack of profit in the product. It was just no longer profitable for Goodyear to continue making that product.

Q. Was it in relation to safety and health concerns?

MR. TAGGART: Objection.

THE WITNESS: I had no information in that -- related to that at all. No, I don't think so. Not that I know of. Not that I'm aware of.

BY MR. JOHNSON:

Q. Okay. Are you familiar with studies and papers that have been conducted and written concerning health concerns from exposure to asbestos fibers?

MR. TAGGART: Objection. Go

ahead.

THE WITNESS: Are you asking that question of my present current up-to-date knowledge?

BY MR. JOHNSON:

Q. No, sir. I'm sorry. I mean, when you were going all the way back to 1955 when you were a working chemical engineer. Were you familiar with the scientific developments in that field?

A. Well, I'm --

MR. TAGGART: Objection. Go ahead.

THE WITNESS: -- I'm as certain as I can be that right up until the time in 196 -- late '8 or early '69 when we actually stopped the production that I and nobody that I know of in development had heard of any safety problem with asbestos.

BY MR. JOHNSON:

Q. Okay. So that would go back to your educational background at Washington University? You don't recall studying anything about safety health concerns in relation to exposure to asbestos?

A. I'd have to say that my recollection of the years I had at Washington U. if there was any mention of asbestos during that period of time it was a very quick fleeting mention and certainly not safety related but simply a description of, hey, this is a mineral that is mined from the earth and some of the properties it has is this, this and this and very interesting mineral but that's about all we did with it. I don't recall that we ever went further than that.

Q. Okay. Once you were working as a chemical engineer at Goodyear and the asbestos became such a large component of some of the products you were working on, then you obviously became much more familiar with the mineral, correct?

A. I'm trying to recall just how much information I had back in those days. I think -- I think I looked it up in an encyclopedia and I found out some things about asbestos there. I don't recall I ever had a brochure from any of the companies that produced the asbestos. I don't think we ever were supplied any information from those companies. Mainly

what we learned about asbestos we learned from using it right within our plant.

Q. From the standpoint of the formulas and its properties?

A. And its properties and some of the unusual aspects of it in that especially that here is a mineral, not a textile and it's a fiber and we knew at some point I believe in the '60s that it could be made into yarn. The yarn subsequently could be formed into fabric. So there was an asbestos fabric being produced back in the 19 -- maybe late '50s and '60s. So that's our basic knowledge that we had at that time for asbestos.

Q. Were you a member of professional associations during the 1950s?

A. Yeah. I belonged to the ACS, American Chemical Society Rubber Division and also there was a localized group in Akron called the Akron Rubber Group where -- and both of those organizations we met periodically and papers were presented and reports were distributed. So we did have -- I did have that experience going with me.

And then we also, in our

department there at Goodyear, we received American Chemical Society magazines and any available magazines at that time related to rubber compounding we had in our plant and we religiously read them. That was part of our ongoing education.

Q. And in doing that you don't recall reading about asbestos?

A. My first recollection of reading about asbestos or at least the safety aspects of asbestos goes back to 19 -- well, my recollection is around 1972 or '3 that I first started seeing it at least in an open enough way that I could see that there was a problem with the safety of it.

Q. Do you recall seeing it in some of the journals or newsletters of the professional organizations that you're a member of?

A. I think I saw it in some of the American Chemical Society articles that -- I think that's where I first saw it.

Q. Okay.

A. It wasn't long after I might have seen it even in the newspaper.

Q. Did you attend continuing education seminars, professional development during the 1950s?

A. Did I?

Q. Attend any type of seminars in relation to chemical engineering?

A. Especially the Akron Chemical Society Rubber Division. We -- they had a meeting about once every quarter and those meetings sometimes were in Akron, sometimes they were in other cities.

And I had the opportunity of going to I'd say maybe half of those meetings and they usually lasted three days: Wednesday, Thursday, Friday and we would go to the different auditoriums in these hotels where they were being held and listen to the papers being presented and we had opportunities to meet with and talk to other peers.

Q. Same question as far as any information that you were -- learned at those times concerning asbestos safety issues. Do you recall any papers or presentations on those issues?

MR. TAGGART: Objection.

THE WITNESS: I don't recall any of those papers or presentations on the subject of asbestos or safety of asbestos. May have been -- happened. I didn't go to all the meetings and I probably didn't read all the reports which were voluminous, but I did -- I think I was curious about asbestos since I had worked with it for so many years, so I was keeping my eye out for it. And I don't recall ever seeing that in any of those meetings that I attended.

BY MR. JOHNSON:

Q. Okay. How about at a later time period along the lines of I think you said maybe early '70s when you recall reading it?

A. Yeah.

Q. Do you recall attending any meetings during that time period when it was discussed from a safety aspect?

A. No. I don't recall that I ever saw a report or that that was included in any of the meetings even after 1970. So --

Q. Did you continue your professional organization involvement throughout your employment at Goodyear? Were you a member of

the societies?
A. Yes, I stayed a member until I retired.
Q. And got the publications?
A. Yes.
Q. Okay. Did you make any presentations yourself at any of the seminars or meetings?
A. I can recall making some at the local Akron Rubber Group meetings which primarily was combination of the development members and sales department members and the salespeople were those represented companies that sold the various different materials that we compounded into our rubber formulas: Carbon black and mineral fillers and oils and accelerators and a whole host of materials.
There must have been 50 to a hundred different types of materials or at least 50 to a hundred different suppliers of the materials that we formulated into our rubber compounds.
Q. Have you authored any professional articles or papers?
A. No, I never produced one, I don't believe, that was published in a national

magazine or anything.
Q. Okay. Did you get any additional education after your degree at Washington University, formal education?
A. The Akron Rubber Group here in Akron back in the 19 -- '50s, especially early '50s and on through the '60s also, they did work with Akron University and we -- I did attend some classes there once a week for about two hours after work one day a week and that went on for about six months and we learned a lot of advanced techniques related to rubber compounding mainly.
Q. Would you describe that more in terms then of broadening your knowledge in direct relationship to your job as opposed to you weren't trying to obtain a degree of any type?
A. No, I wasn't trying to obtain a degree and it was broadening my knowledge of that.
And I will mention that the starting point that almost all of us that got into this development operation in the compounding and formulating of the different products that we made as far as education in

college, the expertise that we gained from -- at the college in the area of the rubber or rubber formulating was essentially nil. There was just nothing in any of the courses that were presented that did more than basically just mention rubber and maybe give a brief description of some of the products that were made from the rubber.
But as far as formulating, we had to learn that from the very beginning at Goodyear. That's why it took us two or three years to get started and I would say until we had at least 20 years in formulating compounds we were still learning things all the time as we went.
Q. Have you ever worked with either a university, some type of an institute or perhaps an individual that was involved in performing a study in relation to asbestos-containing products; in other words, have you ever assisted in that and worked in conjunction with someone?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: As far as asbestos

is concerned the answer is no. We -- I never and I don't know of anyone at Goodyear that did.
BY MR. JOHNSON:
Q. Okay.
A. But there may have been, but I don't know of any.
Q. Okay. Did you for some other product or substance?
MR. TAGGART: Objection.
THE WITNESS: We had some meetings. The Akron University formed a division there that concentrated on formulating and developing new liquid polymers which could have pertinence to the type of products we were making in industrial products possibly.
So we did have a few meetings with some of the top Ph.Ds at Akron U. in that department and they asked us a lot of questions about our products and we learned a little bit about what they were working on from time to time. That went on for a few years that that happened. Just occasional meetings like maybe once every six months or

so.
BY MR. JOHNSON:
Q. Okay. Are you familiar with the collection of documents that are at Akron University, University of Akron that were provided by Goodyear Tire & Rubber Company?
A. I might have heard that that occurred, but that's about all I know.
Q. Never viewed them? You've never been there?
A. I never went there to see them myself, no. Probably should have, huh? I should have known better. That might have been a good idea, but we're awful busy at Goodyear.
They managed to keep us busy enough there that we didn't have too much time to think about that kind of additional requirement.
Q. In looking at Exhibit 1 it shows that in 1959 you became Chief Engineer of Process Development Group and I believe you've already made reference to that, correct?
A. The only -- maybe briefly -- that was an area in our plant that served as a liaison

between development and production, although the engineers in the product groups served that purpose too to some extent.
This was a specific section that had that responsibility with the main emphasis, though, being on the mixing of our development formulations in the factory and also other processing operations such as calendering and extruding were also function of this particular section in working between development and production.
Q. Did that responsibility relate to the production plant at Akron only?
A. Yes, I would say so.
Q. Okay. And then in 1966 you became Chief Engineer of Special Products Group?
A. That's the same section that I started work in or my first major assignment.
Q. Right. And you continued there for about 10 years till 1976?
A. That's correct, yes.
Q. And how did your position differ? You obviously had other engineers working under you?
A. Yes.

Q. About how many?
A. I think I had about five or six chemists and chemical engineering background engineers working for me and we also did design -- had separate group of people who did design work in our department. These were usually mechanical engineers and I had two or three of desi -- and they were called design engineers by title and I had two or three of those working under me.
Q. Okay. The exhibit next shows that 1977 through 1980 that you served as Chief Engineer of Hose Products. Was that a different group within the Akron manufacturing plant?
A. Yes, it was.
Q. And was that the first time that you had worked in that Hose Products Group?
A. Well, we all worked kind of in the same department there, that is, the hose, the conveyor belts and the special products and the auto mats and I can't think of some of the others.
We all worked together so we got to know pretty well what each other -- what we

were doing in each others way and but, yeah, it's the first assignment that I ever had specifically in the hose area.
Q. And at that time was the formula for the hoses did that include asbestos?
MR. TAGGART: Objection.
THE WITNESS: When I entered that department in '77 there were -- I'm sure there were no hoses being made at that time that had asbestos component.
BY MR. JOHNSON:
Q. Then you next served for two years, roughly 1981 to 1982, as Manager of Production Processing for all industrial products. Would that be over these various divisions that we previously spoken of?
A. Yes, it would include all of that and, again, I spent maybe 30 or 40 percent of my time in production with responsibility for making sure that the development formulations and materials that were used in production were performing efficiently.
Q. And in 1983 through 1986 you served as Plant Development Manager at Greensburg, Ohio?

A. Yes.
Q. And what type of production was occurring at that plant?
A. That's air springs for both trucks, buses and also for automobiles.
Q. And what were the air springs made of?
A. Air springs were primarily -- the rubber component was neoprene, the reinforcement component was nylon.
Q. Do you recall any air sampling studies being done when you were working at the Greensburg, Ohio plant?
A. I got to think about that. It may have been done, but as the Development Manager there I wouldn't have been contacted about it and I sure don't know of anything personally.
Q. Okay. Exhibit 1 next shows from 1987-1989 served as Manager of General Products Development Center. Was that back at the Akron headquarters?
A. Yes, that was back in that same department I had started work in except that the top level development person was the manager of the department and that's the job

then that I had for these years.
Q. In your last position 1990 through 1991 you served as Manager of Engineering and Development, again, at the Greensburg Air Spring Plant; is that correct?
A. Yes, that's correct.
Q. Okay. What was the difference in the two positions you had at Greensburg?
A. Well, the second time I went out there was a year or two before I retired and at that point they desperately needed an experienced manager there for I think they had recently, one way or another, they had lost the Development Manager at that time who had replaced me and worked there for several years and also they had lost the Manager of Engineering there at the Greensburg plant.
And so I had -- the presentation was made to me to request that I go back there for a few years and take over for the -- because of the loss of the current people there in the plant.
Q. Okay. In your work as Chief Engineer of Hose Products what information did you have concerning the previous manufacturing of hose

products that contained asbestos?
A. Well, I had responsibility during much of that time for the confidential formulation book that was kept for all the different formulas for the hose group.
And I know I had resea -- when I first went into that job, I researched back into that book and went back for a couple of decades looking at all the formulas and all the specifications for the types of hose that had been made and were still being made in the plant.
And I do remember seeing some of the formulation. It wasn't formulation but some of the specification that some of the hose specifications that related to and contained some asbestos reinforcement.
Q. In what time frame was that?
A. Well, where I saw that at was back in the 1950s and '60s I guess. I think the last time asbestos was used in hose was in like 1970 or '71, perhaps '72. That was by the -- and by the time I went into that department I know there had not been asbestos used in that department for quite a few years.

Q. Are you basing that opinion on your recollection from when you were in that department or are you basing it on information that you have reviewed more recently?
MR. TAGGART: Objection.
THE WITNESS: Well, it's mainly on my -- when I first went into that department and researching back into the past specifications of the products in order to familiarize myself with the older and the current products that were being made.
The other thing I'll answer too that is that it was in the '72 or '73 time frame that we started seeing the publications being issued about the safety aspects of asbestos and I think that led at that time to the cessation of use of asbestos throughout our plant. Any product that might have been made at that time.
Hose I think was about the only one where products were still being made up through 1970 or '71. So that was the only product area that I guess it was -- we stopped any further use in.
Remembering also that the

specifications and the amount of hose production that contained asbestos was never more -- well, out of 50 different types of hose one or two types of hose had asbestos in them and they were small volume uses.

BY MR. JOHNSON:

Q. What were the uses of those hose?

A. We made a two and three and four inch, up to four inches I recall size ID, inside diameter, of a hot water hose that we made and the asbestos fabric was applied to the outside of that hose mainly to reduce the temperature of the outside and to make it easier for people to handle the hose without burning themselves.

Q. Were those used as furnace hoses?

A. That was one of them, furnace hose and then the other one was just a standard hot water or steam-containing hose. Both of those, however, hoses were much more expensive than the conventional hoses for those same surfaces and as a result the volume of use -- volume of production of the asbestos-containing hose was very minor.

Q. You made reference to looking back to

previous specifications at the -- of the hose products. Was that in some type of a folder or a binder or --

A. Yes. We had one book that -- these were kept confidential in a safe at night, that had the formulations in it. We did have a list of the specification -- names of the types of hoses, the specifications of the different types of hoses and brief description then of the components of each of those specifications was included.

Then if you wanted to get more information than that, you had to really go in to have a meeting with the particular compounders or design engineers that were working on those products and they could add to that information if needed.

Q. Okay. Can you describe the book for me?

A. Well, it was a three ring binder with removable pages as I recall both cases.

Q. And you left that department in around 1983; is that correct? No, I'm sorry, 1981. You served there from '77 through '80?

A. Through '80.

Q. Okay. And would that three ring binder with that specification information have been left then at the -- in the safe?

MR. TAGGART: Objection.

THE WITNESS: Well, right at that time I'm pretty sure it would have been, but as you may or may not know as we progress on through the '80s and '90s Goodyear management had made a decision to transfer all of the Akron made industrial products to other Goodyear plants and all the hose went elsewhere and all the industrial -- all the conveyor belts went to different plants at that time. And I have no knowledge now. I can't remember now of how the transfer of paperwork, paper records was accomplished. I really don't know.

BY MR. JOHNSON:

Q. Are you familiar with the Goodyear records retention policies?

A. Well, when I worked as Chief Engineer I think we had policy of maintaining customer related letters -- I think at one point we were keeping them up through 30 years.

Q. What would be a customer related

letter?

A. Well, if there's a request for us to make a new product for them or if there was a problem with an existing product and the customer wrote a letter, the letter would always go in first to the marketing department and marketing manager, but copies would find their way into development and meetings would be held to help impart information to us or to help solve problems and those, throughout all of our product areas, those filled up quite a few filing cabinets.

Q. In your -- any of your management positions at Goodyear do you recall working with anyone at the record center or the records retention program concerning records that you were responsible for?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: I don't recall that that ever came up at all.

BY MR. JOHNSON:

Q. You don't recall -- let me ask it this way. Do you recall ever being involved in sending records from a department that you

were working in to the records center?
A. Well, I wasn't involved with that directly very much, but I do know that every time we issued a new formulation or a new specification there was some way that that was transposed into microfilm, copies were transposed onto microfilm and I do believe that that microfilm was stored somewhere in a centrally located vault type system.
Q. Okay. Do you recall, either while you were working at Goodyear or since you have been consulting, requesting any records from the record center?
A. I have not done that, no.
Q. Have you asked anyone to do it for you?
A. No.
Q. Do you know if you have had presented to you records that had been archived at the record center during any of your consultation work?
A. Yes --
MR. TAGGART: Object.
THE WITNESS: -- in some of the previous depositions as, primarily I think as

exhibits, and with Brent as the source I would be, I had the opportunity to read some documents like you're describing.
BY MR. JOHNSON:
Q. Okay. And you have served as a consultant for Goodyear as a witness at trial; is that correct?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: In an actual court trial you're talking now?
BY MR. JOHNSON:
Q. Yes.
A. With a judge?
Q. Yes, sir, that's my first question.
MR. TAGGART: Same objection.
THE WITNESS: I don't recall doing that since I retired. I hope I'm just not forgetful about it. Most of my depositions have been like today's.
BY MR. JOHNSON:
Q. And approximately how many have you given as a consultant?
MR. TAGGART: Objection.
THE WITNESS: I would guess a

dozen or so.
BY MR. JOHNSON:
Q. Okay. You testified in the Connell case?
MR. TAGGART: Objection.
THE WITNESS: I'm not sure. The name is vaguely familiar, but it might be for some other reason. I don't recall that case, though.
BY MR. JOHNSON:
Q. Okay.
A. McConnell you said?
Q. I'm sorry, C-o-n-n-e-l-l, Connell?
MR. TAGGART: Objection.
THE WITNESS: I sure don't remember that name, but I'm over 80 years old now remember.
BY MR. JOHNSON:
Q. What are your consulting fees?
A. Goodyear agreed right from the very beginning when they asked me if I would be willing to help in this type of operation that we're having today if I'd be willing to help and the comment was made that they would reimburse me for the time I spent on these

cases.
And then the next question came up, well, how would I -- how much money would I be reimbursed? And the Goodyear lawyer that I was working with at the time and I got -- came to a mutual agreement that we figured out my hourly rate. I wasn't paid by hourly rate, but my salary transposed into an hourly figure came to like 60 or $70 an hour or something like that. So he says, well, this will be going on for some years. What if I -- what if we agree to make it a flat hundred dollars an hour. Well, that sounded okay to me.
Q. And this remained that?
A. And it has remained that to this date.
Q. Okay.
A. And it is taxable.
Q. Okay. Now, other than the gaskets and the hose that you've already testified concerning as asbestos-containing products manufactured by Goodyear, what other products are you familiar with Goodyear manufactured that contained asbestos?
MR. TAGGART: Objection. You can

answer. Don't guess or speculate about anything you don't know about.
THE WITNESS: I don't personally know of any others. I've never seen them. I've never witnessed anything about them. I don't know. The hoses and the compressed asbestos sheet are the only ones that I can recall.
(Plaintiff's Exhibit 2 was marked for identification.)
BY MR. JOHNSON:
Q. Showing you Plaintiff's Exhibit 2, which for description purposes at the top says, Goodyear corrugated matting and then at the bottom appears to have some type of an index, would you look that over for a moment, please.
A. Sheet packing. Yeah, these -- familiar with a lot of these.
MR. TAGGART: Bill, there's not a question.
BY MR. JOHNSON:
Q. Okay. Let me ask you first, do you recognize by any chance this particular brochure?

A. I'm not sure. I might have seen it before.
Q. Okay. Now corrugated matting is I guess you might say highlighted on this page. Do you have any knowledge of the formula for corrugated matting and in particular whether or not it would have contained asbestos?
MR. TAGGART: Objection.
THE WITNESS: Well, I'm familiar with the formulation of it because that was one of the products when I was Chief Engineer of the Special Products Group this was one of our products in special products and we had a machine in our first floor operation that produced this, that cured this product on a continuous basis. It was called a rotocure. And the formulation -- we made that in black and we may -- I think we made it in red at times. The formulation had a great deal mineral filler in it but did not contain any asbestos.
BY MR. JOHNSON:
Q. Okay. Now, towards the bottom of that sheet where it indicates the word index, it states matting, packing, lining and other

products. Do you see that with me?
A. Yes, uh-huh.
Q. And then down on the left column underneath corrugated matting the next title says sheet packing and then it begins with Goodyear Asbestos Style 104. Do you see that?
A. Yes, uh-huh.
Q. Okay. If you would for me, obviously some of these I guess speak for themselves, the first three -- I'll read the next two: Wingfoot Asbestos, the third one Style 124 Asbestos. I assume those contained asbestos?
A. Those were the compressed asbestos sheet that we were talking about.
Q. All right. Would you look at the other items that are listed there under sheet packing and tell me if you know if any of those others contained asbestos?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: Just on this one under sheet packing? Actually that's continued on the next column.
BY MR. JOHNSON:
Q. Yes, sir.

A. Puregum packing is part of that same group, chemigum. Yeah, none of those contained asbestos other than those three that were stated on here.
Q. Okay. Do you know from the listing of the products on this sheet the time frame that it would have been applied to?
MR. TAGGART: Objection. Go ahead, if you know.
THE WITNESS: Well, I think this goes back probably into the '50s would be my guess. The reason I say that, there's two products on here that we quit making at about the mid or late '50s and they're still listed here.
BY MR. JOHNSON:
Q. Which two were those?
A. Plioweld rubber lining, that's tank linings and rubber covered rolls. We quit making that.
Q. Okay. Thank you.
MR. JOHNSON: Ask the court reporter to mark this document as Plaintiff's 3.
(Plaintiff's Exhibit 3

was marked for identification.)
BY MR. JOHNSON:
Q. Okay. This indicates at the bottom chemical engineering July 25, 1960 and it appears to be page number 73. Ask you if you would look at that and see if that's a page that's familiar to you.
A. I believe I've seen this before a long time ago.
Q. And let's see in 1960 you would have been serving as Chief Engineer of Process Development Group?
A. Yes, that's right.
Q. Okay. It indicates description of the product: New 150-C compressed asbestos sheet. Is that a product that you're familiar with?
A. I don't think I would have remembered it without seeing this particular page. That -- and from the description that I'm reading here quickly was a compressed asbestos sheet that was based on chemigum, which is a Goodyear trade name for nitrile type of synthetic rubber.
95 percent or more of our

compressed asbestos sheet was -- had an elastomer usage of natural rubber. We did make small quantities periodically of this nitrile, which I hardly remember at all. We certainly made a neoprene version of compressed asbestos sheet from time to time and those might comprise the other two or three or four or five percent that we made during the particular years when this was applicable.
I think we quit making this particular product -- well, it's advertised, but I don't remember it being made during the 1950s. It might -- we might have had an order or two and I think what this particular sheet is doing is trying to generate some new sales.
Q. Okay. Well, let me ask you about that. On the bottom left-hand corner there where it says Chemical Engineering, is that the publication for a professional association?
A. Yes, we read that magazine, that's one of them we get monthly and it was a very good magazine.
Q. And companies within the field would

have advertisements in there?
A. Advertisements, uh-huh.
Q. Right above that there is a rectangular box where it states Goodyear new 150-C compressed asbestos sheet meets the following specifications and I won't read all those letters and numbers. Appears to be three different ones based on the bullet points there. Are those specifications that you are familiar with generally?
A. Well, in a general sort of way I am, but not specifically these particular numbers, but I can tell from the content of this whole page that this particular product, this 150-C product based on nitrile or chemigum rubber was intended -- the gaskets were intended for usage in pipe that conducted solvents such as gasoline or any of the common organic solvents. And nitrile rubber was the best -- certainly in 1960 was the best elastomer for resisting solvents and fuels.
Q. Tell me the significance generally of a specification. I mean, is this the type of specification that might be presented to a manufacturer such as Goodyear from a potential

customer?
A. This says we met these, so I'm sure what we did back at this -- in the years preceding 1960 is samples of this were taken to our laboratory and these specifications will contain an outline and a requirement of the type of test that must be conducted on the product and which must be met. The result -- the limits must be met. And undoubtedly we conducted those tests and we did meet the limits and felt comfortable in publishing this information.
Q. And are those specifications generated by a private entity as opposed to a government institute?
A. ASTM especially is an organization formed for the purpose of originating specific tests and providing each of the different tests with a number, ASTM number which -- and there were articles put out and master books kept detailing what kind of requirements had to be met.
Q. Okay. Thank you.
MR. JOHNSON: Ask that this be marked.

(Plaintiff's Exhibit 4 was marked for identification.)

BY MR. JOHNSON:

Q. Showing you Plaintiff's Number 4, at the top it says Goodyear sheet packing and lining. At the bottom appears to be a page number 113. If you would review that and tell me if you're familiar with it or you recall seeing it.

A. Of our general purpose Goodyear compressed asbestos sheet products that we made we did make a few of them and I think all three of these over on the other page.

Q. Referring now to Exhibit 3 -- no, Exhibit 2 --

A. The first one, yeah.

Q. -- that had the index.

A. That had three asbestos. Those were general purpose Goodyear products that we sold to our own network of gasket cutters and this is one of those. Was a -- basically a white or an off white color.

Q. And what were the application uses of that type of gasket?

A. Well, it went into more or less

general purpose pipelines. Temperatures on here is specified as high as 600 degrees and as high as 400 PSI pressure, which is about the limit that we usually recommended almost all of our compressed asbestos sheet for.

Nothing unusual about those other than the limits are what specified here, the upper limits. And they do mention under features a Navy specification that we apparently met. I don't remember that specifically today, but I'm sure if it's stated here and published that we must have tested that and we certainly passed the test. And it tells you the sizes that we made. Same as the sizes that we made for basically all of our compressed asbestos sheet.

Q. Okay. Then there's a second product that says wingfoot asbestos and I believe on the Exhibit 2 that was indexed also?

A. Yes, that's indexed also and we often used the word Wingfoot instead of the word Goodyear but Wingfoot was a Goodyear trademark and it also was a general purpose type of asbestos gasket product -- containing product.

Q. Okay. Now, you testified earlier,

I'm not trying to be tricky here, about Exhibit 2 that because of a couple of products there that you had recollection that had been discontinued --

A. Yep.

Q. -- you were estimating I believe the time frame as being in the 1950s?

A. That we discontinued those products.

Q. Which of course would date Exhibit 2 since they were on that product?

A. Well, except --

Q. I mean on that --

A. -- these things were reissued periodically and somebody in marketing would check them and release them and I don't know that.

Q. Might not be exact, in other words?

A. Might not be exact.

Q. Okay.

A. Some of the names probably should have been deleted and it might have been years and years later before they got around to updating that and deleting them.

Q. Okay. Well, let me ask you about Exhibit 4. By looking at the specifications

or any of the other information that's provided on that, are you able to give an opinion as far as the time frame of that document?

A. Well, I think we were making that one when I first went into the department and I think we continued making it right till the end.

Q. Okay. And I don't think I asked you that question about Exhibit 3, which was the gaskets.

A. This one was produced in such small quantities and so infrequently that in all the times that I had asbestos responsibility, asbestos sheet gasketing responsibility I would guess we were making this in almost no volume whatsoever.

Q. Okay. So that we're clear --

A. It was very expensive for one thing.

Q. And I'm referring to the one that's described as new 150-C compressed asbestos sheet, correct?

A. That's the one I'm talking about.

Q. Okay.

A. Remembering that -- resistance to

fuels I made a point of awhile ago, but remembering that gaskets are contained and compressed between flanges, only the interior little edge of that is exposed to what's inside the pipe, just that little surface on the interior of the gasket is exposed. The rest of it is sealed between the flanges.

So whether the gasket had extraordinary fuel or solvent resistance or oil resistance wasn't of major significance. And our customers, when they saw the difference in prices, almost in every case opted to continue using our standard product and not the special oil resistant or solvent resistant types.

MR. JOHNSON: Ask the court reporter to mark the next sheet as Exhibit 5.

(Plaintiff's Exhibit 5 was marked for identification.)

BY MR. JOHNSON:

Q. And this indicates at the top Goodyear sheet packing and ask you to look at that, please. That appears to be very similar to the last exhibit as far as the products that are on there. Does that --

A. I think it's either a more updated version or an older copy of almost the same exact thing.

Q. Has a different heading with a graphic on it, but it appears to have a lot of the same information?

A. The two products described I'm sure are the same two products.

MR. JOHNSON: Okay. Thank you, sir. How about a break? Would you like that?

THE WITNESS: Okay with me.

MR. JOHNSON: Okay.

(Break had.)

(Plaintiff's Exhibit 6 was marked for identification.)

BY MR. JOHNSON:

Q. Court reporter has marked this sheet as Plaintiff's Exhibit 6 and for purposes of the record this is the same document that at the bottom it says GYP 000121 and if you would, please, look at that and see if you have recollection of that or if that refreshes your memory concerning particular product or advertisement?

A. Well, I know that the hose -- I know

that that type of hose was being made at Goodyear and some of that hose was made with asbestos reinforcement in it.

Q. Okay.

A. I don't remember a whole lot about it, though, because I think it was generally made in a time frame before I entered that hose department.

Q. Is the reference to this type of hose that's on Exhibit 6 is that similar to the type of hose that is used for a furnace hose?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: Well, I think that that's the same product described perhaps with a few different words and things, but I think it's the same product.

BY MR. JOHNSON:

Q. Okay. Thank you.

(Plaintiff's Exhibit 7 was marked for identification.)

BY MR. JOHNSON:

Q. Okay. Plaintiff's Exhibit 7 indicates at the bottom GYP 000123 and ask that you would look at that, please.

A. Okay.

Q. Okay. All three of those hoses that are indicated on there, does the wording indicate to you that those were manufactured by Goodyear?

A. Yes, I'm pretty certain they were, uh-huh.

Q. Okay. Do you have any particular recollection of those hoses as far as either the production or marketing of them?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: It's been a long time, but they all ring a bell of some sort or another in my mind, yeah.

BY MR. JOHNSON:

Q. Okay. You familiar with the manufacturing process involved with those hoses as it would relate to them containing asbestos?

MR. TAGGART: Objection. Only one on there that says it contains asbestos. Excuse me, two.

THE WITNESS: Where did you see asbestos at?

MR. JOHNSON: The top one. Do you want --
MR. TAGGART: Go ahead.
MR. JOHNSON: Okay. The top one. Well, I've lost it now.
MR. TAGGART: Under construction tube it mentions asbestos braid reinforcement.
THE WITNESS: Asbestos braid reinforcement, uh-huh, that's that -- yeah, that's that second reinforcement in there.
BY MR. JOHNSON:
Q. Okay. Is that the -- where the insert is or there's a cut-out and it shows part of the lining. Is that what that is?
A. Well, it's -- this is pretty hard to tell what they're showing here.
Q. Okay. Let's move down to the third one where in the features it states in part: Outer asbestos braid resists heat, assures excellent cover adhesion. Do you see that description?
A. Yes, uh-huh.
Q. Okay. And, again, there appears to be a cut-out there where it's showing part of the interior of the hose; is that correct?

A. Yes.
Q. Okay. Now, you don't have particular recollection of any of the design features of that?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: Well, what they're showing you on the cut away here, and I think the same thing is true of the refinery hose, the criss-crossed reinforcement they're showing on the left side, to the farthest to the left, is the braided asbestos that is closest underneath the cover of the hose.
And sometimes hose, when it's made, the cover will tend to blister a little bit, especially in real high temperature surfaces. And apparently what they're saying in this article is that by putting -- in a steam hose especially, by putting that layer of braided asbestos under there it allows any contained gases to be bled off from inside the hose thereby eliminating the blistering of the cover.
BY MR. JOHNSON:
Q. Okay.

A. And as far as reinforcement is concerned, the other braid that's shown there is -- I think that's a braided steel wire construction. It could be nylon, but I think it's steel wire and that provides the main ability of the hose to resist high internal pressures and temperatures too but pressures mainly.
Asbestos fabrics and asbestos braids were not notable for their strength, whereas nylon and steel wire were used for that, primarily for that purpose.
The pyrosyn is a trade name Goodyear came out with for a rubber component of this hose that was especially formulated for maximum heat resistance.
MRS. PHILLIPS: Would you say that again. What's the name?
THE WITNESS: What?
MRS. PHILLIPS: What's the name of the --
THE WITNESS: P-y-r-o-s-y-n, pyrosyn, a Goodyear trademark.
MR. JOHNSON: Okay. Ask that this be marked Number 8.

(Plaintiff's Exhibit 8
was marked for identification.)
BY MR. JOHNSON:
Q. Okay. On this document, which at the bottom says GYP 000124, I direct your attention at the top appears to be a similar product flexsteel pile driver and ask that you look there on the right where it's got outer asbestos braid resists heat, assures excellent cover adhesion.
Does that appear to be a similar product to the one that we just made reference to on Exhibit 6 -- 7?
A. I would say so. I think the asbestos layer in that hose also was used for that same purpose and, once again, steel wire is the component that offers the maximum strength capability of the hose.
Q. Okay. Thank you.
A. When asbestos ceased to be used, my recollection is that it often and usually was replaced with glass fiber.
Q. From an engineering standpoint what would be the significance of that or the utility of that?

A. Well, as I see it there's two reasons for having that asbestos in there, although they don't describe it very well. One of them would be, as we talked about on the previous refinery steam hose, and that is it served as a way of bleeding off any trapped air underneath the cover of the hose so that it didn't -- it made the cover resist blistering; that's one reason.

The second reason would be one of the best properties of asbestos is that it was flame resistant and also was extremely good product for resisting the conduction of heat. And by having a layer of asbestos under the cover, although the temperature inside the heart of the hose, inside the ID, inside the inside diameter might be several hundred degrees, that layer of asbestos tended to reduce the temperature on the outside of the cover and made it a little easier and better for people handling the hose.

(Plaintiff's Exhibit 9 was marked for identification.)

BY MR. JOHNSON:

Q. Showing you page marked as

Plaintiff's Exhibit 9, at the bottom it says GYP 000122. On the left it indicates plicord furnace door hose I assume. Now can you tell from that description if that product contained asbestos?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: We're looking at both types of hose right now?

BY MR. JOHNSON:

Q. Well, I was referencing the one on the left first.

A. The one on the left, the only comment I can make relating to that is that since under construction they listed details of what supposedly is the components of this hose they don't include any mention of asbestos and I would expect that if it contained an asbestos layer in the hose the marketing department, who issues these documents, would have wanted to get the advertising advantage of claiming that there was asbestos in the hose and since they didn't do that I expect that it did not have asbestos in it.

Q. Okay. And based upon the language

where it talks about specifically formulated and designed to carry cooling water 250 degrees Farenheit maximum to furnace doors in steel mills and similar service operations where the outside of the hose is subjected to elevated temperatures, based on that description from an engineering standpoint do you think that there is a component, other than asbestos, that meets these heat requirements for this use of this hose?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: There's two ways to achieve exceptionally good heat resistance of a hose and one of them is to formulate the rubber components in a way that will provide the maximum heat resistance and that takes some knowledge of compounding and use of some fairly expensive compounding materials to achieve that. And that would be one of the ways you'd certainly want to do that in this type of hose.

The other way would -- involves the reinforcement of the hose. Is always two main components in tires and there are two

main components in hose and most other products, conveyer belts.

One of them is a rubber and the other one is a reinforcement product. Rubber just by itself would never serve well at all because under internal pressure or tension it just stretches too far. So you have to put reinforcement along with the rubber to limit the amount of stretch and expansion that a hose would exhibit.

And in this particular case they just say synthetic fabric plies and my guess is that that means -- well, that could mean fiberglass, which is the most heat resistant of the fabrics that we used that still had a high level of reinforcement or strength capability and the second one possibly would be nylon, which also had very high strength so --

BY MR. JOHNSON:

Q. From a --

A. -- it's hard to say from this description example. They also talk about half oval wire winding and where you have a desire or a need for maximum heat resistance,

one of the very best ways to achieve that reinforcement-wise is by using steel wire. And that apparently is what the main advantage or the main aspect of this hose should have been stressed. Wasn't done very well but that's my opinion.

Q. Okay. Let me ask you in a general sense, not necessarily as to that hose, but based on the formulation of the material was asbestos a cheaper ingredient than the rubber compound that you were describing that would add to the function of the heat resistance?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: Well, I certainly wouldn't think of it that way at all because, as I said before, the two main components of any hose is a rubber, which could be formulated for maximum heat resistance, but it's still a soft material. It's still stretchable and under high internal pressure that alone is not going to provide a satisfactory hose.

The second component involves the reinforcement and if I were to rate materials

for reinforcement ability, steel would be at the top of the list. Glass fiber, which didn't come into use -- I'm not sure of the year that those became more or less commonly used in industry, my guess is it'd be in the '60s would perhaps be second and then you get into the textile area and you get nylon and polyester and finally cotton.

In the old days, of course, prior to 19 -- mid '40s cotton was about the only thing used to reinforce those and it did a fairly decent job but not nearly as good as some of those others I mentioned.

BY MR. JOHNSON:

Q. So is it your testimony then that the cost of formulating the material for the production would not have been less by using the asbestos?

A. I don't think the use in some of these hoses of a ply of asbestos in it would have much of an effect on cost.

Q. Okay.

A. Whether or not it imparted any desirable property of the hose might be doubtful.

(Videotape was changed.)
(Plaintiff's Exhibit 10 was marked for identification.)

BY MR. JOHNSON:

Q. Okay. Showing you Plaintiff's Exhibit 10, which has been identified in previous testimony as at least part of an article that appeared in the -- is it newsletter or magazine Wingfoot Clan?

A. It's a company newsletter --

Q. Company newsletter.

A. -- weekly newsletter.

Q. And I believe that one is dated November 1964?

A. Yeah, I guess that's a '4.

Q. Okay. Let me ask you, first of all, just the picture itself does that reflect any -- does that refresh any recollection of yours as far as the production process at the Akron plant?

A. Yeah. Well, what they're showing here, and it even says that in writing I guess, one of the main ways we shipped our asbestos sheet gasket product was by rolling up layers of it and putting various layers

together until we got to a weight limit or a diameter limit, handling limit and that's what these two fellows here in the picture are doing.

They're -- that's apparently the first part of a roll that they have started rolling up for shipment and the next step they will insert a second sheet right at the end of this one and continue rolling a second sheet around the outside and usually a third or fourth and depending on the gauge of the particular asbestos sheet being rolled up they might have six sheets of this all rolled up in one shipping roll and then they had craft paper that they finally rolled up on the outside of it, a couple of layers of craft paper on the outside. So that's what they're showing there is the final operation in the department of preparing it for shipping.

Q. Okay. And the headline states Asbestos Packing Celebrates Its 50th Year of Production Success. So that would go back all the way to --

A. 1914.

Q. -- 1914?

A. Yes.
Q. Is that your recollection?
A. Yeah. I -- we never had much information about that while I'm working there, but I read this article. It's -- and probably just subtracted the figures just as we did and realized it was '14.
And at other times I have -- did see some other write-ups that our CEO at Goodyear back at that time met with a -- well, with a customer, and I really think it was Durabla at that time, and the person from Durabla had been over to Germany and had seen Germany making asbestos sheet of some type over there and how they made it.
And he came back and went to P.W. Litchfield, almost our first CEO at Goodyear, and asked if Goodyear would try to make that product for them. And we then made arrangements to get all the information about how it was done over in Germany and we started into that business back in the 1914 and '15 period. It was a very small product, very small usage, but it produced a product that was not on the market anywhere in this country

and was needed, became more and more needed as years went by as a gasket.
Q. What is your recollection of the formulation in the product as it changed starting in 1914 to the time that you were there?
A. Yeah -- I --
MR. TAGGART: Objection.
THE WITNESS: I'm trying to think.
MR. TAGGART: Go ahead.
THE WITNESS: I have read our old -- in our old formulation book that we had, I don't know if I ever went back to the teens, but I think as far back as I can -- ever found a formulation for it was in the '20s and it basically was very, very similar to the formulation that we still had going in the '50s; based on natural rubber.
Well, of course, that was all that was available back prior to 1940 and that the reason we got into synthetic rubber is mainly was during World War II and the Germans started sinking our supply ships that were bringing rubber from South America or Far East and we developed our own synthetic rubber.

BY MR. JOHNSON:
Q. And how is that developed; what's the makeup of synthetic rubber?
A. Well, the one that replaced natural rubber at first and was closest to natural rubber back in those days was called styrene butadiene rubber. Symbols were SBR for initials for those three words.
And that rubber had similar characteristics and properties to natural rubber did, with one exception and natural rubber being uncured is very sticky.
While the synthetic rubber that we made could be formulated almost the same as the natural rubber, but it was not sticky and in some cases that's good and in some cases it wasn't so good.
Q. Okay. And you testified earlier that some of the formula books, the ones that were at least being used at the time, were kept in a vault because of obviously secrecy concerns?
A. Yes.
Q. Okay. Now, at this point in time is there any value from a proprietary interest in protecting a product that's sheet gasket

manufactured with asbestos?
MR. TAGGART: Objection.
THE WITNESS: In view of the fact that Goodyear has not made that product for many, many, many years I think you'd want to add to your statement?
BY MR. JOHNSON:
Q. Right.
A. I'm only guessing, but I would say not that I can see, but there might be somebody else in the Goodyear organization that would dispute that.
Q. Well, yeah.
A. I have no idea other than that but doesn't seem like it.
Q. As a chemical engineer and maybe this doesn't interest you, but let me ask it this way. Are you familiar with an aspect of your profession involving chemical engineering where there is emphasis put on historical perspective about how formulations have changed over the years?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: Well, I'm certainly

aware of all those changes. I'm aware of how important those changes have been to the use of rubber products in the world.
BY MR. JOHNSON:
Q. So you think it'd be fair to say that among some historians and perhaps engineers there would be an interest in that information?
A. Possible, yes. I think in some specific cases especially there might be some interest and in many other cases there wouldn't necessarily be much interest at all.
Q. Okay. From a -- from a standpoint of records related to the patent process would the same information was available in a patented formula be of record with the federal government?
MR. TAGGART: Objection. Go ahead.
MR. JOHNSON: Let me ask that differently.
MR. TAGGART: I'm not sure he knows.
THE WITNESS: I don't know if you're asking about whether there are patented

asbestos-containing rubber gaskets that patents -- where patents have been made on that particular product or not? I don't know of any patent applications that ever occurred on this.
BY MR. JOHNSON:
Q. Okay. In your work at Goodyear were you involved in preparing, assisting in preparing patent applications?
A. Yeah, in a preliminary way I guess. The final part of that was done by the patent department. We had a whole patent department at Goodyear that took over once it appeared to management in our department, for instance, that some aspect of what the development work we were doing might be patentable, then we conferred with the patent department and a decision eventually was made to proceed with a patent or not.
(Plaintiff's Exhibit 11 was marked for identification.)
BY MR. JOHNSON:
Q. Okay. Here's Plaintiff's 11 which appears to be another either news article or promotional article concerning Asbestos

Packing Department and 50 year anniversary. The main reason I wanted you to look at that is to look at the photographs, the best you can, to see if that indicates to you any part of the production process of the sheet packing.
A. Well, one thing I'd like to see is what date is on this document.
MR. TAGGART: I believe it's January 14, 1965.
THE WITNESS: '65. Because it also talked --
MR. TAGGART: I'm just going to object in terms of testimony arising out of these photographs because this is a really bad copy. It's hard to see anything but go ahead.
THE WITNESS: Because, you know, the title on the article is the same in both this case and in the November 23, 1964 case. Of course that's only a two or three month separation there and I suppose that's close enough that you could -- we'd be still observing the 50th year of production of growth even though it occurred a few years later.

I think the article, without really reading it, other than just real quickly, is that it's about the same subject about how we got started in the asbestos product, compressed asbestos sheet product area.
BY MR. JOHNSON:
Q. And can you discern from the photographs any part of the production process?
A. Well, the photographs are particularly poor. Let me read the writing on them a little bit, though. Okay. I know what that is. And let me see. Refining -- what does that say? Refining fiber at the loading bin, okay, of the impact machine, yes, okay. And the body batch. Okay. Uh-huh. Okay. Yeah. You want me to just try to describe what these pictures are showing?
Q. Yes. Let's start with the one on the left.
A. Yeah. The one on the left -- well, let me say the one picture that isn't shown here is the one we ought to start with because the starting point of this production is to

take the asbestos fibers which consists of 85 percent of amount of material and the few gallons of the liquid rubber component.

Those were mixed in a separate mixer so that the rubber then got thoroughly impregnated into all the asbestos fibers and the net result of that, after several hours of mixing, was a product -- was a processed product that were like golf ball size pieces and these were both -- these were combinations of rubber and asbestos.

Okay. Next step after that was mixed, that product was weighed out in specific weights and in containers and taken to the product machine that we called the calender. Two steel rolls that rotated by means of driven -- and driven by motors and this combination of asbestos and rubber components were put in between these two rollers and these rollers sheeted it out to form a gasket. Now that's a real quick description.

Q. Uh-huh.

A. It's more complicated than that but that's basically the end result. It sheeted

the product out and formed a gasket at the desired thickness that was required.

And the second picture there is we got the asbestos in our department from the mines after it was processed, mined and processed and in burlap bags and those burlap bags had these fibers in it and the fibers -- if you have never seen it, and I'm sure you haven't, a hand full of asbestos fibers would look like a hand full of cotton fibers. If you ever saw cotton picked in the cotton bowls and the rough cotton. They're similar, surprisingly so since the asbestos came from a rock, the fibers came from a rock or a solid ore.

And when we got that in, it was in pretty good condition considering the little bit of processing from the time that it originally got exploded out of the vein underground in the earth and -- but we did put it through a machine we called an impact machine and that took these fibers and removed any remaining -- any rock or foreign materials that was in it and it also changed the fibers into a higher quality useful product. So that

was what's going on in the second picture.

The third one is really the first calendering operation that I talked about. Once the product had gotten built up to the desired gauge, the operator at the calender ran a longitudinal cut across the sheet all the way down to the steel roller and he had a device that he got ahold, he pulled it away from the steel roller, pulled the sheet away from the steel roller and got ahold of it with a clamping device and pulled it off of the steel rollers and we wind up now with a sheet of gasket that was approximately 10 feet wide and 11 to 12 feet long and whatever gauge was ordered and desired.

Q. Thank you.

A. So that's what that sheet is showing, pulling the sheet off of the calender rolls.

Q. Okay. Now, you made reference to the asbestos coming in burlap -- burlap sacks. You witnessed that being used as part of the production process?

A. Yes.

Q. And did the workers have any type of respiratory protection when they were using

that?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: There were partial face masks made out of -- I'm not sure what it was made out of -- that you could breathe through and it would separate dust. It was a good dust protector type face mask.

That's the one thing I can remember that was available in that production department. That also -- same thing, similar thing was available in the department I mentioned where we mixed rubber and carbon black together where we had a lot of carbon black in the air.

BY MR. JOHNSON:

Q. And why was it important to control the inhalation of the dust?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: Well, just on the basis that it was I think common knowledge that we didn't want ourselves or anyone else breathing in any more dust than was absolutely necessary.

BY MR. JOHNSON:
Q. Are you aware of any other respiratory precautions that were taken during the production process of asbestos-containing either gaskets or hoses at Goodyear?
A. Well, I thought back over that from time to time and goes back such a long time I'm not a hundred percent sure of my answer. I don't -- to the best of my knowledge I can't recall anything other than those face masks that were available.
Q. Okay. Do you recall Goodyear ever conducting periodic medical examinations of workers that were involved in the production process that would include chest x-rays?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: I don't recall that being done in the '50s and 1960s. Sometime after that we got into production of a product that had some complex organic solvents in it and I do know there was effort made at monitoring the amount of solvent that got in the air and we had -- it had ventilation equipment installed to keep such odors to a

minimum and it -- my recollection is that some of the workers most exposed to those solvents were occasionally sent to the medical department at corporate headquarters and were given some kind of test but that's all I really know about it.
BY MR. JOHNSON:
Q. When you were serving in a management capacity did you receive information and training from Goodyear concerning workplace safety?
A. Well, yes. It's hard for me to remember that, but we did have periodic safety meetings. We even had some of those in the plant manager's office I can recall once or twice at least.
And I sure don't remember details of it any more, but I know that they were safety department, safety subject meetings and various safety related topics were discussed in those meetings. That's the whole purpose of the meeting was to discuss safety topics and I just can't really remember much of the detail any more.
Q. Thank you. I believe you testified

that was it around 1969 that you believe that asbestos was after that date no longer used in the Goodyear's production of gaskets, correct?
A. That's correct.
Q. And I can't recall if I asked you this. Do you have any knowledge of it being used in production of any other products after 1969 at Goodyear?
A. Well, for two or three more years I think it had continued some small usage in hose and that's the only other thing I know about it.
MR. JOHNSON: Okay. We're reviewing a document.
MR. TAGGART: Oh, did you need that back? That's okay.
MR. JOHNSON: I'll try to find you another one.
MR. TAGGART: No, that's all right.
MR. JOHNSON: Okay. If you would mark this for me, please.
(Plaintiff's Exhibit 12 was marked for identification.)
BY MR. JOHNSON:

Q. Mr. DeMarse, I'm showing you a document that's been marked as Plaintiff's Exhibit 12. That purports to be a two page affidavit that E.W. DeMarse signed June 27, 2002.
A. Okay.
Q. In some other litigation and if you would read through that I just want to ask you if those are still your opinions today.
MR. TAGGART: I'll object to the form of the question just because it uses the term opinions.
THE WITNESS: Okay. I kind of remember it.
BY MR. JOHNSON:
Q. Okay. Let me refer back to it, if I may, and just want to see. The case appears to be Warren versus AC & S, et al in New Jersey, state of New Jersey.
Getting to the statement in paragraph number 3 and I'll read it, it states "Compressed asbestos sheet gasket was produced by The Goodyear Tire & Rubber Company for approximately 50 years with production terminating for economic reasons in 1969. The

Goodyear Tire & Rubber Company made no further asbestos-containing sheet packing after 1969."

You stand by that statement, correct?

A. Yes.

Q. Okay. And to the best of your knowledge the biographical type information in there is also still correct?

A. I think. I went over that pretty quickly, but that is when I received my BS in chemical engineering from Washington U. and 1952 to 1991 at Goodyear and I worked at 19 -- worked continuously in industrial products in the industrial products plant from 1952 when I hired in until 1983 when I transferred to the Greensburg plant.

(Plaintiff's Exhibit 13 was marked for identification.)

BY MR. JOHNSON:

Q. Showing you Exhibit 13, which was used in another case, it purports to be a certificate from The Washington University.

A. Yes.

Q. Does that appear to be you?

A. Yes.

Q. Correct?

A. Right.

Q. Thank you.

(Plaintiff's Exhibit 14 was marked for identification.)

BY MR. JOHNSON:

Q. Number 14, which was introduced at the last deposition, a letter on The Goodyear Tire & Rubber Company letterhead dated January 26, 1990 three page document purports to be under your signature. I'll give you sometime to read through that.

A. Well, I can kind of remember this I think.

Q. Well, let me make a couple of references to it if I may. As I indicated the date's January 26, 1990. My first question is, have you had occasion to review that in any other deposition? I mean, it indicates it's been marked previously.

A. Yeah, I can remember reading that --

Q. Okay.

A. -- in some previous deposition or --

Q. Okay. Having reviewed it here, are you able to recall the circumstances around

which that the letter was written?

A. Mr. Barr was the Goodyear attorney that handled our Industrial Products Group whenever we had a specific request relating to the law department.

And I'm sure -- and from that and my recollection is is he requested me to furnish him some background information going back to the 1968 or '9 period when we terminated our asbestos operation. And that's what I did in the rest of that letter.

I gave him the detailed, much more detailed description of how we formulated the components that went into the compressed asbestos sheet and the production operation I at least mentioned. And I think that's -- I don't recall if there's anything else that I gave him besides that. No, I think that's it.

The formulations get a little complicated because the mixing doesn't all occur -- the processing and the mixing of the asbestos getting it ready for final production doesn't all occur in one operation. It goes through about three or four stages where something new is added each time as it goes

into a subsequent stage.

Q. Okay. And in looking at that document how are you able to identify as the formula and production stages for the gaskets prior to 1969?

A. Yeah, let me -- can I see that first page again for a moment? I want to be sure. Yeah. Yeah, this -- the requirement was specific to Durabla.

And we only -- we always only had one formulation for the compressed asbestos sheet we furnished to Durabla. That went back even -- started out before my experience with Goodyear. And from then on we always maintained the same formula for that company and that was at their request.

The only time we ever made a change to that formula was if some particular component or item in the formulation became no longer available. We then would select the best replacement for that material, make a sample, small production run, furnish Durabla with the samples and get their approval then to proceed with the new substitution since there was no alternative or no better

alternative.

Back in those days that would have been a high secret type letter since we're disclosing the formulation in that letter which was not supposed to be done outside of our own department but --

Q. Okay.

A. -- in 1990 that became less important I'm sure.

Q. Okay. If you would, would you read for me the numerical paragraph number 3 which is the last paragraph on page 3 before your signature.

A. "To the best of my knowledge, the 17857 Durabla formulation, and other similar asbestos formulations were in production at Plant 2 Akron from before 1952 (my initial experience) until 1969 when the product line and equipment was transferred to and started up at Goodyear Quebec. I believe production there ceased in October 1973."

I couldn't remember that today I don't think specifically to the month. I think I knew 1973. And it references a letter A.L. Sutton who I'm pretty sure was also in

the law department to L.A. Fleming and I don't know who L.A. Fleming was at this time. And that was dated in 1987 --

Q. Okay.

A. -- that letter.

Q. So would it appear in reading this and your recollection that expressing this statement that production ceased in Quebec in October of 1973 that that was at least in part gained from information contained in that letter dated November 27, 1987 the way you've got it written?

MR. TAGGART: Object. Go ahead.

THE WITNESS: I would say that's true as far as something in writing. My recollection also, though, is that in 1973 period, which is the time frame when we started really knowing about the safety problems with asbestos and it was -- I think I had knowledge about that time that Quebec was no longer going to produce compressed asbestos sheet, that the whole product was no longer going to be made anywhere within Goodyear to the best of my knowledge.

BY MR. JOHNSON:

Q. Was the product being manufactured in Quebec prior to 1969?

A. To the best of my knowledge I don't think so, but I'm not certain.

Q. Do you recall any discussions concerning the production of the product changing from the Akron plant in 1969 to the Quebec plant?

A. I didn't get involved with that very much at all other than being a part of transferring the paper records formulations and paper records that were gathered up in our plant and shipped to the Quebec plant, along with the equipment that was sent from engineering and maintenance and production.

We didn't have anything to do with that specifically but that was being done concurrently in 1969.

Q. Do you know why it would have been economical to produce the product in Quebec and not in Akron?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: One of the main -- I guess I don't know for positive. I haven't

seen records on it, but the supposition that I have made before on that is that for one thing the transportation cost of shipping asbestos from Quebec to Quebec would have been a lot cheaper than shipping it from Quebec to Akron, Ohio.

Secondly, a big part of the cost of producing compressed asbestos sheet gasket was labor and our union situation in Akron caused our labor breaks to be I think, by far, the highest of any Goodyear plant, although I'm not so much talking about tires because they had their own unions in all the other tire plants too. So I'm just talking industrial products or compressed asbestos sheet. We probably had a higher, considerably higher labor cost than what Quebec would have had.

BY MR. JOHNSON:

Q. Okay. Do you recall any increase in environmental regulations at that time from either the state or the federal government?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: Now, this is we're

talking again 1969?
BY MR. JOHNSON:
Q. Yes, sir.
A. No, I know of no difference.
Q. Any recollection of workplace safety measures either on state or federal level?
THE WITNESS: Not that I'm aware of --
MR. TAGGART: Objection.
THE WITNESS: -- but I wouldn't probably have been aware of that anyway I guess because I had really nothing to do with the Quebec operation.
BY MR. JOHNSON:
Q. Okay. Did you ever -- did you ever go to that plant?
A. I've been to a lot of Goodyear plants and two or three of them in Canada and I'm not sure if I was ever in Quebec briefly or not. If I was there, it was as part of a trip being made to two or three plants and I was accompanying somebody else.
And we might have made a tour through it but that -- it would have just been a general type thing like that and I'm not

sure I ever was at Quebec plant. I don't know.
Q. Okay. I asked you earlier about your knowledge of any air sampling studies that had been at either the Akron plant or other Goodyear plants. Let me ask you if you have any knowledge, either while you were working at Goodyear or since you've retired and have been involved in this consulting role, of any air sampling studies that were done involving the Goodyear product of the -- of the gaskets?
A. Of gaskets? No, I don't think I've ever got any new information or additional information in the years since then.
Q. What about the hoses that contained asbestos, any studies as to their use and the exposure to the asbestos fibers?
A. I'd have to give you the same answer. The use of the asbestos as it went into hoses wasn't anything like the use of asbestos, the raw fibers that went into sheet gaskets.
The product that went into hose was more or less finished asbestos type product like fabric and wasn't at all like having loose fibers so, but so I wouldn't

expect there to be much emphasis, as much importance placed on that subject as it would be in the asbestos -- sheet asbestos department.
Q. Okay. You're not aware then of Goodyear having conducted any type of study concerning the exposure to asbestos from the use of any Goodyear manufactured product?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: Not that I'm aware of, but it's certainly possible it could have been done without my knowledge.
MR. JOHNSON: Got a few more documents I want to show you and I think we're just about finished.
(Plaintiff's Exhibit 15 was marked for identification.)
BY MR. JOHNSON:
Q. Plaintiff's Exhibit 15 indicates at the top Industrial Products Notification of Stock Change and has a date on it 6/27/67 and this was introduced at the previous deposition. Ask you if you could review that to see if you have any either personal

familiarity with it or if you have the ability to interpret it.
And let me for the record make it clear that it was referenced on the deposition. It wasn't introduced as a Goodyear document because I think we need to be clear on that on the record.
A. Yeah. We had an awful lot of documents that were issued in our department and one of them that was issued was a change notice and that's what this X-9842 is in the upper left-hand corner. This is a change notice that we were reducing a batch weight on a specific manufacturing of one of the dough batches, which is synonymous with cements as I've called it before. Dough is a cement that is fairly viscous and that's what we used in asbestos is a viscous cement. We called it a dough often.
And anyway we were getting rid of one product, one of our intermediate steps for manufacturing this particular compressed asbestos sheet and replacing it with another one.
Q. Okay.

A. This one here apparently was a DuPont asbestos sheet or one we made for DuPont.
Q. Okay. So if I ask you a few more detailed questions about it, first of all, underneath the Akron where it's got the abbreviation for number n-o period is that where you read X-9842?
A. Your right -- your left thumb, yeah, right there.
Q. Okay. And that is a symbol or code that you're familiar with in your work there?
A. And originated more for filing purposes and rechecking later, if necessary.
Q. Do you know how a document like this would be originated? Would it be from the chief engineer or how would it be originated?
A. It was originated by the development compounder. In this case it was Bruce Dorstewitz I see. Down at the bottom his name is Dorstewitz. And he would have originated it and then the clerical, the typing of it would have been done in the Process Development Group. They also had a clerical employee there that did a lot of the typing of change notices and various other internal

documents.
(Plaintiff's Exhibit 16 was marked for identification.)
BY MR. JOHNSON:
Q. Okay. Next showing you Plaintiff's Number 16, which was also included in the last deposition, it indicates at the top Confirmation of Change in Industrial Products Specification. Can you look at those two and tell me if they're related or if it's referring to a different -- a different change?
A. Yeah, to me they are for exactly the same purposes and involving exactly the same materials.
Q. And what's the date on the second one, the one I just showed you, number 16?
A. The only thing I can't answer is this also has the same X number series on it that this one has and this also has two days -- where did I see the date? Yeah, this is June 25th and this is June 27th. So this one came out first and that number is higher than.
And why we had duplicate type of paperwork coming out for the same thing is

deplorable, but I don't know why it happened here, but it is just simply authorizing or recording of the same information.
Q. Okay. So you can't think of I guess a production reason or management reason. One of them's not issued by a different party confirming the change or something of that nature?
A. No. It says it's to consolidate. We must have had -- perhaps the product that we were killing here must have been almost identical to similar other products so we consolidated them into one --
Q. Okay.
A. -- existing product.
Q. Okay. Thank you.
(Plaintiff's Exhibit 17 was marked for identification.)
BY MR. JOHNSON:
Q. Okay. Number 17 indicates a date at the top of 7/21/64, ask you to look at that document and see if --
A. Another one of our confidential documents.
Q. Okay.

A. We looked at the breakdown in the different steps that the Durabla formulation involved when we start with asbestos and cement or compound and then go through cement. This is the same situation, same procedure, same details for the DuPont gasket material.
Q. And do you recognize some identifying information on there? Is there -- are there a -- is there a name?
A. Which one would be the name? I --
Q. Is there an individual name on there that might be an employee of Goodyear?
A. Oh, the employee. Oh, W.M. Clark. Okay. He also worked closely with Dorstewitz and this was in 1964. So this is three years earlier. Walter was a little more senior to Dorstewitz. He was one of the younger people we had in the department.
Q. What were their positions?
A. Both of these people were development compounders. They both had chemistry backgrounds and they did the formulation type work, not the design engineering type. This was -- they did the same thing really that I came into the department from originally:

Chemistry background, formulation type work. And the product is very similar to the other products we have in that it's based on natural rubber, had about the same percentage of asbestos in it.

MR. JOHNSON: Couple more that are similar to that and we'll try to go through them quickly.

(Plaintiff's Exhibit 18 was marked for identification.)

BY MR. JOHNSON:

Q. Number 18.

A. Okay.

Q. Could you tell me the date on that one? I think it's legible.

A. This is 1965. So this is a year -- basically a year later than the previous one. Also for a DuPont sheet and this one is a different one than the other one and that one is called DuPont S-1. S-1 is their -- DuPont's identification of this sheet and this one is S-2 and I don't -- offhand I could tell you I don't see what the -- trying to see what the difference is.

Q. And is there signature at the bottom

of that that indicates --

A. A.L. Snyder but -- oh, yeah, then there's another one too. A.L. Snyder is the clerical typist that we had that did the typing. Name above that is Yeist and Yeist was also one of our development compounders at that time and --

Q. Okay. I may show you this third one and I think we'll be through with that.

A. They're both -- these look to be both white products, so I don't see much difference between the two offhand.

(Plaintiff's Exhibit 19 was marked for identification.)

BY MR. JOHNSON:

Q. Exhibit 19 appears to be a similar document. Could you read the date on that one?

A. Yeah, this is 19 -- June 1967 and this is the same formulation and has the same numbers on it as Exhibit 17 and it's a serial change to update it to some new -- one of the components, one of the compounding ingredients that was changed from the 1964 to 1967 necessitated -- it's the same number S-5035,

S-5035.

It's a serial change -- what we call a serial change for a minor change that was made to update the product.

Q. And do you recognize a name on the bottom of that of a Goodyear employee?

A. Same people as we've talked about before. Snyder is the clerical typist and Dorstewitz is at that time was our youngest hired compounder.

Q. Okay. Now, do you know if this asbestos sheet packing was being manufactured for DuPont for resale or for DuPont's internal use?

A. I don't really know.

Q. Okay.

A. I could tell you what I think, but it only would be --

MR. TAGGART: Don't guess.

(Plaintiff's Exhibit 20 was marked for identification.)

BY MR. JOHNSON:

Q. This document I don't think was shown earlier and I think the best identifying marking for the record maybe that towards the

bottom right-hand corner it says S-137-P-102 Plaintiff's Exhibit 20 and let me just ask you is that something that you recall working with or anything that you're familiar with at all?

A. I am 99 percent sure I had never seen this product myself personally. The formulation, the book sheet date is -- where did I see it at? 1943. Should be in the middle of World War II.

And it does contain natural rubber, but a different type than we used in later years. And this is the compound that we start by mixing a rubber compound with the various curatives and all the other ingredients and it gets mixed in a machine called a banbury b-a-n-b-u-r-y.

And then once that compound is mixed and sheeted out in a rubber form, it goes to the cement department and they put that in a mixer, this product in the mixer with solvent and make a dough or cement out of it and then that gets brought back to our department down in a first floor in the asbestos sheet gasket department. It gets processed then into a sheet gasket. This --

Well, it's a stock for M-66 dough, so that's the dough number, but this doesn't really tell the end product that it's going to go into.

The dough then gets mixed with asbestos and gets another number on it which identifies the end product and it's not on this sheet particularly. It could be. We would have to look up book sheet that's for M-66-D that would tell you the end product.

Q. At this stage --

A. This does say that it's yellow color. And from 1952 on, and I was down in that department frequently, I never saw, boy, I can't remember ever seeing us make a yellow colored compressed asbestos sheet.

Q. What color do you remember?

A. Almost entirely white and black.

Q. Okay.

A. I know we experimented -- we might even have experimented with yellow now that I think about it and I -- hardly ever did we do that.

Q. And from your review of the records and the formulations what colors were used

prior to your being at Goodyear?

A. Well, I see yellow was, but I'm unfamiliar with the answer to that. I can't answer that.

(Plaintiff's Exhibit 21 was marked for identification.)

BY MR. JOHNSON:

Q. Okay. I believe this is the one we've been looking for, the last document which was introduced at the last deposition. Indicates a letter International Talc Company dated October 10, 1973 to The Goodyear Tire & Rubber Company and you may have seen that in regards to other testimony.

(Music played on telephone.)

MR. TAGGART: That was interesting. Can you still hear us on the phone?

MS. WELSH: Yes, but that was quite interesting.

MR. TAGGART: Little ominous music to lighten up your day.

MR. JOHNSON: Isn't that what they play like on NPR when they want it to wrap up or something? It's like get on with it.

THE WITNESS: I don't recall seeing this before. International Talc Company was a supplier to Goodyear of talc. It was not used to the best of my knowledge in the asbestos manufacturing operation, but it was used in other parts of our plant where mixed rubber was too sticky and needed -- that needed to be reduced and therefore talc was used in our plant to keep layers of rubber from sticking together when that was undesirable.

And, again, from what I am ascertaining from reading this and it says in this first sentence that "The definition of asbestos is still in dispute" and I think what that really is referring to or what they're trying to say there is that International Talc Company did not supply asbestos.

But when you analyze talc to the fraction of a percent of the various materials that is contained in talc, you might find various different things and somehow there was a -- some discussion of this word tremolite, which I had never heard of, and I don't think it really has anything to do with asbestos.

I'm sure it had nothing to do with the asbestos that we used.

And I think somebody was very confused in this letter as a result of somebody being confused in deciding to maybe they can clear it up by sending it to Goodyear. And they sent it to the man -- to a person who worked in the purchasing department.

BY MR. JOHNSON:

Q. Okay. Let me ask you about --

A. And, again, the year was -- what was the year again?

Q. 1973.

A. 1973.

Q. Okay.

A. If anything would have progressed on this that involved industrial products, I think -- I think personally I would have heard of it and I never heard of this before. I don't think this got any further than the purchasing department who clarified this letter up with International Talc or whoever else was involved and that ended the whole thing in my opinion.

BY MR. JOHNSON:
Q. It indicates that to the attention of Mr. J.P. Mullett or Mullett --
A. Mullett.
Q. -- Mullett chemical purchasing. Is that someone that you're familiar with at Goodyear?
A. I didn't know him personally. I knew one or two of his predecessors in earlier years. They divided the purchasing department up into about four different categories and one of them was for industrial products and especially the chemicals that we -- that he purchased for us and he was the guy that specialized in purchasing chemicals.
Q. Now, the sticky rubber that you were referring to that you thought the talc was used with was that rubber used in various manufacturing processes throughout the plant?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: Just about all manufacturing processes in the plant. For instance, when we mixed rubber compounds the first -- the product had to be discharged and

sheeted out after it came out of the mixer into about an inch thickness or slightly less and as wide as what a man on a mill roll could cut off and he hangs it on a conveyor and then release agents are applied to the surface of that, commonly talc, so that when these are stacked up on a skid so they can be transported to various departments in the plant, these sheets of rubber don't all stick together into one big thousand pound unhandlable -- it's not a right word -- impossible to handle condition.
BY MR. JOHNSON:
Q. Okay. And that process would include then the manufacturing of the sheet gaskets and the hose?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: Very little of it went -- pertained to asbestos or any sheet gasketing because only a small percentage of compressed asbestos sheet was rubber, the rest of it was all fibers, but the rest of the products we made in the plant all contained substantial quantities of the rubber part of

the formulation and therefore the mixing of the rubber compounds was done, well, 99 percent of it was done for products other than compressed asbestos sheet: Hose, conveyor belts, tank, well, when we were in that business, dock fenders, all those other products involved rubber that was mixed in and where the product had to be handled and sometimes talc was used. We kept it to a bare minimum because if used in excess it could interfere with adhesion later on.
BY MR. JOHNSON:
Q. Did you give a percentage of the -- of the hose manufacturing process of it was rubber?
MR. TAGGART: Objection.
THE WITNESS: Commonly the hose and most of the other products in our plant, and I'll even go so far as to include tires, which was the biggest product that Goodyear had, the rubber part of those formulations and of those products generally was somewhere between 40 and 60 percent. And generally the highest quality most expensive products would have maybe 60 percent rubber because most of

the other ingredients, except for the rubber, were lower cost so --
MR. JOHNSON: If I could have just a moment to look at my notes I think I'm finished.
(Off record discussion.)
BY MR. JOHNSON:
Q. Okay. Mr. DeMarse, were you involved in answering any of the discovery in this case where you would have been called upon to provide information to respond to questions about this litigation?
MR. TAGGART: You talking about written discovery?
MR. JOHNSON: Yes.
MR. TAGGART: He was not.
BY MR. JOHNSON:
Q. Okay. Do you have any other depositions scheduled at this time?
A. No.
Q. Have any --
A. Not that I know of.
Q. Okay.
MR. TAGGART: I'll tell you later.
BY MR. JOHNSON:

Q. Do you have any trial testimony scheduled at this time that you're aware of?
A. No.
MR. JOHNSON: Okay. That's all I have. Thank you now.
MR. TAGGART: Anybody on the phone have questions?
MS. WELSH: This is Rosemary Welsh. I'd like to put an objection on the record again to this deposition. I object to the extent that new documents were offered to the witness as exhibits and had not been previously produced to Goodyear in response to the written discovery requests and written correspondence. Thank you.
MR. TAGGART: Anybody else on the phone? All right. My name's --
MS. SCHUPBACH: I have no -- this is Rebecca Schupbach. I have no questions, but I would like to speak to the court reporter.
MR. TAGGART: Well, hold on. We're not done in the room yet. My name's Brent Taggart. I represent The Goodyear Tire & Rubber Company and the witness in today's

deposition. I have a few follow-up questions.
BY MR. TAGGART:
Q. Bill, are you familiar with a company called Goodyear Canada Corporation?
A. Yes, certainly.
Q. And is that a separate company from The Goodyear Tire & Rubber Company?
A. It's in another country and it's totally separate from anything we've had here in Akron or Ohio.
Q. Now it is a subsidiary of The Goodyear Tire & Rubber Company but it's a separate company?
A. Yes, I believe that's correct.
Q. I want you to take a look at what you previously testified about and that's Plaintiff's Exhibit 14 and the numbered paragraph number 3 that Mr. Johnson had you read and there's a reference there to Goodyear Quebec. Do you see that?
A. Yes.
Q. Is that a Goodyear Tire & Rubber Company plant or is that a Goodyear Canada Corporation plant?
A. Definitely a Canada Corporation.

Q. All right. So then I want you to look at Exhibit 12 which was previously marked and the third paragraph there where you indicate that The Goodyear Tire & Rubber Company ceased production of compressed asbestos sheet gasket material in 1969. Do you see that?
A. Yes.
Q. That's true, isn't it?
A. Yes.
Q. Because after 1969 all of the machinery that had been at The Goodyear Tire & Rubber Company was at the separate company Goodyear Canada?
A. The point being that we couldn't have made asbestos sheet gasketing after that if we wanted to.
Q. Okay. Now, I believe you testified earlier that all of the asbestos fiber used in industrial products at The Goodyear Tire & Rubber Company in Akron came from Canada; is that correct?
A. That's -- that's to the -- I certainly remember it that way.
Q. Was that chrysotile asbestos?

A. We again saw it --
Q. Or chrysotile?
A. Chrysotile, yes.
Q. Okay. You pronounce it chrysotile, I pronounce it chrysotile.
A. Yes.
Q. So if earlier it sounded like you said chrysolite that was -- you misspoke?
A. I had it mixed up. I didn't mean to say that.
Q. All right.
A. Yeah, chrysotile.
Q. Was the chrysotile and chrysotile asbestos that came from Canada was it white in color or off white/gray?
A. The fibers were --
Q. All right.
A. -- the ore that it came from wasn't white.
Q. And, again, when was the last year that --
MR. JOHNSON: I'm sorry. I guess note my objection because I did not understand the answer.
BY MR. TAGGART:

Q. Okay. Can you repeat the answer? I'm sorry.
A. Yeah. Chrysotile is a type of asbestos ore that was mined in Canada and as such it's mined and originally is in the form basically of a brownish green rock.
Q. So the ore itself was brownish green and the fibers are white?
A. Yeah. It's an amazing product. Some day if you ever want to spend a little time you ought to read about the unique properties that asbestos has. It's one of the most remarkable minerals that ever was encountered I think.
Q. So the -- when was the last time you saw -- what year was the last time you saw compressed asbestos sheet gasket material produced at The Goodyear Tire & Rubber Company?
A. Well, it was either late 1968 or early 1969.
Q. And what --
A. I'm not sure of the exact date we got out of the business manufacturing it. We did manufacture a fairly healthy stock that we had

on hand and used that to supply customers to carry them over until they got a new supplier.
Q. Then what happened to the machinery that you used to make the compressed asbestos sheet after you stopped producing it in Akron?
A. It was shipped to Goodyear Quebec.
Q. And that's the Goodyear Canada?
A. Goodyear Canada, Quebec.
Q. And what happened to the formula cards and records?
A. Those were also sent to Goodyear Quebec personnel.
Q. Okay. So they went to the separate company Goodyear Canada?
A. Goodyear Canada.
Q. When, to your knowledge, is the last time any Goodyear hoses were manufactured by The Goodyear Tire & Rubber Company that contained asbestos as a component?
A. To the best of my knowledge it would have been early 1970s, '71, '72.
Q. Okay.
A. Possibly some of the products would have been stopped, would have went out of business for other reasons even before then,

but that would have been the last of it.
Q. And based upon your experience with hose product lines during the '50s, the '60s and the '70s what percentage of hoses produced by The Goodyear Tire & Rubber Company during that time period of your experience do you -- would you estimate were free of any asbestos component?
MR. JOHNSON: Objection.
THE WITNESS: We're talking hose?
BY MR. TAGGART:
Q. We're talking hose. Let's break it down. In the 1950s based upon what you saw going on in the hose department, which you've testified was in the same general area with special products, are you able to estimate the number -- the percentage of hoses produced by Goodyear in the 1950s that contained no asbestos?
A. Well, I can certainly give --
MR. JOHNSON: Same objection.
THE WITNESS: -- my estimate on that and it would be that the non asbestos containing hoses would have comprised like 95 percent of all the hoses we made --

BY MR. TAGGART:
Q. And how --
A. And maybe more.
Q. How about in the 1960s?
MR. JOHNSON: Same objection.
BY MR. TAGGART:
Q. Go ahead.
A. Same -- same conditions.
Q. And 1970s before you went to the hose department as your primary assignment what percentage?
MR. JOHNSON: Same objection.
THE WITNESS: The first two or three years it might have -- it would have been that same percentage and after that it would have been a hundred percent without asbestos.
BY MR. TAGGART:
Q. And after you joined the hose department in 1977 were there any asbestos hoses being made by The Goodyear Tire & Rubber Company?
A. There were no asbestos products being made at that point that -- I'm positive I would know of it if it was being made and I

sure don't know of any that was being made.
MR. TAGGART: All right. Thank you. I don't have anything further.
MR. JOHNSON: I have a few follow-up.
BY MR. JOHNSON:
Q. Your testimony concerning the asbestos-containing hoses, the fire hoses that I asked you about earlier, those were asbestos containing, correct?
A. You're saying fire hoses?
Q. Furnace hoses.
A. Oh, furnace hoses.
Q. Sorry.
A. Fire hose is a totally different product.
Q. My mistake.
A. I think some of that product had that asbestos component in it and I think a lot of that product did not have asbestos containing in it. It wasn't really a vital necessity to put asbestos in that product, but it was done at times or in some certain products.
Q. Because of the heat?
A. Well, because of the heat and because

by using asbestos in the product and advertising or a sales advantage could be obtained too in my opinion; that might have been part of it.
Q. What were the various types of hoses that Goodyear manufactured that did not contain asbestos?
A. That did not contain asbestos?
Q. Uh-huh.
A. I need a book to go through all of them. OS & D hose, I'll start with that. That's all suction and discharge hose. Dredge hose, inside diameter about 46 inches often. I don't know how long it's going to take me to think about all the different kinds of hoses that we made 'cuz we made a bunch of them.
Q. How many do you think you made?
A. I would say in just types of hose radically different types at least 50 or 60. Each one of those had some variations and -- and probably each one of those had 10 to 15 different sizes --
Q. Okay.
A. -- and were made in five different plants in the United States, several in South

America.
Q. And are these Goodyear Tire & Rubber Company plants or are these subsidiaries?
A. That's a good question. I don't know. I don't know whether plants in Mexico or South America -- I would think they're Goodyear plants, but I don't know for sure.
MR. TAGGART: If you don't know, you don't know. That's the answer.
THE WITNESS: I don't think any of them used asbestos, though.
BY MR. JOHNSON:
Q. Okay. In your readings concerning asbestos have you read about the serious health consequences from exposure to asbestos?
MR. TAGGART: Objection. Go ahead.
THE WITNESS: I have in past years, yes.
BY MR. JOHNSON:
Q. How, if at all, does that effect your opinion concerning the use of the mineral asbestos in the manufacturing process?
MR. TAGGART: Objection. Go ahead.

THE WITNESS: Well, as I look back on that I think the main danger involved, if there is one, for using asbestos in our product would have occurred during the manufacturing process and I still -- and I have testified before that in my opinion once that compressed asbestos sheet was thoroughly mixed and cured under pressure and high temperature as we used in that production department that the product at that point never exhibited any loose asbestos fibers, that they were encapsulated and sealed within the compressed asbestos sheet and I could personally even knowing the dangers of asbestos that has been found out since then, I can never see how our product would have caused a danger to people using it.
BY MR. JOHNSON:
Q. Are you familiar with the process of removing asbestos gaskets from flanges?
A. I've seen that done at times, yes.
Q. And do you not accept the fact that the removal of those gaskets release asbestos fibers in the air?
A. Of course we did recommend to

customers -- well, I shouldn't say anything. Some customers did put release agents on their gaskets before they installed them in flanges, which made them much easier to remove from the flanges later on.

Also some customers removed the gaskets from the flanges without waiting for the number of years to be excessive resulting in the gasket getting more or less brittle and making it more difficult to remove from the flanges, but even in the cases I have seen, admittedly limited number of times, that I've seen gaskets removed with difficulty from the flanges I've seen the gasket break up into small, almost black colored pieces, but I had never saw any loose asbestos fibers.

Q. Are you talking about the bare eye you never saw that?

A. Yes.

Q. Okay. You're not talking about any collection of fibers and scientific testing of them?

A. It -- back at the time I saw that was before we really knew of any dangers with asbestos so, yes, I have to agree with you.

Q. Okay. Now, that you know of the dangers with asbestos has that effected your opinion as far as the use of the mineral in the manufacturing process?

MR. TAGGART: Objection. Go ahead.

THE WITNESS: Well, I guess with hindsight being the way it is I think we would have rather tried to find some other way of making a good gasket product without using asbestos if we -- if it could have been done.

MR. JOHNSON: Okay. That's all I have.

MR. TAGGART: Couple more here, Bill.

BY MR. TAGGART:

Q. When you were recounting for Mr. Johnson just a few minutes ago the non asbestos hoses you can remember, you just did the best you could do off the top of your head; is that so?

A. Yes. I almost need to go through a book of all the different kinds of hoses we made and almost all of them did not contain asbestos. So, you know, we're talking a

multitude, a large number of hoses that Goodyear made and, of course, some of them were made in Akron, some of them were made in Sun Prairie, Wisconsin, some were made in this St. Marys. They were made in various different plants and --

MR. JOHNSON: I'll stipulate that I basically changed the question and asked him to give numbers instead of names.

MR. TAGGART: Okay.

THE WITNESS: I would have to really have a hard time remembering all those types of hose.

BY MR. TAGGART:

Q. Okay.

A. Because we're talking hoses with an ID of a fraction of an inch to hoses that in size are 46 inches inside diameter, so there's a real large volume in number of hoses that we made for all different kinds of applications in the field.

Q. Do you think it would refresh your recollection to look at a complete catalog from the time period of the hoses that Goodyear made in terms of being able to

describe the numbers and types of hoses that didn't contain asbestos?

A. Yeah, that would help me. I don't know whether it would help you.

Q. All right. And you've been retired --

A. If I wanted to really answer your question in detail.

Q. You've been retired from Goodyear for how long now?

A. Since 1991.

Q. So going on 18 years?

A. 18 years.

MR. TAGGART: All right. Thank you. Nothing further.

MR. JOHNSON: Nothing further.

MR. TAGGART: Anybody on the phone? The witness will read and sign.

- - -

(Deposition concluded at 2:45 o'clock p.m.)

- - -

I, ERNEST W. DeMARSE, do verify that I have read this transcript consisting of one hundred fifty (150) pages and that the questions and answers herein are true and correct with corrections as noted on the errata sheet.

Ernest W. DeMarse

Sworn to before me, ----------, a Notary Public in and for the State of ----------, this ------- day of ----------, 2009.

Notary Public in and for the State of ----------.

My commission expires ----------.

ERNEST W. DeMARSE

-Page-	-Line-	

CERTIFICATE

STATE OF OHIO,)
) SS:
SUMMIT COUNTY.)

I, Lori K. Phillips, RMR and Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within named witness, ERNEST W. DeMARSE, was by me first duly sworn to testify the truth, the whole truth and nothing but the truth in the cause aforesaid; that the testimony then given by the witness was by me reduced to Stenotypy in the presence of said witness, afterwards transcribed upon a computer; and that the foregoing is a true and correct transcription of the testimony so given by the witness as aforesaid.

I do further certify that this deposition was taken at the time and place in the foregoing caption specified, and was completed without adjournment.

I do further certify that I am not a relative, employee of or attorney for any of the parties in the above-captioned action; I am not a relative or employee of an attorney of any of the parties in the above-captioned action; I am not financially interested in the action; and I am not, nor is the court reporting firm with which I am affiliated, under a contract as defined in Civil Rule 28(D).

IN WITNESS HEREOF, I have hereunto set my hand and affixed my seal of office at Akron, Ohio on this 12th day of February, 2008.

Lori K. Phillips, RMR and Notary Public in and for the State of Ohio.

My Commission expires December 2, 2010.

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