

In the Matter Of:

ROBERT AND LINDA WHALEN vs. JOHN CRANE, INC., et al.,

WHALEN TRIAL

October 02, 2014

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1 SUPERIOR COURT OF CALIFORNIA

2 COUNTY OF ALAMEDA

3 BEFORE JUDGE VICTORIA S. KOLAKOWSKI

4 DEPARTMENT 520

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6 ROBERT WHALEN AND LINDA WHALEN,

7 Plaintiffs,

8 vs.

No. RG14711964

9 JOHN CRANE, INC., et al.,

10 Defendants.

11 _____/

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15 REPORTER'S TRANSCRIPT OF TRIAL PROCEEDINGS

16 October 2, 2014

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19 Taken before Kimberly R. Hendershott

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Page 2

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Page 4

P R O C E E D I N G S

Thursday, October 2, 2014 - 9:48 a.m.

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(Whereupon, the jury having entered the courtroom, the following proceedings were had:)

THE COURT: Good morning, ladies and gentlemen.

JURY PANEL: Good morning.

THE COURT: I wanted to first say before I begin with the instructions, where I get to tell you a little bit about what we are going to be doing here, and I wanted to address the fact that when you arrived this morning, there was some baked goods in the jury room. I just want to say that those are not provided by the Court. Those are provided by the attorneys.

JURY PANEL: Thank you.

THE COURT: That's their way of showing their appreciation. We want you to -- I think that the thought is that we want you to be fully engaged and happy, and so --

MR. PURCELL: And it's equal in count. So count the muffins, it's all equal.

THE COURT: So there's no -- just to know -- so the attorneys provided this. Now, I just heard you

Page 5

thank them. You may feel like thanking them again when you see them in the hallways or something. Again, as I'll explain, they're instructed not to talk to you. So if they don't respond, I think that they see by your reaction today your appreciation.

And so now I'm going to begin by talking a little bit about the case, about the process.

You've been sworn in as jurors in this case. I want to impress on you the seriousness and importance of serving on a jury. Trial by jury is a fundamental right in California. The parties have a right to a jury that is selected fairly, that comes to the case without bias, and it will attempt to reach a verdict based on the evidence presented.

Before we begin, I need to explain to you how you must conduct yourselves during this trial. Do not allow anything that happens outside this courtroom to affect your decision.

During the trial, do not talk about this case or the people involved in it with anyone, including your family or persons living in your household, friends or coworkers, spiritual leaders, advisors, or therapists.

You may say you're on a jury and how long the trial may take. That's all. You must not even talk

Page 6

1 about the case with the other jurors until I tell you
 2 it's time for you to decide the case. This prohibition
 3 is not limited to face to face conversation. It also
 4 extends to all electronic communications. Do not use
 5 any electronic device or media such as cell phone,
 6 Smartphones, PDA, computer, the internet, any internet
 7 service, any text or instant messaging service, any
 8 internet chat room, blog, or website including social
 9 networking websites or online diaries to send or
 10 receive any information to or from anyone about this
 11 case or your experience as a juror until after you've
 12 been discharged from your jury duty.

13 During the trial you must not listen to anyone
 14 else talk about the case or the people involved in the
 15 case. You must avoid any contact with the parties, the
 16 lawyers, the witnesses and anyone else who may have a
 17 connection to the case.

18 If anyone tries to talk to you about the case,
 19 tell that person that you cannot discuss it because
 20 you're a juror. If he or she keeps talking to you,
 21 simply walk away and report the incident to the court
 22 attendant as soon as you can.

23 After the trial is over, and I've released you
 24 from jury duty, you may discuss the case with anyone,
 25 but you are not required to do so.

Page 7

1 During the trial, do not read, listen to, or
 2 watch any news reports about this case. I have no
 3 information that there will be news reports concerning
 4 this case.

5 This prohibition extends to the use of the
 6 internet in any way, including reading any blog about
 7 the case or about anyone involved in it. If you
 8 receive any information about this case from any source
 9 outside the courtroom, promptly report it to the court
 10 attendant.

11 It is important that all jurors see and hear
 12 the same evidence at the same time. It also means
 13 don't talk to each other about it. Do not do any
 14 research on your own or as a group. Do not use
 15 dictionaries, the internet, or other reference terms.

16 Do not investigate the case or conduct any
 17 experiments. Do not contact anyone to assist you such
 18 as a family accountant, doctor, or lawyer.

19 Do not visit or view the scene of any event
 20 involved in this case, or use any internet maps or
 21 mapping programs, or any other program or devices to
 22 search for or review any place discussed in the
 23 testimony.

24 If you happen to pass by the scene, do not
 25 stop or investigate. If you do need to review the

Page 8

1 scene during the trial you'll be taken there as a group
 2 under proper supervision. That's not going to be
 3 happening in this case.

4 If you violate any of these prohibitions on
 5 communications and research, including prohibitions on
 6 electronic communication and research, you may be held
 7 in contempt of court or face other actions. That means
 8 that you may have to serve time in jail, pay a fine or
 9 serve other punishment for that violation.

10 It is important that you keep an open mind
 11 throughout this trial. Evidence can only be presented
 12 a piece at a time. Do not form or express an opinion
 13 about this case while the trial is going on. You must
 14 not decide on a verdict until after you've heard all of
 15 the evidence and have discussed it thoroughly with your
 16 fellow jurors during your deliberations.

17 Do not concern yourself with the reasons for
 18 the rulings I will make during the course of the trial.
 19 Do not guess what I may think your verdict should be
 20 from anything I might say or do.

21 When you begin your deliberations, you may
 22 discuss the case only in the jury room and only when
 23 all the jurors are present. You must decide what the
 24 facts are in this case. Do not let bias, sympathy,
 25 prejudice, or public opinion influence your verdict.

Page 9

1 At the end of the trial, I will explain the
 2 law that you must follow to reach your verdict. You
 3 must follow the law as I explain it to you, even if you
 4 do not agree with the law.

5 Now, to assist you in your task as jurors, I
 6 will now explain how the trial will proceed. I will
 7 begin by identifying the parties to the case. Robert
 8 Whalen and Linda Whalen filed this lawsuit. They're
 9 called the plaintiffs. They seek damages from John
 10 Crane, Incorporated, the Goodyear Tire & Rubber
 11 Company, and J.T. Thorpe & Son, Incorporated, who are
 12 called the defendants.

13 First, each side may make an opening
 14 statement, but neither side is required to do so. An
 15 opening statement is not evidence. It is simply an
 16 outline to help you understand what that party expects
 17 the evidence will show.

18 Also, because it's often difficult to give you
 19 the evidence in the order we would prefer, the opening
 20 statement allows you to keep an overview of the case in
 21 mind during the presentation of the evidence. You
 22 cannot use it to make any decisions in the case.

23 Next, the jury will hear the evidence. Robert
 24 Whalen and Linda Whalen will present evidence first.
 25 When Robert Whalen and Linda Whalen have finished, John

<p style="text-align: right;">Page 10</p> <p>1 Crane Incorporated; the Goodyear Tire & Rubber Company; 2 and J.T. Thorpe & Son, Incorporated, will have the 3 opportunity to present evidence.</p> <p>4 Each witness will first be questioned by the 5 side that asked the witness to testify. This is called 6 direct examination. Then the other side is permitted 7 to question the witness. This is called 8 cross-examination.</p> <p>9 Documents or objects referred to during the 10 trial are called exhibits. Exhibits are given a 11 number, or a letter so they may be clearly identified. 12 Exhibits are not evidence until I have admitted them in 13 to evidence.</p> <p>14 During your deliberations you'll be able to 15 look at all exhibits admitted into evidence. There are 16 many rules that govern whether something will be 17 admitted into evidence.</p> <p>18 As one side presents evidence, the other side 19 has the right to object and ask me to decide if the 20 evidence is permitted by the rules. Usually I will 21 decide immediately, but sometimes I may have to hear 22 arguments outside of the presence.</p> <p>23 After the evidence has been presented, I will 24 instruct you on the law that applies to the case, and 25 the attorneys will make closing arguments.</p>	<p style="text-align: right;">Page 12</p> <p>1 accurate.</p> <p>2 At the end of your trial, your notes will be 3 collected and destroyed.</p> <p>4 Now, since there are two plaintiffs in this 5 trial, you should decide the case of each plaintiff 6 separately as if they were a separate lawsuit. Each 7 plaintiff is entitled separate consideration of his or 8 her claims.</p> <p>9 There are three defendants in this case, in 10 this trial. You should decide the case against each 11 defendant separately as if it were a separate lawsuit. 12 Each defendant is entitled to a separate consideration 13 of his or her own defenses. Unless I tell you 14 otherwise, all instructions apply to each plaintiff and 15 defendant.</p> <p>16 Now, a corporation, John Crane, Incorporated; 17 the corporation Goodyear Tire & Rubber company; and the 18 corporation, J.T. Thorpe & Son are parties to this 19 lawsuit. John Crane, Incorporated, the Goodyear Tire & 20 Rubber Company, and J.T. Thorpe & Son, Incorporated, 21 are entitled to the same fair and impartial treatment 22 that you would give to an individual.</p> <p>23 You must decide this case with the same 24 fairness that you would use if you were deciding the 25 case between individuals. When I use words like</p>
<p style="text-align: right;">Page 11</p> <p>1 What the parties say in closing argument is 2 not evidence. The arguments are offered to help you 3 understand the evidence and how the law applies to it. 4 And you have been given notebooks and may take notes 5 during the trial. Do not take the notebooks out of the 6 courtroom or the jury room at any time during the 7 trial. You may take your notes into the jury room 8 during deliberation. Leave them out here.</p> <p>9 You should use your notes only to remind 10 yourself of what happened during the trial. Do not let 11 your note-taking interfere with your ability to listen 12 carefully to all the testimony, and to watch the 13 witnesses as they testify.</p> <p>14 Nor should you allow your impression of a 15 witness or other evidence be influenced by whether or 16 not other jurors are taking notes. Your independent 17 recollection of the evidence should govern your 18 verdict, and you should not allow yourself to be 19 influenced by the notes of other jurors, if those notes 20 differ from what you remember.</p> <p>21 The court reporter is making a record of 22 everything that is said. If during the deliberations 23 you have a question about what the witness said, you 24 should ask the court reporter's record be read to you. 25 You must accept the court reporter's record as</p>	<p style="text-align: right;">Page 13</p> <p>1 "person" or "he" or "she," in these instructions to 2 refer to a party, those instructions also apply to John 3 Crane, Incorporated; the Goodyear Tire & Rubber 4 Company; and J.T. Thorpe & Son, Incorporated.</p> <p>5 You must not consider whether any of the 6 parties in this case have insurance. Presence or 7 absence of insurance is totally irrelevant. You must 8 decide this case based only on the law and the 9 evidence.</p> <p>10 You must decide what the facts are in this 11 case only from the evidence you see or hear during the 12 trial. Sworn testimony, documents, or anything else 13 may be admitted into evidence. You may not consider as 14 evidence, anything that you see or hear when the court 15 is not in session, even something done or said by one 16 of the parties, attorneys, or witnesses.</p> <p>17 What the attorneys say during the trial is not 18 evidence. In their opening statements and closing 19 arguments, the attorneys will talk to you about the law 20 and the evidence. What the lawyers say may help you to 21 understand the law and the evidence, but their 22 statements and arguments are not evidence. The 23 attorneys' questions are not evidence. Only the 24 witnesses' answers are evidence.</p> <p>25 You should not think that something is true</p>

<p style="text-align: right;">Page 14</p> <p>1 just because an attorney's questions suggested it's 2 true.</p> <p>3 However, the attorneys for both sides can 4 agree that certain facts are true. This agreement is 5 called a stipulation. No other proof is needed, and 6 you must accept those facts as true in this trial. 7 I'll tell you what has been stipulated to.</p> <p>8 Each side has the right to object to evidence 9 offered by the other side. If I do not agree with the 10 objection, I will say that it is overruled. If I 11 overrule an objection, the witness will answer and you 12 may consider the evidence. If I agree with the 13 objection, I will say it's sustained. If I sustain an 14 objection, you must ignore the question.</p> <p>15 If the witness did not answer, you must not 16 guess what he or she might have said or why I sustained 17 the objection. If the witness has already answered, 18 you must ignore the answer.</p> <p>19 An attorney may make a motion to strike 20 testimony that you have heard. If I grant the motion, 21 you must totally disregard that testimony. You must 22 treat it as though it did not exist.</p> <p>23 A witness is a person who has knowledge 24 related to this case. You'll have to decide whether 25 you believe each witness and how important each</p>	<p style="text-align: right;">Page 16</p> <p>1 You may consider these differences, but do not 2 decide that testimony is untrue simply because it 3 differs from other testimony.</p> <p>4 However, if you decide a witness has 5 deliberately testified untruthfully about something 6 important, you may choose not to believe anything that 7 witness said.</p> <p>8 On the other hand, if you think the witness 9 testified untruthfully about some things, but told the 10 truth about others, you may accept the part you think 11 is true and ignore the rest.</p> <p>12 Do not make any decisions simply because there 13 were more witnesses on one side than on the other. If 14 you believe it's true, the testimony of a single 15 witness is enough to prove a fact.</p> <p>16 Now, to the alternate jurors. You're bound by 17 the same rules that govern the conduct of jurors who 18 are sitting on the panel. You'll observe the same 19 trial and should pay attention to all my instructions 20 just as if you were sitting on a panel.</p> <p>21 Sometimes a juror needs to be excused during a 22 trial for illness or for some other reason. If that 23 happens an alternate will be selected to take that 24 juror's place.</p> <p>25 Now, if during the trial, you have a question</p>
<p style="text-align: right;">Page 15</p> <p>1 witness' testimony is to the case. You may believe 2 all, part or none of a witness's testimony.</p> <p>3 In deciding whether to believe a witness's 4 testimony, you may consider among other factors the 5 following: How well did the witness see, hear, or 6 otherwise sense what he or she described in court.</p> <p>7 How well did the witness remember and describe 8 what happened?</p> <p>9 How did the witness look, act and speak while 10 testifying.</p> <p>11 Did the witness have any reason to say 12 something that was not true? For example, did the 13 witness show any bias or prejudice or a personal 14 relationship with any of the parties involved in this 15 case, or have a personal stake in how this case is 16 decided?</p> <p>17 What was the witness' attitude towards this 18 case or about giving testimony.</p> <p>19 Sometimes a witness may say something that is 20 not consistent with something else he or she said. 21 Sometimes different witnesses will give different 22 versions of what happened. People often forget things 23 or make mistakes on what they remember. Also, two 24 people may see the same event but remember it 25 differently.</p>	<p style="text-align: right;">Page 17</p> <p>1 that you believe should be asked of a witness, you may 2 write out the question and send it to me through my 3 courtroom staff.</p> <p>4 I will share your question with the attorneys 5 and decide whether it may be asked. Do not feel 6 disappointed if your question is not asked. Your 7 question may not be asked for a variety of reasons.</p> <p>8 For example, the question may call for an 9 answer that is not allowed for legal reasons. Also, 10 you should not try to guess the reason why a question 11 is not asked or speculate about what the answer might 12 have been.</p> <p>13 Because the decision whether to allow the 14 question is mine alone, do not hold it against any of 15 the attorneys or their clients if your question is not 16 asked.</p> <p>17 Remember that you are not an advocate for one 18 side or the other. Each of you is an impartial judge 19 of the facts. Your question should be posed in as 20 neutral a fashion as possible. Do not discuss any 21 question asked by any juror with any other juror until 22 after deliberations begin.</p> <p>23 I'm going to add just one more thing, which is 24 that I may reword the question to make it, for example, 25 more neutral, or I may combine several questions that</p>

<p style="text-align: right;">Page 18</p> <p>1 different jurors may have about the same topic. Or it 2 may suggest something that may need a broader 3 explanation.</p> <p>4 Now, each of us has biases about -- about, or 5 certain perceptions or stereotypes about other people. 6 We may be aware of some of our biases, although we may 7 not share them with others. We may not be fully aware 8 of some of our other biases.</p> <p>9 Our biases often affect how we act favorably 10 or unfavorably towards someone. Biases can affect our 11 thoughts, how we remember, what we see and hear, whom 12 we believe or disbelieve, and how we make important 13 decisions.</p> <p>14 As jurors, you're being asked to make very 15 important decisions in this case. You must not let 16 bias, prejudice, or public opinion influence your 17 decision. You must not be biased in favor of or 18 against any party or witness because of his or her 19 disability, gender, race, religion, ethnicity, sexual 20 orientation, gender identity, gender expression, age, 21 national origin, or socioeconomic status.</p> <p>22 Your verdict must be based solely on the 23 evidence presented. You must carefully evaluate the 24 evidence and resist any urge to reach a verdict that is 25 influenced by bias for or against any party or witness.</p>	<p style="text-align: right;">Page 20</p> <p>1 that have consequences to the parties. Those decisions 2 must be based only on the evidence that you hear in the 3 courtroom. The evidence as presented in this court can 4 be tested. It can be shown to be right or wrong by 5 either side. It can be questioned, and it can be 6 contradicted by other evidence.</p> <p>7 What you might read or hear on your own could 8 easily be wrong, out of date, or inapplicable to this 9 case. The parties can receive a fair trial only if the 10 facts or information on which you base your decisions 11 are presented to you as a group, with each juror having 12 the same opportunity to see, hear, and evaluate the 13 evidence.</p> <p>14 Also, a trial is a public process, depends on 15 disclosure in the courtroom of facts and evidence. 16 Using information gathered in secret by one or more 17 jurors undermines the public process and violates the 18 rights of the parties.</p> <p>19 Now, I'm going to talk to you briefly about 20 evidence.</p> <p>21 A party must persuade you by the evidence 22 presented in court that what he or she is required to 23 prove is more likely to be true than not true. This is 24 referred to as the burden of proof.</p> <p>25 After laying all the evidence you decide --</p>
<p style="text-align: right;">Page 19</p> <p>1 And I want to just add to that "or attorney." 2 Now, from time to time during the trial, it 3 may become necessary for me to talk with the attorneys 4 out of the hearing of the jury, either by having a 5 conference at the bench when the jury is present in the 6 courtroom, or by calling a recess to discuss matters 7 outside your presence. Or I may go back to chambers 8 with the attorneys and talk to them back there.</p> <p>9 The purpose of these conferences is not to 10 keep relevant information from you, but to decide how 11 certain evidence is to be treated under the rules of 12 evidence.</p> <p>13 Do not be concerned about our discussions or 14 try to guess what is being said. I may not always 15 grant an attorney's request for a conference. Do not 16 consider my granting or denying a request for 17 conference as any indication of my opinion of the case 18 or my view of the evidence.</p> <p>19 I know that many of us are used to 20 communicating and perhaps even learning by electronic 21 communication and research. However, there are good 22 reasons why you must not electronically communicate or 23 do research on anything having to do with this trial or 24 these parties.</p> <p>25 In court, jurors must make important decisions</p>	<p style="text-align: right;">Page 21</p> <p>1 you cannot decide if something is more likely to be 2 true than not true, you must conclude that the party 3 did not prove it.</p> <p>4 You should consider all the evidence no matter 5 which will party produced the evidence.</p> <p>6 In criminal trials, the prosecution must prove 7 the defendant is guilty beyond a reasonable doubt. But 8 in civil trials such as this one, the party that is 9 required to prove something need prove only that it is 10 more likely to be true than not true.</p> <p>11 Evidence can come in many forms. It can be 12 testimony about what someone saw or heard or smelled. 13 It can be an exhibit admitted into evidence. It can be 14 someone's opinion. Direct evidence can prove a fact by 15 itself. For example, if a witness testifies that she 16 saw a jet plane flying across the sky, that testimony 17 is direct evidence that a plane flew across the sky.</p> <p>18 Some evidence proves a fact indirectly. For 19 example, a witness testifies that he saw only the white 20 trail that jet planes often leave. This indirect 21 evidence is sometimes referred to as circumstantial 22 evidence.</p> <p>23 In either instance the witness' testimony is 24 evidence that a jet plane flew across the sky. As far 25 as the law is concerned, it makes no difference whether</p>

Page 22

1 evidence is direct or indirect. You may have choose to
 2 believe or disbelieve either kind.
 3 Whether it is direct or indirect, you should
 4 give every piece of evidence whatever weight you think
 5 it deserves.
 6 During the trial you will hear testimony from
 7 expert witnesses. The law allows an expert to state
 8 opinions about matters in his or her field of
 9 expertise, even if he or she has not witnessed any of
 10 the events involved in the trial.
 11 You do not have to accept an expert's opinion.
 12 As with any other witness, it's up to you to decide
 13 whether you believe the expert's testimony and choose
 14 to use it as a basis for your decision.
 15 You may believe all, part, or none of an
 16 expert's testimony. In deciding whether to believe an
 17 expert's testimony, you should consider the expert's
 18 training and experience, the facts that the expert
 19 relied on, and the reason for the expert's opinion.
 20 Now, the law allows expert witnesses to be
 21 asked questions that are based on assumed facts. These
 22 are sometimes called hypothetical questions. In
 23 determining the weight to give an expert's opinion
 24 that's based on the assumed facts, you should consider
 25 whether the assumed facts are true.

Page 23

1 Now, if the expert witnesses disagree with one
 2 another, you should weigh each opinion against the
 3 others. You should examine the reasons given for each
 4 opinion and the facts of the matters each witness
 5 relied on. You may also compare the experts'
 6 qualifications.
 7 Now, a witness who is not testifying as an
 8 expert may give an opinion during the trial. You may,
 9 but are not required to accept that opinion. You may
 10 give the opinion whatever weight you think is
 11 appropriate.
 12 Consider the extent of the witness's
 13 opportunity to perceive the matters on which the
 14 opinion is based, the reason the witness gave for an
 15 opinion, and the facts or evidence on which the witness
 16 relied in forming that opinion.
 17 You must decide whether information on which
 18 the witness relied was true and accurate. You may
 19 disregard any part or all of an opinion that you find
 20 unbelievable, unreasonable, or unsupported by the
 21 evidence.
 22 Okay. So just to let you know, also, at the
 23 end, as I said, I'm going to be giving you -- I'm going
 24 to be giving you instructions about the law, and at
 25 that time, just so you know, you will be receiving a

Page 24

1 copy of that to take in with you during deliberations.
 2 So you don't have to have everything memorized in that
 3 way.
 4 Now, as I said, I was going to instruct you on
 5 the law and how the trial proceeds, and then I'm going
 6 to invite the parties to make an opening statement.
 7 They may choose to either make it now -- to make the
 8 opening statement now or the defendants may choose to
 9 defer their opening statement if they wish to make one.
 10 So at this point I'm going to ask the
 11 plaintiff, are you going to make an opening statement
 12 in this case?
 13 MR. PURCELL: Yes, we are, Your Honor.
 14 THE COURT: Okay.
 15 MR. PURCELL: Proceed?
 16 THE COURT: You may proceed.
 17 MR. PURCELL: May it please the Court, the
 18 court staff, Madam Reporter, Ms. Alesio, my colleague,
 19 guests, defense counsel, my colleagues, good morning.
 20 We have quite a bit of information to share
 21 with you this morning. And if I do my job correctly,
 22 at the conclusion of our opening remarks today, I
 23 believe you will have a very good overview of what this
 24 case is about specific to the plaintiffs and specific
 25 to each of the three companies involved in the trial.

Page 25

1 That's the idea.
 2 Some people analogize it to looking at the
 3 picture on the cover of a puzzle box, and all the
 4 pieces are in the box.
 5 The evidence is all the pieces. And we'll
 6 start showing you those on Monday when we have our
 7 first witness. Today it's all about what the over all
 8 picture is. And it's going to be my privilege to go
 9 first and try and orient you folks to what this case is
 10 all about and what has led us here.
 11 You'll come to realize and know very soon that
 12 it's coming up on about a year ago, November of 2013,
 13 that a fellow named Robert Whalen and his wife Linda
 14 Whalen received some of the most impacting and
 15 troublesome news that a person can receive.
 16 It's in that time period after a lot of effort
 17 by his treating doctors that they resigned themselves
 18 to the notion that he had this particular disease
 19 called epithelioid pleural mesothelioma. And I assure
 20 you folks by the time we are done with the evidence,
 21 you folks will know that backwards and forwards, even
 22 though it may seem foreign to you now.
 23 The reason that is such a terrible thing in
 24 terms of a diagnosis is because it is one of the few
 25 remaining things in medicine that doctors are flummoxed

<p style="text-align: right;">Page 26</p> <p>1 by, and they don't have anything they can really do to 2 help you. It's not curable.</p> <p>3 All of the methods that sometimes have good 4 outcomes with other kinds of cases don't help.</p> <p>5 It's basically a death sentence, and most 6 people endure it for about 12 to 18 months after 7 receiving the diagnosis. And you can do the math to 8 know where Mr. Whalen is on that right now.</p> <p>9 We had hoped that he would be well enough to 10 be here live to travel, but it turns out I don't think 11 that's going to be the case. Although somewhat his 12 health is day to day, we expect to show you all of his 13 testimony through videotape, because that was preserved 14 many months ago in anticipation that he wouldn't be 15 well enough to be here.</p> <p>16 So what do we need to know in our 17 investigation about what brought that on? What 18 happened here? Well, to understand that, we've been 19 investigating it for quite a while, and we have a lot 20 of information. And the bottom line is, unfortunately, 21 for Mr. and Mrs. Whalen, this is a classic circumstance 22 that has happened numerous times to individuals like 23 Mr. Whalen who long ago in their past had occasion to 24 be around and exposed to products that contained this 25 mineral called asbestos.</p>	<p style="text-align: right;">Page 28</p> <p>1 you're going to enjoy this trial. These attorneys 2 have -- this isn't their first rodeo, and it's not my 3 first rodeo. If we're doing anything right, it's 4 probably because prior jurors have told us listen, you 5 need to do more here and less there, talk about this, 6 don't do that. And I think you're going to be the 7 beneficiaries of some very interesting testimony and 8 arguments by counsel in this case.</p> <p>9 So I don't think it's going to be boring and a 10 drudgery, and I invite you to be very engaging because 11 nothing gets past juries, and that's the privilege of 12 jury trials. There's nothing that one or more of you 13 folks aren't going to observe and some nuance, what did 14 that witness say, how does that stack up with the 15 science, what does the literature show, what is he 16 arguing, what are they presenting, how does it all come 17 together, and that's really the beauty of this jury 18 system.</p> <p>19 But at the end of the day, the bottom line is 20 what this trial is about is percentages of an enormous 21 loss. That's really the sum total of what this trial 22 is about and what the evidence is going to be about. 23 And let me be real clear here. To their credit, no one 24 is going to debate the damages in this case much. They 25 all well-appreciate and respect what this disease</p>
<p style="text-align: right;">Page 27</p> <p>1 You will find out that one of the reasons 2 there's such a buzz about mesothelioma in medicine and 3 in law is because it's one of the few malignancies that 4 is basically a one-cause malignancy in human beings.</p> <p>5 So, for example, we've heard about you can 6 smoke cigarettes and you can get lung cancer, but there 7 are other things that can contribute and cause lung 8 cancer, in addition to the most prominent cause being a 9 history of smoking. That's very different.</p> <p>10 When you find mesothelioma, the doctors begin 11 to look back in your past even if you can't really 12 remember an opportunity for an exposure to this dust to 13 look for it and find it, because they know that it must 14 be in your past. It is something that is well-known to 15 cause this unique cancer, which you'll learn all about 16 in this case, and we'll talk about in a moment. It's a 17 one-cause malignancy in humans.</p> <p>18 And so that creates a lot of interesting 19 questions to go back in time and determine what 20 happened in any given individual and that's what our 21 investigation has been all about and what has led us to 22 be here today, and now, this is our opportunity to 23 share with you what our investigation has shown 24 specific to Mr. and Mrs. Whalen.</p> <p>25 And it may not seem now like it, but I think</p>	<p style="text-align: right;">Page 29</p> <p>1 means, what it is, and what it's like to go through it. 2 And we'll present all that evidence to you. I'm not 3 going to go through it much today, specific to Mr. and 4 Mrs. Whalen, because it is largely if not entirely 5 agreed to and not a dispute. It is what it is, and you 6 folks will we evaluate it when we get to that point.</p> <p>7 They do dispute that they contributed at any 8 percentage in bringing about this disease in 9 Mr. Whalen. And let me make clear that the evidence is 10 going to show you that they did contribute causally 11 through their products that contained asbestos, but 12 they did not themselves 100 percent any of them cause 13 this outcome. They contributed a percentage.</p> <p>14 And as the judge mentioned in burdens of 15 proof, the way the law works, it's up to them to prove 16 up what that percentage is. And I will say to you as 17 they prove it, as we help them prove it, we will give 18 you as comprehensive, a history of all source points of 19 exposure suffered by Mr. Whalen that has an aggregate 20 dose contributed to this horrible outcome. As that 21 includes these defendants products.</p> <p>22 But I am here to tell you today, and I will 23 tell you in my summation at the conclusion of evidence, 24 they are not the majority responsible parties. To find 25 that any of them to be 100 percent involved in this</p>

<p style="text-align: right;">Page 30</p> <p>1 would be as unsupported in the evidence as to find them 2 to be zero. And it's somewhere between zero and a 3 hundred. And once we prove they were a contributing 4 cofactor and cause, as we will, they will then argue to 5 you what that percentage should be down from a hundred. 6 And I'm here to tell you it should be very much down 7 from a hundred. It's much closer to zero than it is a 8 hundred, I think the evidence will show you, and that's 9 because Mr. Whalen, given his history in the Navy and 10 what you're going to learn about what he did as is 11 often the case. He was exposed to many 12 asbestos-containing products, some of which belonged to 13 these defendants, many of which do not.</p> <p>14 But what you'll learn about carcinogenesis and 15 malignant mesothelioma in particular, is that these are 16 dose response diseases, that all you can say about 17 someone who gets the clinical disease ultimately is 18 that it's the aggregate dose sufficiently long enough 19 ago for the fundamental carcinogenesis and biology to 20 obtain that produced that outcome in him, not 21 necessarily anyone else. His fellow shipmates, the 22 people were exposed the same air and asbestos he was, 23 most of them will never get clinical disease, but he 24 did.</p> <p>25 And you'll learn about how in terms of the</p>	<p style="text-align: right;">Page 32</p> <p>1 And Robert was born on February 3rd, 1945. In 2 fact, he was born on 2-3-4-5, for us who pay attention 3 to those things. He went to high school, had some odd 4 jobs at a creamery and a farm, and he joined the Navy 5 after high school in 1964 and began his basic training 6 and served in the Navy, in a variety of circumstances 7 you'll hear about, all the way through 1990. At which 8 point dishonorably discharged out of the Navy.</p> <p>9 He went into city management. He was the city 10 manager of a powerhouse in this place where they 11 settled in Nebraska, city of Ord, O-R-D. And that's 12 where he and Linda were living doing just fine, thank 13 you, and, in fact, he continued to work even after his 14 diagnosis of this terrible circumstance in the latter 15 part of 2013. They're the plaintiffs, husband and 16 wife.</p> <p>17 The defendants are three at the present time, 18 and I've listed them alphabetically. There's no 19 particular order. Everyone knows of the Goodyear Tire 20 & Rubber Company. They were founded way back in 1898. 21 Obviously they don't make just tires and rubber 22 products. You'll hear about what they also make.</p> <p>23 And largely this case is about a line of 24 gasketing material that they made, and you'll learn 25 about what is something called Goodyearite and Cranite,</p>
<p style="text-align: right;">Page 31</p> <p>1 physiology and biology and epidemiology and pathology. 2 We are all very much alike but we are all very 3 different. And what we know about Robert Whalen, 4 unfortunately, is that he's a responder with clinical 5 mesothelioma to exposures to asbestos. And if you 6 contributed to that aggregate dose, as we will show you 7 these defendants did, you've contributed to the outcome 8 in connection with and along with all the other source 9 points of exposure to asbestos, none of which are the 10 responsibility of these defendants.</p> <p>11 And that percentage belongs away from them, 12 but their accountability is what this trial is about is 13 the appropriate percentage that's left of this enormous 14 loss that belongs with them and their products.</p> <p>15 And that's what this case is about in summary.</p> <p>16 If I were you folks, I would want somebody to 17 start from the beginning, and I would want to be very 18 clear about whose who and what's what. And I hope 19 these charts today will give you some of that concrete 20 orientation. And let me get started so we can tell you 21 what the evidence is going to show.</p> <p>22 I'd like to start with this part. The 23 plaintiffs identified is Robert Whalen and his wife 24 Linda. They've been together for decades, married, 25 happily, happily, you'll hear about them.</p>	<p style="text-align: right;">Page 33</p> <p>1 which if you were all plumbers and pipefitters and 2 machinist mates in the Navy you would know as a bread 3 and butter term. That's the stuff that you put between 4 metal and cinch down with bolts so that whatever is 5 flowing through the pipes isn't going to leak at the 6 junction point of these two pipes, the flanges. 7 Basically that's what it is.</p> <p>8 There's different sizes, it comes sometimes 9 pre cut. Oftentimes it comes in big sheets, so that as 10 you'll hear from Mr. Whalen, you can actually take and 11 put a stencil or some pattern on it and take snips, cut 12 it up, move it around, fix the bolt holes, drill 13 through it, and make it fit exactly where you need the 14 two flanges to come together.</p> <p>15 You'll have a chance to see this better, but 16 here's a picture of a sheet of that material, Cranite, 17 as an example. It comes in rolls. You might be 18 familiar with washers in your garden hose, same kind of 19 thing on a small scale. You basically squish it so 20 that it fills all the voids so the high pressure steam 21 or water or some other material doesn't leak.</p> <p>22 And sometimes that needs to be repaired, 23 sometimes there's not a good seal. And as a machinist 24 mate and someone that's an inspector like Mr. Whalen 25 was aboard these vessels you'll hear about in the Navy,</p>

<p style="text-align: right;">Page 34</p> <p>1 that was his job. Something leaking, they got to get 2 in there, wrench on it, tighten it down if they can, 3 torque it. If they can't, isolate it, pull it off, 4 pull it out, take the old gaskets out, put the new ones 5 in, fit it, put it back, fix it. That's basically what 6 he did a lot of.</p> <p>7 Next defendant I've listed here is J.T. Thorpe 8 & Son, Inc., founded in 1922. Nothing to do with 9 gaskets. Their involvement was as a contractor, they 10 would help insulate systems that used steam or other 11 kinds of materials.</p> <p>12 So, for example, if you have a boiler, 13 something making steam, and you needed to travel 14 through pipes to turn something or heat another area, 15 that pipe, if you just left it metal, would lose a lot 16 of energy. It would be very inefficient. And after 17 putting all this energy in at the boiler, you don't 18 want to be just losing energy like that. You want that 19 energy and heat to stay in the pipe until it gets to 20 its working locations.</p> <p>21 And the way you accomplish that is you hire 22 insulators, the type of trade that J.T. Thorpe & Son 23 was, and they were very good at it, probably the best 24 one could imagine, to come and insulate your pipes. 25 That means go around elbows, go around flanges, make</p>	<p style="text-align: right;">Page 36</p> <p>1 packing. The packing is used predominantly in pumps or 2 valves, something with a shaft so that if you've got a 3 pump that's turning a shaft, a motor, where that shaft 4 is turning, at some point, it's got to go into 5 something that's liquid or steam or some something 6 that's moving through a pipe. And where it goes 7 through, if you just have it metal to metal, it will 8 leak, whatever is in the system.</p> <p>9 Packing is something you wrap around that 10 moving shaft, and you cinch it down with enough to 11 expand it to fill all the little voids so that that 12 shaft can turn and there's no leak. And then as it 13 wears, sometimes you've got to go wrench on that valve, 14 that nut, cinch it up a little bit tighter, and it 15 stops the leak.</p> <p>16 At some point it's so burnt out it doesn't 17 help, you've turned the nut as far as you can, and 18 you've got to bite the bullet, isolate the pump, take 19 it offline, undue everything, pull out that old beat 20 cooked packing, which is basically at that point just 21 asbestos that's left in, because all the nonasbestos 22 materials are cooked out.</p> <p>23 Pull it out, blow it out, clean it out, cut 24 you off some new packing, wrap it back around the 25 stand, put the nut back down, now the pump is ready to</p>
<p style="text-align: right;">Page 35</p> <p>1 corners, follow the pipe, and you apply this material 2 loosely called lagging, was the slang for it. 3 Sometimes the trades who were called insulators were 4 nicknamed ladders, and those were the guys who would 5 come in. And it's really quite an art form, this 6 insulation would quickly come in three-foot sections, 7 it could be in different thicknesses. You'll see some 8 examples I think they've got it, and they'll show you. 9 It's asbestos-free so don't be concerned.</p> <p>10 It's preformed half round, and you put it 11 around a pipe and wire it on, and then you fix it with 12 some mud and then you put some asbestos cloth over it, 13 put mud over that, and when it was done, it just looked 14 like a very smooth, not jagged, very smooth fatter pipe 15 that's painted on ships and things of that sort. And 16 it's performing the function of insulation. And the 17 people who did that work were J.T. Thorpe & Son.</p> <p>18 And then I've listed John Crane, Incorporated, 19 founded in 1917. They are a company that specializes 20 in sealants. They used to be known as the Crane & 21 Packing Company years ago, and I mentioned they had a 22 few other names, but right now they're known as the 23 John Crane, Incorporated, Company.</p> <p>24 They make, in addition to gasket material, 25 they also make something involved in this case called</p>	<p style="text-align: right;">Page 37</p> <p>1 work, put it back online.</p> <p>2 Same thing with valves. If you've got a valve 3 that you want to open or shut, where that shaft goes 4 into the globe or whatever is in the pipe that's 5 manipulating the material, you've got to have something 6 in there that would keep it from leaking, like high 7 pressure steam or water, and that's what packing can be 8 put in a valve.</p> <p>9 Here's an example of a spool of that packing, 10 it's in an airtight container, and you'll see -- this 11 happens to be John Crane packing, Crane Packing 12 Company. It's of a particular thickness, of a 13 particular shape. There's all types of varieties that 14 are specified for certain pumps. It comes on spools, 15 and tradesmen would come and get this material when 16 they needed to repack a valve, pull off the length they 17 need, cut it, wrap it around the shaft, tighten down 18 the nut, and compress this material.</p> <p>19 And when this material needs to be changed 20 out, about the only thing left in it is the asbestos 21 component part as packing, a valve and pump packing.</p> <p>22 By the way, this is a picture of the actual 23 object of a roll of Cranite gasket material that you'll 24 hear a lot more about. This is sort of the material 25 you'd commonly see around the shop. Fellows used this</p>

<p style="text-align: right;">Page 38</p> <p>1 literally like bread and butter. It's just around for 2 everything. You cut it, you shape it, you put it 3 between pipes, and it helps seal materials. 4 And those are the companies involved, ladies 5 and gentlemen. 6 So let's talk about asbestos and introduce you 7 to what that is, because mainly what we're going to be 8 talking about in this trial is asbestos, and we need to 9 learn about breathing in anatomy, we need to learn 10 about cancer. So let me introduce to you what the 11 evidence is going to show about those things. 12 First of all, I've mentioned asbestos. What 13 is asbestos? You will learn it's a mineral that grows 14 in the ground in veins that is mined, crushed, 15 processed. Think of wheat turned into flour, and bags 16 of flour that can be then used to make cakes and 17 cupcakes or croissants and muffins. That -- the flour 18 looks very different than the wheat. That's kind of 19 the difference between raw asbestos in the ground and 20 bags of it that's ready to be incorporated as an 21 ingredient into valve packing, pump packing, sheet 22 gaskets, pipe insulation. And that's the nature of 23 this raw material asbestos. 24 You'll get a chance to look at it in many 25 forms. This is a sealed vile of a chunk of asbestos</p>	<p style="text-align: right;">Page 40</p> <p>1 under some magnification, is a typical curlycue type 2 fiber. It forms in curves as it was explained to me. 3 That's literally where serpentine comes from, serpent. 4 You imagine the people who are mineralogists. 5 Anyway, serpentine is this material. And the 6 type of asbestos has a name that you'll hear a lot 7 about called chrysotile. All chrysotile asbestos is 8 the serpentine family of asbestos. And it's the 9 curlycue type. If you had a pile of it that was 10 processed and ready to be put in to a product, in your 11 hands, that pile of it would generally appear to be 12 whitish in general color, the power of it. 13 The other types are amphiboles. And what 14 differentiates them is they have a little bit different 15 chemical composition, but they're still all asbestos. 16 The two major types of the amphiboles are something 17 called amosite and another form called crocidolite. 18 And then there are various minor other forms, 19 anthophyllites, other -ites, but they did not ever 20 appear large enough in quantities in nature to make it 21 economically sensible to mine it and process it and 22 make it availability to product manufacturers as an 23 ingredient for products. 24 So mainly there's three types of asbestos used 25 in most all products used around the world, and that</p>
<p style="text-align: right;">Page 39</p> <p>1 that you'll have a chance, I hope, it's in evidence, to 2 look at and examine closely. You can see I'm clinking 3 it against the glass because it's fuzzy looking, it's a 4 bunch of individual fibers. Think of hard spaghetti 5 out of the package that you haven't boiled yet, hold it 6 together, bunch the individual pieces of spaghetti, but 7 it's hard, it's like a rock. 8 Now, this is an enormous amount of asbestos. 9 You would never see this in a product. But this is 10 what it looks like in the ground. 11 And here's a picture of it in a medical book, 12 and I apologize for the glare. We've been trying to 13 figure out a way to get that to go away, but we'll get 14 that worked out. And you'll see, this is a large chunk 15 of asbestos. It's a fuzzy rock. Here's the fibers as 16 they grew in the ground, the fuzzy ends. That's the 17 kind of raw material crushed and put in bags and then 18 is available for use in products like gaskets and 19 packing and pipe insulation. 20 A little mineralogy to introduce you to this 21 topic of asbestos. There's two basic families of 22 asbestos which you'll hear about. One is called a 23 serpentine family, and the other is called the 24 amphibole family of asbestos. 25 Serpentine asbestos, if do you looked at it</p>	<p style="text-align: right;">Page 41</p> <p>1 being the chrysotile, amosite, and crocidolite variety. 2 Amosite, under a certain level of 3 magnification, unlike the serpentine type, would appear 4 more straight and splinter like, not curlycued. So it 5 would be the case with crocidolite; although, it has a 6 tendency to be a little thinner in diameter. Now, 7 we're talking about invisible microscopic fibers, but 8 that's one of the orientation differences between 9 crocidolite and amosite as amphiboles. 10 If you had a pile of amosite processed in your 11 hand ready to put into a product, this would have a 12 tendency to be sort of a brown or tan or gray looking 13 colored asbestos contrasted from the white. 14 Crocidolite, which largely comes from South 15 Africa, would be more of a blue. Sometimes it's 16 referred to as blue asbestos, and it's the rarest of 17 the type of asbestos. It has a little bit different 18 chemical qualities. It's a little more expensive 19 coming from South Africa. It's not as available as the 20 chrysotile which predominantly comes from Canada here 21 in North America. It wasn't used as prevalently as the 22 other forms. 23 And in terms of the types of asbestos you'll 24 find in products, depending on who you ask, somewhere 25 between 90 to 95 percent of all asbestos used in</p>

<p style="text-align: right;">Page 42</p> <p>1 products including that in packings and gaskets and 2 pipe insulation, this is the chrysotile variety.</p> <p>3 One type of a trace element amphibole may come 4 up in this case, and that's a form of asbestos called 5 tremolite. And the reason that may come up is, even 6 though it is mineralogically an amphibole, it is 7 oftentimes formed in the ground in the same vein that's 8 predominantly chrysotile. That's true largely from the 9 chrysotile that comes from Canada as your supplier. 10 And so if you don't take steps to take out the 11 tremolite, your processed chrysotile as a raw 12 ingredient will have a contamination of tremolite in 13 it. It will be both, some tremolite, mainly 14 chrysotile. And that's sometimes very often found in 15 conjunction with chrysotile.</p> <p>16 So that's the basic introduction of what 17 asbestos is. It's important to summarize what the 18 evidence is going to show you about some details about 19 asbestos.</p> <p>20 This is a picture of an example of one of 21 those fiber bundles under the microscope. You'll see 22 plenty of this. You'll see how they're all individual 23 pieces. They can break off like pieces of hard 24 spaghetti. It's still spaghetti but it's smaller. 25 That symbol in the corner, 37, that's the symbol Mu in</p>	<p style="text-align: right;">Page 44</p> <p>1 But it shows you that as we go down in 2 magnification, we are talking about fibers that are 3 incredibly small, measured in terms of microns. To 4 further emphasize that, the microscopist in this 5 medical textbook took another picture right below it. 6 Now, there -- you're probably way ahead of me. The 7 structure -- the large structure left to right is a 8 higher magnification of a single human hair. Now, you 9 can really see the scales on the single human hair, 10 much higher in magnification -- and this is supposed to 11 focus by itself, so please focus.</p> <p>12 MR. RICH: We played with it before you 13 started.</p> <p>14 MR. PURCELL: See, you got to watch these 15 guys, okay, watch them.</p> <p>16 MR. RICH: We didn't play with it.</p> <p>17 MR. PURCELL: Let's see if that does it. 18 There we go.</p> <p>19 Now, again, you see huge bundles of chrysotile 20 asbestos. Notice how some of them are curly and 21 they're not straight, the prior was big, big bundles 22 of -- look at that big bundle there of amosite, 23 straight looking. And now you can see huge collections 24 of chrysotile asbestos that have alighted on to this 25 single human hair. Very, very, very small in terms of</p>
<p style="text-align: right;">Page 43</p> <p>1 the Greek alphabet, and that's used by microscopists as 2 a unit of measure in things that are very small.</p> <p>3 So the scale for this particular shot is -- 4 that's 37 microns is the word, a unit of measurement.</p> <p>5 A micron, as it's been told to me, is roughly 6 the equivalent of 1/25 thousandths of a single inch. 7 It's very small. You cannot see things that are 8 hundreds of microns in length. But that gives you some 9 orientation of what asbestos looks like under the 10 microscope. And I like to look at this as an example.</p> <p>11 And if I could get them to move their coffee 12 pot.</p> <p>13 THE CLERK: Mr. Purcell, would you like me to 14 turn down the light?</p> <p>15 MR. PURCELL: Sure. And that's not them 16 trying to hide evidence from you folks.</p> <p>17 This is from a medical textbook and here, to 18 give you an idea of the sheer microscopic size we're 19 talking about, and that's going to be a big part of 20 this case, there's that 44 micron measurement again. 21 This large diagonal structure is a single human hair 22 magnified. You can see the scales on it, and then in 23 comparison, you can see, ladies and gentlemen, what our 24 enormous bundles of asbestos in comparison. You 25 wouldn't find bundles of it this big in any product.</p>	<p style="text-align: right;">Page 45</p> <p>1 its orientation, asbestos.</p> <p>2 If you wanted to see a comparison of the 3 different types, let me direct your attention to one of 4 the reference sources we'll be talking about for 5 mesothelioma. Here's a page that you could just take a 6 look at. You'll see it in much more greater detail, 7 and from a distance you can probably already orient you 8 as to what is the chrysotile, what's the fatter, 9 straighter amosite compared to the thinner, straighter 10 crocidolite, and the other minor form that didn't find 11 its way into the product uses particularly. Again, 12 these are gigantic enormous bundles compared to what is 13 encountered in workplace settings.</p> <p>14 Now, what is it that makes asbestos unique. 15 We'll talk about the medicine in the biology in a 16 moment. But you'll learn that your body had an amazing 17 capacity to deal with impurities, things you breathe 18 and inhale in that don't cause you to have any 19 pathology, any disease. Your body has defense 20 mechanisms to protect the working part of your lungs 21 that exchange air and carbon dioxide in normal 22 respiration.</p> <p>23 Asbestos, however, trumps those defense 24 mechanisms, and that's what makes it so dangerous and 25 what makes it so much the cause of so much disease.</p>

Page 46

1 But, in general, you'll hear about the details
 2 of asbestos that applies to all those types of asbestos
 3 that I went through before I talk about products. As
 4 I've already introduced to you, it's a mineral fiber,
 5 microscopic and invisible. Literally, you can have
 6 millions of asbestos particles in a given quantity of
 7 air, and it is entirely invisible to the naked eye. It
 8 wouldn't be anything that you could see even if there
 9 was a concentrated beam of light. Sometimes if you see
 10 a sunbeam coming through the window, and you're dusting
 11 or you're shaking out a towel, you'll see particles in
 12 the light that flow through it. Or at a movie
 13 projection at a movie. If people still go to movies,
 14 I'm not sure. You see particles float through the
 15 light beam. Those are enormous particles. You would
 16 not see any asbestos that would come through such a
 17 thing typically. It's truly invisible, literally,
 18 millions of particles per cubic foot appear entirely
 19 dust free just like the room air right now.

20 Asbestos, even though it's incredibly small,
 21 is uniquely durable as a fiber. Much more so than
 22 other fibrous things like cellulose or wood fibers.
 23 There are many fibrous things in nature. None of them,
 24 if you'll provide -- if you'll allow me to phrase, as
 25 studly as an asbestos fiber. It's the top of the heap.

Page 47

1 That means -- take an example, tensile strength, the
 2 way scientists measure strength of a fiber. A
 3 microscopic asbestos fiber, the evidence will show you,
 4 has a higher tensile strength than a steel girder used
 5 to construct buildings like this one, beams and
 6 columns. The asbestos is higher, more durable, more
 7 impervious to forces than steel. And yet, these
 8 fibers.

9 Being so small, are nevertheless not very
 10 weighty. They are incredibly aerodynamic. What that
 11 means is that once they get released into the air, they
 12 have a propensity to stay in air.

13 It's been measured, and the evidence will show
 14 you that if you had an asbestos fiber 8 feet off of the
 15 laboratory ground, in absolutely isolated still air,
 16 and by still air I don't mean like in this courtroom.

17 This courtroom would be a blizzard to
 18 scientists. I'm moving around, you folks are
 19 breathing. This thing is generating heat, there's
 20 lights. This would be a whirlwind of air currents to a
 21 scientist.

22 I'm talking about in controlled, still air, it
 23 will take about eight hours for that fiber to settle to
 24 the floor in absolutely still air. It has to do with
 25 some aerodynamic qualities the way air molecules form

Page 48

1 around and bind with the fiber. We'll talk about those
 2 in some level of detail.

3 But that's the fact. Now, you put that into a
 4 work environment that you'll hear about with
 5 Mr. Whalen, like submarines or shops where there's
 6 tradesmen of all kind doing their work, picking up
 7 their tool boxes, picking up materials, cutting, moving
 8 around, literally the turbulence behind a worker who
 9 walks around, and the air currents closing in behind
 10 him or her is enormous energy to resuspend the asbestos
 11 fibers off of any surface. It doesn't even look dusty,
 12 that it has previously managed to settle onto so that
 13 it is resuspended into the workplace air.

14 It doesn't look like you're creating any dust.
 15 Truly, you have no idea what's happening, and yet you
 16 are swimming in an ocean of these fibers and inhaling
 17 them. That's one of the problems presented by asbestos
 18 contamination.

19 If you try to clean it up, you don't take a
 20 broom and a dust pan. You don't take a shop vac. A
 21 shop vac, all you're doing is sucking in the asbestos
 22 and blowing it out the other end, because the filter on
 23 a shop vac will look like a volleyball net with a
 24 pencil flowing through it. It's just reshooting it
 25 out. Even though it doesn't appear to be dusty, that's

Page 49

1 what's actually happening.

2 To clean up an asbestos spill, you have to use
 3 special equipment. The filter system that was -- has
 4 an acronym. It's called a HEPA filter, high efficiency
 5 particulate air, and that's got a filter membrane not
 6 like the volleyball net, but the holes in it are formed
 7 with lasers, so that only air molecules can pass, and
 8 everything that's larger than an air molecule, and it's
 9 a close call with asbestos, would be trapped on the
 10 filter membrane.

11 That's one of the problems with contamination,
 12 that once you have asbestos in the environment, you'll
 13 hear about it on work clothing. If you just clean off
 14 and look like you are broom cleaning yourself to go
 15 home for the day, or off the ship, or back to your
 16 barracks, you're not. You're just kicking all that up
 17 around you. Think of Pigpen in Peanuts. That's just
 18 what's happening with fiber and you don't even know it.

19 It is an incredibly complicated activity to
 20 try and decontaminate overalls or work clothes or
 21 Levi's or Ben Davidson shirts. The asbestos is so
 22 permeating because of its size, it's best to just throw
 23 it away. It is toxic.

24 All of the forms of asbestos are what are
 25 called carcinogens. That's the fancy term that means

<p style="text-align: right;">Page 50</p> <p>1 causes cancer, which we'll talk about in a moment in 2 some detail. That's the serpentine variety as well as 3 the amphiboles, chrysotile, amosite, and crocidolite. 4 And in particular, unfortunately, these fibers 5 cause this unique cancer called mesothelioma. You'll 6 learn that that name derives from the cells, the unique 7 cells that are involved in that cancer. They are 8 called mesothelial cells, and mesothelioma is a cancer 9 of those mesothelial cells, which are not lung cells, 10 they're not from your lung, it's not mothogenic 11 (phonetic), which is an entirely separate organ that 12 I'll orient you to in a moment. 13 And despite having looked for one for many 14 decades, to this day medical science has never 15 established some minimum threshold below which a 16 person's risk for a response like mesothelioma is not 17 increased when you inhale and retain asbestos fibers. 18 One of the things we're going to learn about 19 is most of the countless, literally trillions or even 20 a google, like what it used to mean, a google amount of 21 asbestos, visible in the air you're breathing, when you 22 breathe it in it's not a matter of a single fiber or 23 things like that coming in to you. 24 It's multiple millions and billions with each 25 breath. A great percentage of them are so small you</p>	<p style="text-align: right;">Page 52</p> <p>1 insulation. 2 And by the way, this very same material with 3 the same composition can be bought in square rectangle 4 pieces instead of curved half rounds, and that's 5 helpful to insulate flat bulkheads on ships, walls, 6 things around boilers. It's the exact same material, 7 it's just rectangular instead of curved. 8 The majority of it is nonasbestos containing. 9 It has to be cut, fitted, tied. There's debris around. 10 It's a messy job. But most of what the fellows 11 remember seeing is not the asbestos, because you 12 wouldn't see the asbestos. What you're seeing is the 13 magnesia and the calcium silicate that comprise the 14 majority of it. 15 And the way it works is you need something in 16 a matrix to hold together the magnesia and the calcium 17 silicate. Otherwise the material would fall apart. It 18 literally was an accident. I'm just going to show you 19 how this stuff got invented way, way back in the turn 20 of the last century. 21 Asbestos was often used by a pharmacist years 22 and years ago as a filter media when they're making up 23 batches of medicine. And a pharmacist was making up a 24 batch of milk of magnesia and accidentally spilled the 25 batch that had some asbestos in it onto a plate that</p>
<p style="text-align: right;">Page 51</p> <p>1 breathe them right back out, because they are so much 2 smaller than the airways that they don't even come 3 anywhere near in contact with anything physiologic in 4 your body, yet often many of them do. And those then 5 are what your body has to deal with, and we're going to 6 learn what about that can mean in certain people, and 7 what it does to you when you inhale this material. 8 Suffice it to say that it's important to know 9 that no one has ever established some minimum level 10 that's it's okay to breathe asbestos products. 11 And by the way, this is the last of what I 12 consider the kind of boring part of the whole thing. 13 How long can these people talk about dust. We're going 14 to turn to something a little more interesting soon. 15 This is the last easel pad about that. 16 And let me introduce you to these different 17 kinds of products a little bit more, because you're 18 going to hear quite a bit of evidence about them. I've 19 grouped the thermal insulation in one category. 20 But they're very different products. I talked 21 a minute ago about pipe insulation. Most pipe 22 insulation is about 15 percent asbestos. The other 85 23 percent is not asbestos. It's typically historically 24 magnesia or calcium silicate, a benign other material 25 that comprises the vast majority of the preformed pipe</p>	<p style="text-align: right;">Page 53</p> <p>1 was over a steam radiator in the laboratory. 2 And then he spilled some that didn't have 3 asbestos in it, and he noticed that when he tried to 4 pick up the material that it frothed up because the 5 plate was hot. If it didn't have asbestos in it, it 6 just felt apart, it crumbled, it fell apart. 7 But when he tried to pick up the material that 8 had asbestos in it, it came up in one unit. And the 9 idea was then, wow, if you could then help keep 10 together this insulating material, magnesia, with a 11 matrix of fiber, then you could have benefit as a 12 product to help do the insulation of pipes. And that's 13 how the preformed pipe covering was really invented 14 years and years ago. 15 But it's not a matter of the asbestos being 16 fireproof that does the insulation. Really what it is 17 is it's the air pockets in the matrix held together by 18 asbestos fibers that provide the insulating qualities 19 of the pipe insulation or the block. That's why you 20 don't need a ton of it in there, 12, 15 percent by 21 weight. 22 You would use this thermal insulation on pipes 23 coming off of in two boilers, turbines. You'll learn a 24 lot about propulsion of submarines. Some of them are 25 nuclear, some of them are diesel.</p>

<p style="text-align: right;">Page 54</p> <p>1 What you'll learn in the evidence is that 2 whatever type they are, they basically run the same. 3 You have something that you either burn like diesel or 4 can generate heat from a nuclear core that then is 5 attached to a boiler that heats up water, purified 6 water to a very high pressure and steam that then is 7 transmitted to a turbine, a series of blades that as 8 they go through, transfers the energy to the blades, 9 the turbine is affixed through a shaft to a 10 propellor -- in naval service they call it a screw. 11 And that's what turns, and that's how the 12 submarine or the vessel or the battleship or the 13 destroyer moves through the water. 14 Whether it's nuclear power source or diesel or 15 some other power source, it's basically the same, it's 16 a steam operated system, and it needs this insulation. 17 When you've put this material on a pipe, 18 that's not the end of it, because this material is 19 easily broken apart. The nomenclature for it is called 20 friable. What a friable material, the Environmental 21 Protection Agency means, is a material that's capable 22 of being reduced to dust by hand pressure alone. 23 So, for example, this laminated wood here 24 surface is not friable. I can rub on it, and it's not 25 going to become dust. This pipe insulation, if you</p>	<p style="text-align: right;">Page 56</p> <p>1 And then there are various muds or cements 2 that you would mix up with water, smear in all the 3 cracks, smooth it all out, let it dry, and then you can 4 paint it. And that's the typical final application of 5 these products aboard ships. 6 Mr. Whalen, of course, was around a great deal 7 of this material at various times as you'll learn about 8 when he testifies. 9 I've already talked about what packing is, 10 I've already talked about what gaskets are. They have 11 wide ranges of percentage and types of asbestos that 12 we'll talk about in some detail with people who know. 13 Asbestos was also used in various compounds. 14 Sometimes it was on -- we've heard of popcorn ceilings. 15 You spray in -- for aesthetics, believe it or not, it 16 doesn't provide any acoustic benefit. It's just 17 aesthetics. They didn't want Sheetrock brooms to look 18 like boxes. So they wanted to do something different 19 so they sprayed this cottage-cheese looking material. 20 It had about four to eight percent chrysotile 21 asbestos in it, with polystyrenes and other materials, 22 and the asbestos helped it adhere to the ceiling and 23 make it more compable (phonetic). 24 Tape. There's things called asbestos tape 25 that you can wrap around pipes, things that are</p>
<p style="text-align: right;">Page 55</p> <p>1 rubbed on it or touched it you can break it up into 2 dust, and it's friable product. 3 So to toughen it up, because you would have 4 sailors and others who might come in contact with it, 5 bump up against it, step on it, you would then do other 6 things to complete the insulation or the lagging as 7 I've talked about it. 8 The next thing you would put on top of it is 9 something called a cloth. Sometimes used in welders 10 blankets. And those are a much higher concentration of 11 asbestos. Sometimes as high as 99 percent asbestos. 12 And what those materials look like are just 13 like gunny sacks or burlap sacks that potatoes come in, 14 they're made out of asbestos. Asbestos fiber can be 15 woven into a textile, and bring qualities of rock to 16 the textile, even though it's something that can be 17 woven like with thread. 18 So if you wanted to have a blanket you could 19 put behind a piece of equipment you're welding on so 20 that the sparks and slag could fall on something that 21 wouldn't burn, asbestos cloth is a very good candidate 22 for that type of use. 23 It's also a very tough material you can put 24 around the insulation, sew it on, and that is the next 25 step in completing the lagging.</p>	<p style="text-align: right;">Page 57</p> <p>1 smaller. If you don't want to have to insulate, so 2 they have some insulation going through gauges and 3 valves and such, like you can imagine. 4 Also, asbestos made out of the same cloth 5 would be made into mittens or gloves for industrial 6 use. And there were a couple times that Mr. Whalen 7 remembers using asbestos-containing mittens or gloves 8 to handle hot things as he's doing his work. And then 9 I've got a category of other. 10 Ladies and gentlemen, literally there are 11 thousands of products that were made with asbestos 12 historically in a variety of application. Some floor 13 tiles, some cement pipes. All sorts of things may have 14 found their way that have asbestos, but these are the 15 categories of products that mainly we can document are 16 at some point in the history of Mr. Robert Whalen. 17 Now, I promised that we would turn to 18 something more interesting, and let me turn to that. 19 THE COURT: Is this a good time to take a 20 break? 21 MR. PURCELL: Well, I was going to see, Your 22 Honor, its's as good a time as any. That's fine if 23 that's the -- 24 THE COURT: Why don't we take a ten-minute 25 break then.</p>

<p style="text-align: right;">Page 58</p> <p>1 And just let me please remind you don't 2 discuss the case with anybody. Don't make your mind up 3 about anything. You still have heard no evidence, but 4 it's going well. 5 Okay. So I'll see you guys in ten minutes. 6 (Jury exiting courtroom.) 7 (Break taken.) 8 THE COURT: Let's bring back the jury. 9 (Whereupon, the jury having entered the 10 courtroom, the following proceedings were 11 had:) 12 THE COURT: Counsel you may proceed. 13 MR. PURCELL: Thank you, Your Honor. 14 THE COURT: Or resume. 15 MR. PURCELL: Sure. 16 Before we turn to the more interesting, I 17 believe, the disease aspect of asbestos, let me just 18 comment that Mr. Whalen's history that you'll hear 19 about, and I'm going to go through a little bit more in 20 detail in a moment, is very common. It's people who 21 are in an environment where there are multiple 22 different sources of respirable asbestos dust that 23 mixed together in an aggregate that they breathe as 24 part of their daily work. Rare is the person who only 25 has in their history an exposure to gaskets because the</p>	<p style="text-align: right;">Page 60</p> <p>1 interaction where it likes to a mucus membrane like 2 your lips or inside your mouth, where you then swallow 3 the fiber, and it gets into your GI tract and such. 4 So there's two ways asbestos fibers get inside 5 you. That's through inhalation, through the mouth and 6 nose. As well as ingestion from membranes that it 7 comes in contact with. 8 And largely what we'll be presenting is all of 9 the source points of exposures suffered by Mr. Whalen 10 in his work in the Navy. 11 Okay. So what makes asbestos so different, so 12 dangerous? And in going through that, I'm then going 13 to turn to Mr. Whalen, and then I'm going to talk to 14 you about when medical science understood everything 15 I'm telling you about, and I think the evidence is 16 somewhat surprising in that respect as we go back. 17 But let's turn to the topic of asbestos 18 disease. I use this chart just to help orient some of 19 the basics that we need to know. There's basically two 20 ways asbestos causes problems in your body. One is a 21 scar process that's not cancerous. It's just a scar. 22 It can become very serious, but it is still not cancer, 23 it's a scar. And another biologic phenomena that can 24 occur is a cancer. 25 And they are very different. One doesn't</p>
<p style="text-align: right;">Page 59</p> <p>1 guy who's working with gaskets, making gaskets, is 2 probably near ladders somewhere on the sub, in the 3 building, in construction. Sometimes they drive to 4 work together, sometimes they live together. You're 5 rarely going to find someone who is an insulator who's 6 not around plumbers and pipefitters and machinists 7 working with packings, or gaskets, or tape. 8 What you'll find, as it is the case with 9 Mr. Whalen, is there's an amalgamation of many 10 different source points of different propensity for a 11 product to be dusty. Some are more dusty than others. 12 Different asbestos types, the frequency they're around 13 the products, the proximity of their nose and mouth to 14 the product. I mean it's one thing if you're across 15 the room as others will show you, and ladders are 16 cutting and installing pipe over there on that wall on 17 a system, but you've got a valve and a pack that you're 18 repacking in front of you, like Mr. Whalen would be, 19 that you're using a hook to pull out that old, hard, 20 brittle packing that no longer provides the function, 21 and you are blowing it out, getting a blast of that 22 fiber in your face, very proximally to your nose and 23 mouth. 24 By the way, ingestion is the term given to 25 asbestos that gets inside people through your mouth,</p>	<p style="text-align: right;">Page 61</p> <p>1 proceed the other, one doesn't lead to the other. You 2 can have neither clinically, you can have both, or any 3 combination. But they are very different processes. 4 And what we'll learn about how people begin to 5 understand asbestos as unique as a dust and cause 6 disease came about through understanding the scar 7 diseases before the cancer disease, which they began to 8 understand in the late '40s and early '50s. 9 But let's first orient ourselves to what we're 10 talking about here. Let me just put scar on the left 11 side here and cancer on the right to describe these two 12 different phenomena. These are four different sets 13 of lungs. Lungs in our chest is what delivers oxygen 14 that we inhale. The air you breathe in is about 20 15 percent oxygen. You need to get that inside you in to 16 the working part of your lungs so that that oxygen 17 molecule can get into your bloodstream, be picked up by 18 hemoglobin pumped throughout your body and delivered to 19 organs so that your metabolism can use it 20 appropriately, give off its carbon dioxide. That's a 21 product of normal metabolic processes, then get rid of 22 it out of your body. That's basically the sum total of 23 the respiration system. The lungs are the only organs 24 that deliver that oxygen to your bloodstream. 25 You have two of them. They sit in your chest.</p>

Page 62

1 This is an anatomic model. They sit on a muscle that
 2 separates your thoracic cavity from your chest cavity,
 3 and that muscle is called a diaphragm. And what
 4 happens when you breathe is this muscle receives a
 5 signal to distend or go down. When it goes down, you
 6 might think that breathing is a matter of sucking in
 7 air. It's really not at all. The more accurate
 8 scientific way to describe it is an equalization of
 9 partial pressure around your head.
 10 And what that means is this is an airtight
 11 cavity. When this muscle goes down, the partial
 12 pressure in this airtight chest cavity is smaller than
 13 the partial pressure around your head. And so air
 14 wanting to equalize those partial pressures is drawn
 15 into your chest cavity when the diaphragm goes down, to
 16 equalize outside and inside.
 17 Then, that same muscle goes back up and
 18 literally squishes these lungs and you exhale. The
 19 more the muscle goes down, the bigger the equalization,
 20 the volume of air that flows into your lungs, and the
 21 higher you respire.
 22 Your lungs when they're healthy are
 23 spongelike, is a good analogy. They are not hard or
 24 rigid. They are very elastic. They're made up of
 25 tissue and mainly are air sacs called alveolar sacs.

Page 63

1 And it's in these microscopic air sacs that this gas
 2 exchange takes place.
 3 An average adult male has somewhere between
 4 300 and 600 million alveolar sacs comprising your
 5 lungs.
 6 And, in fact, the tissue is so much that
 7 anatomically if you took the tissue in the average
 8 adult male's lungs and spread it out so that it was
 9 only cell thin, it would cover about the size of a
 10 tennis court. That's how much tissue was all folded
 11 within the cell to make up your lungs.
 12 A very porous sac filled organ so that it can
 13 maximize the efficiency by which there's an opportunity
 14 for this translocation of air molecules into your
 15 bloodstream. And I'll explain what that means in a
 16 moment.
 17 So let's see if we have a few drawings that
 18 will help us understand the basic anatomic parts of
 19 respiration we need to understand to understand disease
 20 followed by asbestos.
 21 If you were in med school, you probably would
 22 see these drawings, these are by a fellow named Nether.
 23 He's the best medical illustrative doctor, and all the
 24 medical textbooks use Nether because they're so
 25 accurate. That's what we're using here. This is an

Page 64

1 example of an oblique cross-section of one lung cut so
 2 we could see the orientation of the parts of lung.
 3 You'll see the main stem airway that comes
 4 down, and think of an upsidedown oak tree with the
 5 branches getting smaller and smaller, after forks,
 6 after forks, after forks. That's how the airways are
 7 oriented in your lungs. This has got one of those
 8 airways oriented, and it goes all the way to the end.
 9 And at the end you'll see a collection of
 10 great looking like structures. Those are actually the
 11 alveolar sacs, and that's where the gas exchange takes
 12 place in normal respiration.
 13 There's blood vessels that goes throughout
 14 your lungs, and there's also lymphatic channels
 15 illustrated in green. And the round intersections are
 16 the lymph nodes which all have to do with various types
 17 of normal functioning in your body.
 18 If we took and looked at this alveolar sac in
 19 a higher magnification, where the gas exchange takes
 20 place, you would see it depicted by Dr. Nether in this
 21 drawing. So here we've got that airway coming down,
 22 that single airway we focused on. There's the cluster
 23 of sacs at the end of the airway, and now he's drawing
 24 it that much larger on the right side of the diagram,
 25 and he's cut away a few of the sacs. You'll see that

Page 65

1 they are clusters, and they have these very small
 2 thread-like looking capillaries, or very small blood
 3 vessels that physically surround the air sac. Those
 4 are indeed very small blood vessels attached to the
 5 other larger vessels in your body going all the way to
 6 the heart, and they surround the alveolar sac so that
 7 they physically bring blood right next to the alveolar
 8 sacs, and that's where gas exchange takes place.
 9 If you took one of those sacs and enlarged it
 10 even more, you would look at something like this. This
 11 is a cross-section of one of those sacs, if you will,
 12 and a cross-section of these capillaries that go around
 13 the air sac. It's across this membrane, very precious
 14 tissue, that gas exchange takes place, where the air
 15 molecules that reach your alveolar sac traverse across
 16 the membrane, are picked up by the hemoglobin in the
 17 blood that's being pumped by, so that that oxygenated
 18 blood can then be delivered elsewhere throughout your
 19 body to give off the oxygen.
 20 It's also this membrane where carbon dioxide
 21 diffuses the other direction. The product of
 22 metabolism that your body needs to get rid of that goes
 23 back into the air space, the diaphragm comes up, and
 24 you exhale the carbon dioxide, and that's normal
 25 breathing. And these are the basics of how that is

Page 66

1 accomplished.

2 If you think about it this way, here's the air

3 sac, here's those various cross-sections of blood

4 vessels that go around it. When oxygen reaches that

5 location, O2, it diffuses across that membrane picked up

6 by the blood, pumped throughout your body, and at that

7 same location, the carbon dioxide, CO2, diffuses the

8 other direction, goes back into the alveolar sac, and

9 you can get rid of it and breathe it out. The normal

10 respiration.

11 Now, a couple of other organs in our chest we

12 need to understand, and that's where mesothelioma comes

13 in. Here's another drawing that I think is helpful to

14 orient us to what's going on. Here, unlike the model,

15 this person is facing away from you, and you're looking

16 at the back. Superimposed in black are the ribs, the

17 spine, and you'll see depicted in blue, on top of the

18 red lungs, a different organ that surrounds the lungs

19 here. And that 's an organ called the pleura,

20 P-L-E-U-R-A.

21 The pleura serves this function. When the

22 diaphragm moves and your lungs expand and contract to

23 receive air and give back air, there's motion. You'll

24 probably see a video of how much motion is associated

25 with normal respiration even when you're just sitting,

Page 67

1 resting, not exerted yourself. It's an enormous amount

2 of motion going on in your chest, and yet you don't

3 feel your pleura is helping that motion.

4 No matter how much you exaggerate breathing in

5 or breathing out, you don't feel your lungs sliding

6 along your ribcage. A very rigid cage, if you will,

7 bone, that the elastic organs work in.

8 And the reason is, because around your ribs

9 are big time nerves. There's nerves under -- it will

10 go from your spine under each of these ribs. We'll

11 talk about nerve -- nervation at some point in this

12 case. And if you didn't have this membrane, you would

13 irritate those nerves every time your lung slid to

14 receive more air.

15 This membrane is called the pleura, and it

16 facilitates motion so that you don't irritate nerves in

17 the regions when you breathe.

18 If you wanted to think of it, it's like saran

19 wrap on a steak. You might buy a steak that way. So

20 the steak is the lung and the saran wrap is the pleura.

21 It's literally that thin when it's healthy. It's a few

22 cells thin, in fact. You can't really even see it if

23 it's healthy.

24 And in this model, the artist has tried to

25 draw it, but it's a very thin blue line that's right

Page 68

1 under the cutaway ribs, right between the

2 cross-section. Oh, excuse me. That's not supposed to

3 happen. I'm sorry. I don't know if I'm supposed to

4 take it back from you or not, but... Let the record

5 reflect the juror gave the lung back.

6 MR. PARSONS: Not mine.

7 MR. PURCELL: You'll see it right under the

8 white cross-section of the ribs that normally then

9 would fold around, and it's that membrane sandwiched

10 between the ribs and the surface of the lung, and it

11 actually has two surfaces.

12 The surface that's right up against the lung

13 is called the visceral pleura, and the surface that's

14 up against the ribs is called the parietal pleura. And

15 in between those two pieces of saran wrap is a very

16 little bit of fluid that you'll hear about, and it

17 helps the lung move without their being sensation of

18 any motion whatsoever. That organ, the pleura, is made

19 up of unique cells called mesothelial cells, different

20 from lung cells.

21 Lung cells are involved in the tissue where

22 the gas exchange takes place. Mesothelial cells are

23 what comprise the pleura.

24 There will be reference to this as a reference

25 book called Tumors of the Serosal Membranes. Tumors is

Page 69

1 another name for new or cancerous growth, and serosal

2 membrane is another name for pleura.

3 Pleura -- the pleura is a serosal membrane.

4 And here's a picture of a single mesothelial cell under

5 the microscope that makes up this saran wrap like

6 lining called the pleura.

7 You also have serosal membranes that are

8 around your heart called the pericardial region so that

9 your heart moves without motion to sensation. And you

10 also have peritoneal serosal membranes down in your

11 thoracic cavity so your organs there move without there

12 being any kind of motion that you normally can sense.

13 So when you have a healthy chest, respiration

14 occurs without there being any problem or feeling of

15 disease.

16 To orient you, again, if you thought about

17 each of the surfaces has two parts, the way it was

18 described to me is if you took a beach ball that was

19 deflated, had no air in it, and you put your fist in

20 the beach ball, the way that the surfaces of the beach

21 ball would reflect back over your fist, that's a good

22 example of how this organ, the pleura, is configured

23 around your lungs.

24 And you can move, and the visceral surface is

25 up against the lung, parietal up against the chest

<p style="text-align: right;">Page 70</p> <p>1 wall, and motion occurs without you irritating any 2 nerves.</p> <p>3 So asbestos that you inhale, when you inhale 4 it, it can cause problems with the normal functioning 5 of these various organs, and let's talk about that. 6 Let's talk about the scar responses first.</p> <p>7 When you breathe in air, your body has a bunch 8 of defense mechanism to keep particles from reaching 9 the alveolar sacs where gas exchange takes place. It 10 literally starts with the hairs in your nose, sometimes 11 you'll hear workers at the end of the day, they'll blow 12 their nose into a handkerchief or a rag, and they'll 13 see twice the material they've been working with, 14 they've been breathing all day, that's material that 15 didn't make it down into their lungs, and that's a good 16 thing. Particles are small and not caught in nose 17 hairs then go down the airway, this main stem bronchus 18 that I talked about.</p> <p>19 This main stem bronchus isn't just an airway. 20 Inside it it has a layer of little hairlike structures 21 called cilia and cells that make mucus. So it's like a 22 sticky bunch of hairs that line the inside of that 23 airway that can capture fiber or materials or particles 24 or pollen, and they beat from your belt to your nose 25 up. And they bring those material particles that they</p>	<p style="text-align: right;">Page 72</p> <p>1 that gets down into the alveolar sac. They literally 2 engulf it, break it down, and that then is something 3 that is brought out of the alveolar sac isn't there any 4 longer, that's phagocytosis.</p> <p>5 When it comes to asbestos fibers, these 6 alveolar macrophages are unable to break down any 7 asbestos for a lot of the reasons why you put asbestos 8 fibers in products in the first place.</p> <p>9 These are actually cytotoxic to the alveolar 10 macrophages unlike the other things you're breathing 11 in.</p> <p>12 And so instead of breaking down the fiber, 13 when you have asbestos fibers that are breathed in and 14 reach the air sacs, the alveolar macrophages are unable 15 to break them down. Some of them become actually 16 physically aligned to the surface of the alveolar sac.</p> <p>17 The macrophage receives the signal to go try 18 and phagocytize the fiber, and the fiber kills the 19 alveolar macrophage. It can't break it down. At that 20 point your body's defense mechanisms don't stop. They 21 have other things that are what's called upregulated.</p> <p>22 There's a cell called a fibroblast. 23 Fibroblast cells make connective tissues. Fibroblast 24 get a signal when the alveolar macrophages die to come 25 to that location and make connective tissue. And they</p>
<p style="text-align: right;">Page 71</p> <p>1 catch up into your mouth where you spit them out or 2 swallow them. The point is they also then don't get 3 down into your lungs.</p> <p>4 The particles that are small or still and make 5 it past your nose hair, past the mucociliary escalator 6 as its called, and down into the alveolar sacs, your 7 body still have additional mechanisms to deal with 8 particles. One of them is depicted in this last Nether 9 drawing that showed you.</p> <p>10 This bumpy looking brown cell is involved in 11 helping keep your surface of your alveolar sac free of 12 fiber, and that's a cell that's called an alveolar 13 macrophage, or phage. Alveolar because it's through 14 the air sac, it patrols the surface; macro, because 15 that means big; and phage I'm told it means an eater. 16 And so it's described to be like the big scavenger 17 white blood cells, the PAC-MAN, if you will, that eat 18 up and gobble up impurities that reach the alveolar 19 surface. That process is called phagocytosis. And 20 alveolar sacs have multiple of these macrophages in 21 them, and they do an excellent job of -- literally they 22 change shapes. From your high school biology class, 23 the pseudopods, the false feet that they turn, and 24 you'll see pictures of these, and they go, and they're 25 chemically drawn to a dust particle or pollen grain</p>	<p style="text-align: right;">Page 73</p> <p>1 begin to lay down and encapsulate that location at 2 various different stages, this is one breath, two 3 breaths, days, months. And at some point they can 4 actually start looking at the whole thing as being one 5 place that they need to lay down the scar tissue, and 6 they literally, once it gets started, can obliterate 7 the alveolar membrane.</p> <p>8 And as you could probably already expect, when 9 this tissue becomes thicker, this gas exchange no 10 longer can occur. So that that location is never going 11 to work again. It's never going to deliver oxygen to 12 the blood and take carbon dioxide back.</p> <p>13 Now, you have an overcapacity of these, 14 hundreds of millions, and so this response can be 15 happening in you, and you don't know it, you don't feel 16 it, you don't notice you're short of breath. It can go 17 on for decades, and it goes on at a different rate. 18 But at some point, some people develop it to a point 19 where they start becoming short of breath. They 20 realize that they're having to be more labored. Their 21 diaphragm moved more to get the same amount of oxygen 22 they need to deliver it to their muscles and to live.</p> <p>23 Now, this scar tissue that's laid down can 24 show up as a very unique pattern. Typically it first 25 shows up in the bases of the lungs, right at what they</p>

<p style="text-align: right;">Page 74</p> <p>1 call the costophrenic angle. That's the angle between 2 the diaphragm and the bottom peripheral edge of the 3 lung. Very characteristic shapes and patterns. And 4 radiologists, oftentimes these guys get chest X rays, 5 can look at these things, they typically occur 6 bilaterally, meaning both sides as you would expect. 7 They look at the shape, they're linear, they're not 8 round, their location, and to a radiologist, they have 9 a very characteristic shape and location. And that is 10 scarring that all but confirms for the doctor that this 11 person must have had a lot of exposure to asbestos in 12 the past, because of what they see on the chest X ray. 13 When it gets to a point of being clinically 14 diagnosed, this scar -- another word for it, by the 15 way, you'll hear is fibrosis, that just means scar. 16 This is called asbestosis. It is scarring of the lung 17 tissue secondary to asbestos fiber deposition. And 18 this so happens to be the disease they first started 19 seeing in people exposed to asbestos. 20 Indeed, you'll learn, when we go through the 21 history, that this name asbestosis was first coined by 22 a Dr. Cooke, C-O-O-K-E, in 1924. And yes, they had 23 chest X rays in 1924, and they could look at this and 24 they could say I'm seeing this in people that -- you 25 know what's unique about them, these are people who</p>	<p style="text-align: right;">Page 76</p> <p>1 that comprise the serosal membrane around the lungs as 2 we've described. 3 As it turned out, Mr. Whalen has pleural 4 plaques. Very characteristic, very common in people 5 exposed to asbestos. Doctors see it, and it's 6 almost -- the fancy word is pathognomonic, a doctor 7 sees that in someone, and they say, you know, in your 8 past whether you know it or not, you were exposed to a 9 lot of asbestos because that's what causes it, I see it 10 on the chest X rays. Those are the scar responses that 11 you need to understand. 12 Now, entirely separate from the biology 13 associated with the scar response is the cancer 14 response. Cancer, we need to understand what it is and 15 how it's different from the scar response. 16 One way it's different, just from 30,000 feet 17 is these diseases have a tendency -- the scar diseases 18 to be diffuse, that happen multiple locations at the 19 same time throughout the lung and around the pleura. 20 Widespread scar. Similar response all over. 21 Cancers, on the other hand, are more localized 22 when they start. They start at a spot, at a cell, at a 23 region, and then expand and grow different from the 24 presentation of a scar disease. 25 Asbestos can cause cancer in the cells that</p>
<p style="text-align: right;">Page 75</p> <p>1 have worked in industry, and their job for 25 years has 2 been nothing but work -- whatever you call those things 3 they make textiles on, a -- a loom. Yes, a loom. And 4 they sit there at the loom for 30 years and make cloth 5 and have exposure to asbestos, and then they're getting 6 this scar disease, and doctors started looking at it 7 and seeing what's going on here, and that was described 8 and labeled in 1924. 9 Now, the other type of scar that occurs with 10 asbestos exposure has to do with when asbestos fibers 11 are at the periphery of the lung, and I talked about 12 the motions back and forth. Well, when there's an 13 asbestos fiber right where the lung is moving, it can 14 develop a thickening of the pleura. Somewhat like if 15 you garden or play tennis and you see calluses that 16 form on your skin where the racket or the sheers 17 interact with your hand, they can develop thickened 18 areas, and it can include -- it can also occur on the 19 diaphragm bilaterally, and that 's abnormal. You can 20 see that on the chest X ray, and those are called 21 plaques, pleural plaques. A different response that 22 can happen with the scarring inside the lung as well as 23 on top of it. 24 But again, pleural plaques aren't involving 25 the lung tissue. That occurs in the mesothelial cells</p>	<p style="text-align: right;">Page 77</p> <p>1 make up the lung tissue. Sometimes you've heard that 2 referred to simply as lung cancer. Oftentimes it's 3 called in medicine bronchial cancer or bronchiogenic 4 carcinoma, all synonymous with lung cancer. 5 It involves the tissue inside. You can have 6 someone who co-presents with lung cancer and 7 asbestosis. Subclinical asbestosis and lung cancer. 8 Asbestosis and no cancer. Any combination of, they are 9 separate, different phenomena. 10 Asbestos then can also cause a cancer of the 11 lining of the chest cavity or the lung, and that is the 12 cancer involving mesothelial cells called mesothelioma. 13 And that's a cancer that arises in the 14 membrane, and instead of like lung cancer that starts 15 inside the tissue and grows outward as it gets larger, 16 it starts on the surface and stays on the surface, 17 compressing the lung as it goes. 18 And unlike the bilateral diffuse asbestosis 19 and pleural plaques, cancers are typically not 20 bilateral. They start in one location and spread. 21 So asbestosis, pleural plaques, scar, scar 22 disease, lung cancer, mesothelioma, cancer. Many 23 things can cause lung cancer. Many things don't cause 24 mesothelioma. For example, cigarette smoke carcinogens 25 can cause lung cancer, they don't contribute causally</p>

<p style="text-align: right;">Page 78</p> <p>1 at all to mesothelioma.</p> <p>2 So we need to understand since we know what</p> <p>3 scarring is, what is cancer. In its most fundamental</p> <p>4 definition, all cancers are this: Cancer is the loss</p> <p>5 of controlled cell growth. Let me say that again.</p> <p>6 Cancer is the loss of controlled cell growth.</p> <p>7 All of the different cells that comprise our</p> <p>8 body, different organs, our hair, our skin, our lungs,</p> <p>9 fingernails, all the cells in our body have different</p> <p>10 rates by which they replicate, divide, and make new</p> <p>11 daughter cells.</p> <p>12 That's a normal thing. Your lungs don't have</p> <p>13 a very aggressive rate of replication. It's a very</p> <p>14 small percentage of cells that are normal that are</p> <p>15 dividing, but there are some. Other organs like your</p> <p>16 skin are much more rapid rate of new cells. Your skin</p> <p>17 is constantly shedding dead skin cells and regenerating</p> <p>18 new skin cells in your epidermis.</p> <p>19 It all is basically the same mechanism</p> <p>20 controlled by your genes. Cancers occur when that</p> <p>21 normal rate of cell growth is interrupted and the cells</p> <p>22 don't know when to stop growing, because of some</p> <p>23 alteration or error in their genetics. And a material</p> <p>24 that can interrupt the normal rate and controlled</p> <p>25 growth of cells is a carcinogen and asbestos is indeed</p>	<p style="text-align: right;">Page 80</p> <p>1 nuts.</p> <p>2 You can see in this picture that the genetic</p> <p>3 material is being protected by the nuclear membrane</p> <p>4 from the fibers that have been introduced in the petri</p> <p>5 dish. The fibers cannot reach the genetic material.</p> <p>6 Now, when those cells receive a signal to</p> <p>7 divide, to make two identical daughter cells, that</p> <p>8 nuclear membrane opens, and that's how the genetic</p> <p>9 material reforms to make two identical daughter cells</p> <p>10 with the exact same genetic makeup as the mother cell.</p> <p>11 That's normal cell replication. And it occurs</p> <p>12 generation after generation at a normal controlled</p> <p>13 rate.</p> <p>14 When those cells divide in the presence of a</p> <p>15 carcinogen, that carcinogen can interrupt the normal</p> <p>16 replication of the genetic material of the daughter</p> <p>17 cells.</p> <p>18 And if the daughter cell doesn't have the</p> <p>19 right and exact genetic material, that daughter cell</p> <p>20 can become immortal. Can become a cell that doesn't</p> <p>21 have the capacity to control its own rate of growth,</p> <p>22 and when it divides again, its daughter cells won't</p> <p>23 have that capacity either.</p> <p>24 You'll hear about something called the p53</p> <p>25 gene. Among biologists it was the protein of the year</p>
<p style="text-align: right;">Page 79</p> <p>1 one such thing.</p> <p>2 So let's look for a minute at something that</p> <p>3 will help us understand what we're going to learn about</p> <p>4 the concept of cancer.</p> <p>5 This is the cover of a medical journal that</p> <p>6 will help illustrate what I want to orient you to</p> <p>7 today. It says "Cellular and Molecular Aspects of</p> <p>8 Fiber Carcinogenesis."</p> <p>9 Carcinogenesis is the name of the method that</p> <p>10 cancer gets accomplished biologically, the process, if</p> <p>11 you will. Fiber carcinogenesis is things like asbestos</p> <p>12 that causes cancer. The loss of controlled cell</p> <p>13 growth. And cellular and molecular aspects have to do</p> <p>14 with the component parts of what leads to cancer.</p> <p>15 And what this shows here is two cells in a</p> <p>16 Petri dish, side by side. And you'll see that each</p> <p>17 cell as you'll learn about, has a nucleus, a center,</p> <p>18 and it's protected by a nuclear membrane.</p> <p>19 And inside that membrane is where your genetic</p> <p>20 material is located that is comprised, the chromosomes,</p> <p>21 the set you get from your mother and the set you get</p> <p>22 from your father that combine in the helix that you'll</p> <p>23 hear about, that's where the genetic instructions are</p> <p>24 that guide everything about you, your height, your</p> <p>25 weight, eye color, hair color, everything. Soup to</p>	<p style="text-align: right;">Page 81</p> <p>1 about a decade and a half ago. And you'll understand</p> <p>2 what it is. The p53 gene happens to be the identified</p> <p>3 gene that helps control the rate of cell replication.</p> <p>4 It's what accomplishes the controlled growth.</p> <p>5 And if that p53 gene is on a chromosome that</p> <p>6 doesn't make it to this daughter cell so that this</p> <p>7 daughter cell simply does not have that genetic</p> <p>8 material in it, neither will its progeny and so forth.</p> <p>9 Now, a genetically altered cell may die. They</p> <p>10 don't all continue to live. But they could divide</p> <p>11 again. And if they divide again in the presence of</p> <p>12 another breath of asbestos or another day of asbestos,</p> <p>13 or another week or year, then those daughter cells can</p> <p>14 have two errors or four errors, and so forth.</p> <p>15 And what, you know, happens in mesothelial</p> <p>16 cells in a man who gets clinical mesothelioma, like</p> <p>17 Mr. Whalen, is that one or more of these cells as a</p> <p>18 progeny got through all of the body's defense</p> <p>19 mechanisms to kill off aberrational genetically erred</p> <p>20 cells to reach a point where there were so many of them</p> <p>21 that the whole mass loses this ability to control its</p> <p>22 own growth, and so it goes haywire and begins to</p> <p>23 compromise the normal functioning inside your body.</p> <p>24 And that's the process of carcinogenesis.</p> <p>25 You will see this in great detail as it's</p>

<p style="text-align: right;">Page 82</p> <p>1 being studied. Here's an example of a slide that shows 2 three cells that are stained a pretty color so that 3 they are something that we could easily see.</p> <p>4 These are three cells under a microscope. The 5 two cells on the right, these big cells, the nuclear 6 membranes are in blue, the genetic material. They 7 haven't received any signal to divide. It's not their 8 time. The cell in the middle has received a signal, 9 it's time for it to divide.</p> <p>10 And you can begin to see the orientation of 11 the nuclear material inside the membrane starting to 12 align up so that when that membrane is open, it can 13 join with other sets of genetic material and create two 14 identical daughter cells.</p> <p>15 Here's a picture of that happening in the 16 presence of asbestos. But unlike other material, 17 here's one daughter cell, another daughter cell, and at 18 the arrow points you can see the asbestos fiber 19 material. Here you can see a big blob, that's a 20 medical term, a big blob of genetic material that's not 21 going to make it to the other daughter cell.</p> <p>22 And if that blob of genetic material has the 23 p53 gene in it, that daughter cell is not going to have 24 the genetic mechanism to control its own growth.</p> <p>25 Now, that cell may not live, but in someone</p>	<p style="text-align: right;">Page 84</p> <p>1 a cross section like this, and you turned it on edge to 2 see what it is, here you've got a cross section through 3 the heart, this other lung is missing, and this lung is 4 being depicted as a cross section.</p> <p>5 If this was normal tissue, you would not see 6 the pleura, the mesothelial cells that go around the 7 lung or the pericardial membrane around the heart, 8 because it's so thin it would be like looking at the 9 edge of a piece of Saran wrap. You wouldn't see it.</p> <p>10 But in mesothelioma, these cells that comprise 11 it that I have shown you start growing and become a 12 hard rind-like material that's not normal, and they 13 encase the lung, surround the lung, and here it's 14 spread to going around the heart as well.</p> <p>15 It's one of the reasons why it's not a good 16 candidate for surgical intervention like lung cancer. 17 Lung cancer, sometimes if you have a lower lobe lung 18 cancer, you could go in and surgically remove a lobe or 19 take it out, and you may cure someone. But with 20 mesothelioma, you can't do that readily.</p> <p>21 You'd have to literally scrape all of that 22 off, and there are aspects of it you couldn't reach 23 anatomically. That's one of the reasons it's not a 24 very good candidate for surgical intervention.</p> <p>25 One more picture, we'll show you the</p>
<p style="text-align: right;">Page 83</p> <p>1 who gets clinical mesothelioma, we know that it did. 2 And we'll go through all of the genetic circumstances 3 of it with you, but when you reach a point that someone 4 begins to have symptoms, and that's what happened with 5 Mr. Whalen, he'd been struggling with having some 6 infections and lung problems and wasn't breathing good 7 and going to a doctor for a series of several years.</p> <p>8 And doctors would treat him, they'd give him 9 some antibiotics, help him, thinking it wasn't any big 10 deal, got a cold, until it kept happening so often that 11 he had trouble breathing, that he went to the doctor in 12 the fall of 2013.</p> <p>13 They didn't diagnose the mesothelioma until 14 December, but looking back, they realized that what he 15 was presenting with in November of 2013, was indeed 16 this cancer called mesothelioma. And let me show you 17 what it looks like.</p> <p>18 And one of the reasons it is so problematic 19 when it comes to trying to fix or cure it. Now, this 20 slide below would only mean something to you if you 21 were a pathologist. But that's what it looks like in a 22 piece of tissue. Here's what it looks like 23 anatomically.</p> <p>24 What this is is an orientation is if you took 25 a cross section of someone's chest like the model here,</p>	<p style="text-align: right;">Page 85</p> <p>1 orientation. This time instead of a cross section, 2 this is now a vertical -- back up. A vertical slice 3 from the top down toward the diaphragm, and here you 4 see the mesothelioma.</p> <p>5 These sections are, the tissues that separate 6 lobes of the lung, areas of the lung, and you can 7 readily understand why it's not something that lends 8 itself well to surgical intervention.</p> <p>9 It's also a cancer that cannot be completely 10 helped with any kind of radiation or chemotherapy, 11 despite the efforts that you'll hear about that's been 12 going on with Mr. Whalen.</p> <p>13 If I were to summarize briefly what you'll 14 learn about this disease mesothelioma, I've put it on 15 this chart, which I intend to use with witnesses, so 16 that you can understand what this disease means to 17 doctors as a challenge.</p> <p>18 As I've already indicated, it's a cancer of 19 the pleura. It's not lung cancer. It is very 20 debilitating. I told you a moment ago that your lungs 21 are very elastic, and they move. Well, when they are 22 encased in a harder rind, that inhibits their expansion 23 so you just can't breathe. You can't draw in enough 24 air to get all the air you feel like you need. You 25 feel like you're -- you can't breathe.</p>

<p style="text-align: right;">Page 86</p> <p>1 It's also exceedingly painful as a process. 2 Why? Because of the reason you have the pleura in the 3 first place. See, everywhere there's a nerve coming 4 off of your spine under a rib. If your pleura is 5 healthy, there's no irritation of that nerve when your 6 lungs move. 7 If you've got a rind that's harder, it's like 8 you've got something in between there that's rigid, and 9 it irritates all those nerves. When you have to 10 breathe to live. And so you can have narcotics, you 11 can have injections, you can do several things, but 12 there are side effects from narcotics that are terrible 13 that you'll hear about. 14 One of the bigger problems in managing 15 mesothelioma is that as you increase the narcotics to 16 address the pain that you have every time you breathe, 17 it causes things like your tissues inside various of 18 your organs to dry up, like a dry river bed. And so 19 going to the bathroom becomes very painful. 20 Because instead of having a pliable 21 gastrointestinal tract, the morphine and such you get 22 dries the inner linings of that will out, and it 23 becomes exceedingly painful to get rid of feces when 24 you're trying to deal with this management of this 25 disease.</p>	<p style="text-align: right;">Page 88</p> <p>1 (Jury exiting courtroom.) 2 THE COURT: Do we need anything on the record? 3 MR. RICH: No, Your Honor. 4 THE COURT: Let's go off the record. 5 (Discussion held off the record.) 6 (Lunch break taken.) 7 THE COURT: I just wanted to note for record 8 that I have been informed during the -- just before we 9 came back on that the -- that Goodyear has resolved, 10 they have settled, and so they are not going to be 11 participating in the trial. 12 I'm going to make an announcement to the jury 13 to that effect using the CACI 109 instruction regarding 14 removal of claims or parties in this case, a party, and 15 I just want to say, again, on the record it's been a 16 pleasure working with all of you, and good luck. 17 And again if there's anything that the Court 18 can do to help any of the other parties resolve, I'm 19 happy to be of assistance. So thank you. 20 MR. RICH: Thank you. 21 MS. WEBB-LAWTON: Thank you, Your Honor. 22 MR. RICH: We're going to leave now. 23 THE COURT: Yes. 24 MR. PURCELL: Were you going to announce this 25 to the jury at this time or later?</p>
<p style="text-align: right;">Page 87</p> <p>1 It's a progressive disease. It starts and 2 grows as it makes room for itself. Unfortunately it is 3 invariably fatal, there is no cure, once you have it 4 all you can do is manage it as aggressively as 5 otherwise, and it's caused by all forms of asbestos. 6 And I gave you an example. It's not caused by 7 cigarettes. 8 Now, here's a page from Mr. Whalen's medical 9 records. 10 Your Honor, I notice that it's noon. Is this 11 the time you like to break? 12 THE COURT: Yes. 13 MR. PURCELL: It's good for me before I turn 14 it to Mr. Whalen. It's a little after noon. 15 THE COURT: Yeah, I know. Do you have an 16 estimate for how much longer you have? 17 MR. PURCELL: I don't. I would suspect it's 18 probably about 35, 40 minutes. It's not brief. 19 THE COURT: Okay. We're going to take a break 20 now. We'll come back at 1:30. 21 And, again, don't discuss the matter with 22 anybody, and don't do any research, don't make up your 23 mind about anything until after you've heard the 24 evidence. 25 Thank you very much. We'll be back at 1:30.</p>	<p style="text-align: right;">Page 89</p> <p>1 THE COURT: I think that maybe I should do 2 that now simply because -- so that you don't reach the 3 point where, you know, if you're going to be in a few 4 moments I assume talking about the parties some more, 5 and they may wonder why you're not saying anything 6 about -- I don't know whether you will or whether or 7 not that affects what you will say in your opening. Do 8 you have a preference, Counsel? 9 MR. PURCELL: I do not. I think Crane may -- 10 John Crane may. And I also wanted to apprise the Court 11 that I inquired of them whether John Crane had any 12 intentions now or in the future of trying to seek 13 removal of the case to federal court. 14 And we were not able to further get an 15 understanding of John Crane's intentions in that 16 respect, and, therefore, Thorpe is still participating. 17 THE COURT: Okay. I understand that, and so 18 now -- does John Crane have a concern about when I tell 19 the jury about the fact that Goodyear is no longer a 20 party? 21 MR. GRIFFIN: If you're inclined to give the 22 instruction, Your Honor, we'll just seek the Court's 23 opinion as to when. Our position would be to not 24 instruct them one way or the other. You're either 25 going to highlight the fact that they're gone, but if</p>

<p style="text-align: right;">Page 90</p> <p>1 you're inclined to give instruction, we are not partial 2 to when that is.</p> <p>3 THE COURT: Oh, okay. I think that it's 4 best -- since they'll notice that there's one less 5 party here. And so rather than have them be thinking 6 about it, I'd rather tell them not to think about it. 7 I'll just be brief with it, and then we'll just move on 8 from there. And so I'll just say it fairly matter of 9 factly once everybody is seated.</p> <p>10 MR. GRIFFIN: Thank you.</p> <p>11 THE COURT: And then I will invite Mr. Purcell 12 to continue with his opening. Okay. Can we bring the 13 jury in.</p> <p>14 (Whereupon, the jury having entered the 15 courtroom, the following proceedings were 16 had:)</p> <p>17 THE COURT: Welcome back, ladies and 18 gentlemen. I also wanted -- I wanted to say two 19 things. One thing I wanted to say is if at any point 20 in the proceedings at all you have difficulty either 21 hearing what somebody is saying or observing some 22 presentation that any of the witnesses or attorneys are 23 making, please do not hesitate to say something about 24 it.</p> <p>25 We're using a projectors and things like that</p>	<p style="text-align: right;">Page 92</p> <p>1 always been regarded as basically incurable diseases, 2 very serious diseases.</p> <p>3 Having said that, I do want to explain the 4 evidence on these three notions, because they are very 5 important to the task we have ahead of us. These are 6 three well-established phenomena that date back to the 7 '30s when they were first established and known, that 8 effect and analysis of investigating what's behind a 9 particular person developing an asbestos-related 10 disease.</p> <p>11 These apply as concepts both to the scar 12 diseases, asbestosis and pleural plaques, as well as to 13 the cancers, whether it's lung cancer or in our case 14 the mesothelioma we went through. And let me explain 15 what each concept means.</p> <p>16 First of all, all the asbestos-related 17 diseases are diseases of very long latency. Latency in 18 science is defined to be the following: It is the time 19 interval from first exposure to an agent, through to 20 the onset or beginning of clinical symptoms of disease.</p> <p>21 Once again, it is the time interval from the 22 first exposure to an agent and the beginning or onset 23 of a clinical disease. That's the latency.</p> <p>24 You will find out when it comes to asbestos 25 disease, and this is largely because of the various</p>
<p style="text-align: right;">Page 91</p> <p>1 in here today. But that will happen throughout the 2 trial. I am -- the attorneys I'm sure would appreciate 3 it. And if you -- and don't be shy about it, because 4 it's possible if you're having difficulties some of 5 your colleagues might be as well. So don't hesitate to 6 bring anything up. Not saying anything has happened 7 like that, but I figured I would make that invitation.</p> <p>8 And the second thing I was going to say is 9 that the Goodyear Tire & Rubber Company is no longer a 10 party in this case. Do not speculate as to why this 11 party is no longer involved in this case. You should 12 not consider this during your deliberations.</p> <p>13 So with that I'm going to now invite 14 Mr. Purcell to continue with his opening.</p> <p>15 MR. PURCELL: Thank you, Your Honor. When we 16 took our break, I concluded this chart of various 17 bullet points about this disease, mesothelioma. And 18 before we turn to more specifics about Mr. Whalen, I 19 want to cover three very important ubiquitous concepts.</p> <p>20 One is easy to cover. All the 21 asbestos-related diseases, whether scar responses or 22 cancer, are, in effect, incurable. The best one you 23 have a chance for is lung cancer. If you catch it 24 early, and you're strong enough to survive the 25 resection. But basically, asbestos diseases have</p>	<p style="text-align: right;">Page 93</p> <p>1 biologic responses we've already talked about today, 2 whether it's a fibrotic scar response, or the alveolar 3 macrophages deal with their efforts to try and 4 eradicate the asbestos, and it lays down fiber blast, 5 scar tissue, and formation bit by bit to clinical 6 evidence of asbestosis, or whether it's a 7 cancer-causing microscopic genetic error in cells, some 8 of which die off, some of which continue and divide. 9 And then some of their lineage die off, et cetera, et 10 cetera.</p> <p>11 The concept is that it takes a very long time 12 for asbestos to cause disease. Whether it's a scar or 13 whether it's a cancer. So that means that if I was 14 exposed to asbestos today, and I was diagnosed with an 15 asbestos disease tomorrow, the doctors would know that 16 my exposure to asbestos today had nothing to do with 17 causing my diagnosis of the disease tomorrow.</p> <p>18 Why? Because the time interval is not 19 sufficient for the fundamental biology to occur. It 20 might be involved in a disease I might get many years 21 in the future.</p> <p>22 But the disease I got diagnosed tomorrow must 23 have something to do with the exposures I suffered 24 very, very long ago, not the one I had today.</p> <p>25 The evidence will show you that asbestos</p>

<p style="text-align: right;">Page 94</p> <p>1 diseases are, on average, 25 or 30 years in terms of 2 their latency. And that's specifically the case with 3 mesothelioma. That means that on average if you have 4 an exposure today, the doctors would not expect you to 5 have any kind of symptom, let alone a diagnosis of 6 mesothelioma associated with that exposure, for 25 to 7 30 or longer years later.</p> <p>8 And I know that seems kind of 9 counterintuitive, but asbestos doesn't affect you the 10 way acute things can affect you, like radiation or if 11 you smell something like ammonia, and you immediately 12 have eyes watering, and you have symptoms. It's not 13 like that.</p> <p>14 This is a more stealthy response that you 15 have, where you don't have any idea what's happening on 16 a molecular and cellular level for decades.</p> <p>17 The shortest latency is subject to debate in 18 medicine. Some doctors believe that a minimum latency 19 period is 10 to 15 years. Others are more comfortable 20 with the shortest latency of seven years.</p> <p>21 You won't find many doctors comfortable with a 22 minimum latency of less than seven years. On the other 23 end of the spectrum, however, you will hear from people 24 who have devoted their lives to studying asbestos 25 disease, pulmonologists, epidemiologists who study</p>	<p style="text-align: right;">Page 96</p> <p>1 sure, his doctors gave him antibiotics, you know, take 2 two aspirin, go home, feel better, come back. He did 3 that for quite a period.</p> <p>4 But most of them believed that once they 5 reached the fall of 2013, and this was a recurring 6 problem, that he would have fluid collect in his chest. 7 It's a very common sequelae. It's a very common 8 pleural effusion that occurs with people who have a 9 growing mesothelioma, they drain that fluid, they look 10 for cancer cells in it.</p> <p>11 Oftentimes it's negative, but it helps them 12 understand, they are dealing with a more serious 13 chronic disease rather than an acute infection that 14 just is recurring.</p> <p>15 Usually by the end of November, December, when 16 the doctors looked at all the medical records, that's 17 when they knew for the first time that they were 18 dealing with for sure symptoms of a mesothelioma.</p> <p>19 But whatever it is, whether it really was the 20 problem he was having breathing 2011 and 2012, or 21 whether it was the end of 2013, with the diagnosis 22 thereafter, that interval from '64 to 2013 is a classic 23 presentation for mesothelioma caused by exposure to 24 asbestos in the workplace. He meets that criteria, 25 logically.</p>
<p style="text-align: right;">Page 95</p> <p>1 cause and effect and such.</p> <p>2 They've seen latencies as long as 75 or 80 3 years. People they have been able to document that 4 were exposed as a youngster. Cases where a woman's 5 father was in the shipyard business when he lived with 6 her. She was exposed. She remembers hugging him when 7 he got home from work. His clothes are dusty. She 8 knows she had an exposure, and her mesothelioma doesn't 9 occur until she's 75 or 80 years old. And the doctors 10 have no doubt whatsoever that those exposures that long 11 ago were involved in causing that final clinical 12 disease.</p> <p>13 You should also know that when a cancer 14 becomes clinical, meaning it has symptoms, and it 15 starts to encase a lung, there are trillions of cells 16 involved. It isn't a matter of small numbers. These 17 are enormous populations of cells that have lost their 18 ability to control their own growth. And that also has 19 something to do to explain the very, very long latency.</p> <p>20 When it comes to Mr. Whalen, you will realize 21 that the first exposure we've been able to document is 22 when he started in the Navy in 1964. And there's some 23 debate about whether his symptoms that he had in 2011 24 or 2012, when they thought it was an infection, they 25 thought he might have pneumonia. They weren't really</p>	<p style="text-align: right;">Page 97</p> <p>1 Next, total dose response sequences. All the 2 asbestos-related diseases are what are called total 3 dose response diseases, and it's a very basic concept 4 that simply means the more you're exposed to the agent, 5 your asbestos, the more likely you would get a disease 6 from that exposure.</p> <p>7 If you were to plot exposure and likelihood of 8 a response, it's a roughly 45 degree angle. The more 9 you're exposed the more likely you're going to have a 10 disease. Total dose response.</p> <p>11 There's not a lot of data at lower exposures 12 because of the rarity of these diseases, but that 13 doesn't in any way challenge the notion that the more 14 you're exposed, the more you're likely to have a 15 disease.</p> <p>16 And what it also tells you is that when you 17 have exposures to asbestos, it's typically in the 18 millions with each breath, with each inhalation, 19 literally blowing out the housing of a pump or a valve 20 or packing that's been spent, that's pulled out with a 21 hook, that brief few moments, seconds, is trillions of 22 asbestos fibers you're breathing that are going into 23 your lungs, and there's trillions of them coming right 24 back out with the subsequent breath, in and out, in and 25 out.</p>

<p style="text-align: right;">Page 98</p> <p>1 But there are billions that you are retaining 2 in your mucociliary escalator, in your lungs, and as 3 you do this over time, it accumulates. Your dose, your 4 fiber burden accumulates.</p> <p>5 And what can be said about it is someone who 6 gets a disease, it's that fiber burden, that's what 7 produced that result in you. It may not have produced 8 a similar result in anyone else.</p> <p>9 So, for example, if you have two people that 10 work side by side, shoulder to shoulder doing the same 11 work for their entire career, and they breathe the same 12 air, the same exposure or very close, one of those men 13 or women may develop asbestosis, pleural plaques, they 14 get lung cancer, and they get mesothelioma, or any 15 combination.</p> <p>16 And the other person breathing the same amount 17 of asbestos may have no signs whatsoever that they were 18 ever even exposed to asbestos. No pleural plaques, no 19 asbestosis, no cancer, they're fine. And they may 20 indeed continue to be fine for their normal life 21 expectancy.</p> <p>22 So that's the way the doctors look at it. 23 We're all the same, yet we're all very different when 24 we look at the biology, and you can't predict who's 25 going to respond or in what way.</p>	<p style="text-align: right;">Page 100</p> <p>1 2013, he was diagnosed with mesothelioma. His risk of 2 this outcome is a hundred percent. And once that's 3 what you're looking at, what caused it is the total 4 dose that he suffered, more than seven, 10, or 15 years 5 depending on how you feel about minimum latency.</p> <p>6 Here it's not a problem because his exposures 7 are much longer ago than that, it's that aggregate that 8 produces response in him. Dose response.</p> <p>9 And finally I already hinted at is individual 10 susceptibility. The evidence will show you, ladies and 11 gentlemen, and no one really understands why this is 12 the case, some people respond to carcinogens 13 differently than others do.</p> <p>14 You can expose two people to the same amount 15 of a carcinogen. One gets a clinical cancer and the 16 other one never will. Everybody reacts differently. 17 What we know about Mr. Whalen is that he is a responder 18 in the form of a clinical disease, mesothelioma.</p> <p>19 What you also need to know about individual 20 susceptibility is that when it comes to asbestos, thank 21 fully the majority of people exposed will never get any 22 of the asbestos-related diseases.</p> <p>23 Your body's defense mechanisms in large part 24 are such that no matter the exposure, whether you're a 25 career insulator, which we'll hear about, or a career</p>
<p style="text-align: right;">Page 99</p> <p>1 But in someone who gets the disease, it is a 2 function of all of their exposures to the agent, 3 sufficiently long enough ago for the biology to be 4 obtained that's behind that response in them.</p> <p>5 You can say that each successive exposure to 6 the agent increases your risk of a future outcome, but 7 you can't ever really predict a cancer in someone.</p> <p>8 And that's true regardless, really, of the 9 carcinogenic agent. Take, for example, and I've told 10 you, cigarettes have no carcinogens in them related at 11 all to mesothelioma. They do cause lung cancer. But 12 when you have smokers who smoke, doctors can't predict 13 which of them are ever going to get lung cancer and 14 which of them are not.</p> <p>15 But when someone who smokes like that gets a 16 lung cancer, the doctors can say that diagnosis in them 17 was a function of the total cigarette dose they 18 suffered long enough ago for that cancer to occur from 19 the carcinogens that are in cigarette smoke.</p> <p>20 And in that way, risk is increased, cause is a 21 little different. So with each exposure to asbestos 22 Mr. Whalen's risk of mesothelioma is increased, but 23 this case is not about an increased risk of a disease 24 he doesn't have.</p> <p>25 Unfortunately, in November and December of</p>	<p style="text-align: right;">Page 101</p> <p>1 drywaller with Sheetrock and joint compound tape or 2 floor tiler or working with packing or one of those 3 people on the looms working and making asbestos cloth, 4 textiles, you can never know who's going to get the 5 disease, but you will know as a population, it's a rare 6 disease indeed. And that's true you'll find with most 7 carcinogens.</p> <p>8 We're going to talk a little bit about the 9 individual susceptibility notion because unfortunately, 10 many people are infected with misinformation about 11 cancer incidence and cancer causation.</p> <p>12 And as it turns out, the lung cancers and 13 in particular mesothelioma are comparatively rare 14 outcomes in people exposed to carcinogens. What you'll 15 learn about a mesothelioma is it's a rare disease even 16 in people heavily exposed to asbestos, thankfully. But 17 unfortunately, it's a hundred percent behind 18 Mr. Whalen's circumstance.</p> <p>19 You'll also learn about in lung cancer by 20 analogy. If you took ten people who are heavy 21 cigarette smokers, ten people who smoke, let's say, a 22 pack or two a day for 30, 40 years, many people 23 erroneously will think that the majority of those ten 24 people will likely get lung cancer from that heavy 25 smoking history, but everyone agrees, based on the</p>

<p style="text-align: right;">Page 102</p> <p>1 statistics of the American Cancer Society, the 2 epidemiology that actually the incidence of lung cancer 3 from heavy smoking is somewhere between one and two of 4 those ten people that I gave as an example. 5 Now, to an epidemiologist and a 6 biostatisticians, that's an enormous incidence, 7 alarming incidence, but it is exactly the same thing as 8 saying you have an 80 to 90 percent chance of never 9 getting lung cancer if you are a big time cigarette 10 smoker, and that runs counterintuitive perhaps to what 11 you may think about carcinogenesis. 12 So the point is the cancers we're talking 13 about are highly a function of the individual's 14 susceptibility to the carcinogen, and the reality is 15 that the body defense mechanisms, miraculous as you 16 learn about it, is able to stand and eradicate the 17 cells that have genetic errors caused by the 18 carcinogens already that they have, and that's true for 19 asbestos and cigarettes and all sorts of carcinogenic 20 compounds. But if you get the individual cancer, 21 you're one of the unlucky people whose physiology is 22 such that you can develop this loss of control cell 23 growth that leads to a malignancy. 24 So let's see how this then all comes together 25 about the evidence for Mr. Whalen.</p>	<p style="text-align: right;">Page 104</p> <p>1 exposure to asbestos. 2 Sweeping up the barracks in the Navy where he 3 stayed with his colleagues training to be a machinist 4 mate as it's called. You'll hear about that. 5 He then stays in the Navy until 1990, and he 6 receives various types of training. You'll hear about 7 the different places he was, the different vessels he 8 was aboard. He basically became what's called a 9 nuclear inspector, trained in nuclear power systems. 10 He would serve aboard submarines for lengthy periods of 11 time when they were doing things like their sea trials. 12 He was there when they would repair, construct, 13 overhaul. 14 A sea trial is where you got a new vessel, and 15 you've got it and out, and you're trying to basically 16 shake it down to see if it works. So when all the 17 pumps fail that are going to fail, and all the valves 18 don't work that aren't going to work, you want to know 19 that when you're not in combat or on a mission, and 20 you've got guys like Mr. Whalen aboard who can fix 21 them, fix the leaks, undo the packing, fix the valves, 22 shake it down so that you know it's a viable naval 23 vessel to enter into service. 24 You'll hear about times he's on submarines 25 called Vallejo, USS Grant, the Stimson. You'll hear</p>
<p style="text-align: right;">Page 103</p> <p>1 I'm going to show you a chart that we'll use 2 in reference from time to time with the witnesses, and 3 it's exceedingly incomplete. You can't put in a 4 timeline everything about the evidence you're going to 5 hear about Mr. Whalen, but it is helpful. I think as a 6 framework to orient his particular circumstances. 7 How this is oriented is this blue line is just 8 a timeline moving from the left to the right. And it 9 starts with his date of birth back in 1945. And you'll 10 learn about, in the evidence, what he did as a 11 youngster, working at a creamery, nothing where we 12 could really locate or determine any likely exposures 13 to any asbestos. 14 Until such time and after he gets out of high 15 school, he joins the Navy in 1964, and at that point 16 you'll hear about what he first did in the Navy, where 17 he went to boot camp, what his first duties were. As 18 it turns out one of the first things he was charged 19 with doing was sweeping up the barracks where all of 20 the new people in the Navy were staying. 21 And as we've determined and you'll hear, those 22 barracks were steam heated, they were equipped with 23 steam systems that had pipes that had insulation on 24 them. And he recalls sweeping up part of the dust in 25 the floor regularly, and that probably was his first</p>	<p style="text-align: right;">Page 105</p> <p>1 about his work around turbines, pumps, valves, both 2 repair and maintenance. At one point he works with a 3 repair barge, a different kind of vessel. And I don't 4 want to go into the details of all that now. You'll 5 start learning about that early next week and 6 Mr. Whalen can explain all that. 7 Then in 1990 when he's honorably discharged, 8 that's when he began to work as a city manager for the 9 city of Ord, Nebraska where he's located, retired 10 basically, and he worked at a powerhouse. 11 Interestingly his job duties you'll hear about were 12 such that we don't believe he was ever likely exposed 13 to asbestos at that powerhouse. Although the 14 powerhouse did have source points, he was never around 15 the work that we can put our fingers on to point to as 16 a source point of exposure to asbestos. 17 In contrast, what you'll hear about in the 18 Navy is that he is working with Goodyearite, Cranite, 19 John Crane packing. He's around others working with 20 these specific products using them as they're intended 21 and in dusty conditions being exposed to asbestos from 22 those products as well. 23 Well, moving along in the timeline then, I've 24 written up here November of -- excuse me, that should 25 be 2013. I apologize. That is the date of his</p>

Page 106

1 diagnosis.

2 You'll also, by the way, hear about -- when he

3 went into the Navy is when he first started smoking.

4 And he smoked all the way through at least 2005. But

5 if you look in the medical records, it's one thing

6 about somebody's smoking history, they're all over the

7 map, you know, and not everybody can remember the exact

8 date that they stopped.

9 But he smoked through like 2005, 2006, 2007,

10 fought it. You'll learn all about it's addictive

11 nature and stuff like that. I think there was a

12 suggestion yesterday that he started smoking back when

13 there were warnings on the packages.

14 And what the evidence will show you is that in

15 1964, that's when the first Surgeon General report came

16 out about hazards. But there weren't any warnings on

17 packs of cigarettes until 1966, January by statute.

18 Now, that's not to say that a lot of people didn't say

19 that smoking was bad for you, but you'll hear about the

20 life Mr. Whalen entered into as a young man in the

21 Navy. The Navy was embedded with smoking. It was a

22 norm. They had ships that had -- what they called

23 smoking lamps in the systems of the ship, and they were

24 lit when you could smoke. And they were turned off and

25 that means you don't smoke.

Page 107

1 And it was patriotic to give servicemen

2 cigarettes for Christmas, and you took cigarette

3 breaks. You didn't take morning and afternoon breaks.

4 It was embedded in his environment. And he got

5 addicted basically to nicotine before the warnings were

6 ever on there. That's not to say that he didn't at

7 some point know it was bad for him, and it was. And he

8 knew that, but he couldn't stop, and you'll hear about

9 that.

10 The point of it is is that he had some

11 responses to it. He developed something called Chronic

12 Obstructive Pulmonary Disease, COPD, which he was

13 living with, and that's what they thought was part of

14 his breathing problems. Well, you smoked for a long

15 time, you've got problems breathing. Here's an

16 infection you're going through, you've got a problem

17 related to that. Had it just been that, he wouldn't be

18 here. He's not dying from COPD. He's living with it.

19 But what they found was he had something

20 entirely unrelated to his cigarette smoking, and that

21 was his mesothelioma, and that's changing his life

22 substantially.

23 I'm going to talk later in the evidence about

24 the pleural effusion, the thoracentesis, the shortness

25 of breath, thoracotomy, the CT, the vast procedures of

Page 108

1 chemotherapy. All of that, let's just put that in a

2 category. It's bad, it's tough, he's battling it, and

3 you only need to hear about it once, and we'll talk

4 about that.

5 But I do want to infuse those notions to how

6 we now that exposures to John Crane Packing, as a point

7 source, and Goodyear's products, and other company's

8 products are behind causing his mesothelioma in 2013.

9 Well, we already talked about the latency as

10 being completely classic. Earliest exposure we've been

11 able to investigate and to determine '64, disease

12 certainly by 2013 at appropriate latency.

13 Minimum latency, if you went back in time from

14 his diagnosis, let's say we went back 10 years, then we

15 would be at 2003. If you went back 15 years, meaning

16 if he had any exposure in those years, it wasn't long

17 enough ago to be involved in this meso diagnosis in

18 2013.

19 Well, if you did that, you're not going to get

20 back into his Navy career. You're still going to be

21 when he was serving post 1990 as a city manager for the

22 city, and we don't believe he was exposed to asbestos

23 there. So that we know that all of his aggregate

24 exposure occurred plenty long enough ago for the long

25 latency to be met in that -- in that aspect.

Page 109

1 And in total dose response, we know that his

2 risk of mesothelioma, unfortunately, is a hundred

3 percent. We're not looking at what increases the risk

4 of something he didn't happen to get. This case is

5 about what caused what he got. And that's what we are

6 here to prove, and we will prove to you that what

7 caused his response of mesothelioma is the aggregate

8 total dose of exposures he had to asbestos, long enough

9 ago for the biology to take place.

10 So the evidence will show you it's this total

11 dose in all of its component parts that produces this

12 outcome in Robert Whalen, not necessarily anybody else.

13 And that, as is true with all of

14 carcinogenesis, you cannot go back in a person's

15 history and assign causation to subsets or parts of the

16 total dose, and disregard the causal contribution of

17 some other part of it, because that's not how

18 carcinogenesis works.

19 We went through the generations of the cell

20 divisions, the effect of the additional subsequent

21 exposures. They are all interrelated in bringing about

22 the point where it tips and you have lost all

23 controlled cell growth of your mesothelial cells. They

24 are all causally related to this man's mesothelioma.

25 So that means you can't go back and say, well,

Page 110

1 it's the asbestos that was chrysotile from thermal
 2 insulation, but not the chrysotile in the cloth that
 3 caused this. Or you can't say it's all the packing but
 4 not the thermal insulation. Or it's all gaskets and
 5 packing and not any of the mud. Because they all
 6 contributed to bring about this biologic response
 7 clinical mesothelioma.

8 And the same is true, you'll hear that
 9 witnesses testify. We are going to talk to you about
 10 all sorts of cause and effect relationships.

11 So, for example, a little more familiar
 12 perhaps to some of you. If you had someone -- again,
 13 smoking has nothing to do with his mesothelioma, but
 14 let's say we were looking at a lung cancer and a person
 15 that had smoked cigarettes for many years, and let's
 16 say they smoked filtered cigarettes for awhile, and
 17 then unfiltered cigarettes for a time period, or that
 18 they smoked Winstons or Marlboros or different brands
 19 or Kents or New Ports in various combinations as they
 20 switched brands.

21 For the exact same reasons as it relates to
 22 asbestos aggregate dose amounts, is you couldn't go
 23 back in medicine or in science and say it was the years
 24 he smoked the unfiltered Winstons that caused his lung
 25 cancer and not the Marlboros or the Kents or the New

Page 111

1 Ports. All you can say is that in this man who got the
 2 smoking caused lung cancer, it's the aggregate dose in
 3 him, not necessarily anybody else, but in him, that
 4 produced this clinical response. It caused his
 5 response.

6 And so it is that this case is largely about
 7 the various contributions of asbestos exposure in
 8 Mr. Whalen's history that brought about this response,
 9 and we will show to you that he had exposures to
 10 asbestos that came from John Crane packing companies,
 11 valve packing, Cranite, gasket material, all the
 12 insulation. We'll go through and tell you everything
 13 we can about this aggregate dose. And ultimately then
 14 it will be for the defendants to carry their burden of
 15 proving down from a hundred percent, what percentage
 16 residual their asbestos contributed to this outcome.

17 Again, that's a shifting in the burden of
 18 proof. It's not our burden to prove John Crane or
 19 Goodyear or Thorpe's contribution up from zero. It's
 20 their burden to prove it down from a hundred, a burden
 21 we will help them carry.

22 And as I told you earlier, we're going to push
 23 that down quite a bit from zero, from a hundred towards
 24 zero, but it's not zero, because we can show the
 25 exposures.

Page 112

1 A minute about fiber counts that I think is
 2 important to orient you. Scientists you'll hear from
 3 the industrial hygienists that study asbestos, they
 4 need to be able to communicate accurately about
 5 concentrations in workplace dust. And so they will say
 6 things that are vague like there's a lot of dust, or
 7 there's minimal dust, or it's a moderate amount. And
 8 over time when doctors and such were looking at levels
 9 of asbestos exposure in the workplace, because it's
 10 been studied for decades, they wanted to try and
 11 standardized the communication.

12 So they developed ways that they could test
 13 air samples of concentration of dust in an air space
 14 collected, and then put it on a filter and describe
 15 levels of exposures to communicate with industrial
 16 hygienists about levels. And they've developed some
 17 terminology that we're going to have to get very
 18 familiar with. And some of it is not necessarily
 19 intuitive.

20 So, for example, early on when they were
 21 looking at asbestos disease -- and you'll see from
 22 various publications. Here's a publication from the
 23 Centers For Disease Control and Prevention, all about
 24 asbestos. You'll see the quotations again, this is an
 25 example from something called The Asbestos Working

Page 113

1 Group of OSHA, where they've specifically studied all
 2 the literature regarding asbestos. These notions I've
 3 already shared with you, the lower the exposure, the
 4 lower the risk of developing asbestosis and cancer,
 5 that's dose response. Excessive cancer risks, however,
 6 have been demonstrated at all, fiber concentration
 7 study to date, evaluation of all available human data
 8 provides no evidence of a threshold or for a safe level
 9 of asbestos exposure, various things that I've already
 10 talked to you about. We'll show you where that's
 11 actually in the literature and the authors have talked
 12 about it.

13 But here's an example of the teaching of
 14 counting methods.

15 So when they take an air pump, and they put it
 16 on a workers belt, and they're pumping air back through
 17 a tube that's got a little metal core filter with very
 18 small holes in it, and they run it for a stated period
 19 of time, they're trying to get an estimate of the
 20 amount of dust in that air in that work environment.
 21 They collect -- we're talking about exceedingly small
 22 things they're looking for.

23 They'll collect it on the filter, and then
 24 they'll dilute it, and pour it and prepare it in
 25 certain ways, and they'll put it under a microscope.

1 And this is what you may see under a microscope.
 2 You'll see some things that look like fiber bundles,
 3 some things that cross, some things that go off the
 4 stage, some fiber bundles that are barely on the
 5 microscope stage, some that's got a blob of something
 6 with a fiber, various impurities in the air.

7 And you might look at that and say well,
 8 what's the count, how many fibers were in that air
 9 sample. I think you'll be surprised of the count.
 10 It's not what you would expect. So when a person in
 11 industrial hygiene says there's one fiber per CC,
 12 meaning one asbestos fiber in the volume of about a
 13 sugar cube, a cubic centimeter, that doesn't mean that
 14 there's only one asbestos fiber in that level. It's
 15 the amount that meets all of the counting criteria for
 16 a fiber.

17 A fiber has to be three times longer than it
 18 is wide. So right now I'm a fiber. I may not be a
 19 fiber all my life, but right now I'm a fiber, and you
 20 look at this. Some of these things, that's not a
 21 fiber, even though it's in a fiber. It has to be
 22 one to be counted that's all on the stage, not any part
 23 of it off. So believe it or not, this example number
 24 eight, a fiber bundle of asbestos wouldn't be counted
 25 as a fiber in this test result, because part of it is

1 off the stage. This one wouldn't be counted either.

2 So it's a very particular science under
 3 something called the National Institute for Occupations
 4 Safety and Health, called NIOSH, this method, 7,400
 5 method of counting.

6 And the reason I go into this in some detail
 7 is because you'll hear over time in the literature I'm
 8 about to show you that people tried to look for levels
 9 of exposure where you wouldn't expect there to be
 10 disease in the majority of people exposed in that
 11 environment.

12 And they expressed it in terms of million
 13 particles per cubic foot and later in fibers per CC.
 14 And these did provide some guidelines as they followed
 15 populations where they didn't see a whole bunch of
 16 asbestosis in people that were exposed at those levels.
 17 But they've never found a level that doesn't increase
 18 the risk of mesothelioma and lung cancer from exposures
 19 to asbestos.

20 So these guidelines have only ever been for
 21 the fibrotic diseases, never for the cancer diseases
 22 like Mr. Whalen suffers from.

23 So again, I reiterate the literature is going
 24 to well show you that there's never been established a
 25 level that they know is safe in terms of exposure to

1 asbestos. And that's been true for as long as they've
 2 been studying asbestos-related disease.

3 Now, in terms of specifically Mr. Whalen,
 4 here's an example of some of the medical information
 5 you'll see about him. To see how the doctors were
 6 really trying to see what they had on their hands. And
 7 this sort of nomenclature medically will become second
 8 nature to you by the end of this case.

9 You'll see this is in May of 2014. They're
 10 still trying to see is this not mesothelioma. They're
 11 hoping it's not mesothelioma because if it is
 12 mesothelioma, they can't really help him much. They
 13 hope it's some other thing, it's an acute infection,
 14 maybe it's a bronchiogenic carcinoma, and they go
 15 through all the tests to determine exactly what it is.

16 "The patient is a 68-year-old male presented
 17 with problems with pleural effusion on the right side."

18 Okay. Pleural effusion is the collection of
 19 fluid. The fusion means fluid. As the tumors grows
 20 and makes room for itself, it exudes a certain fluid
 21 that collects in the airtight airspace of the chest
 22 cavity, and they can drain that fluid and make you feel
 23 better even though it's still going to collect again.

24 "Pleural effusion on the right side with
 25 initially a thoracentesis" -- that's the procedure

1 where they stick a needle between your ribs in the back
 2 or the front and draw out the fluid, thoracentesis, by
 3 pulmonary medicine, that again -- excuse me --
 4 "thoracentesis showing an exudate but negative
 5 cytology." Showing fluid.

6 Negative cytology means -- cytology is fluids.
 7 That's what pathologists look at smears, Pap smears,
 8 things like that. The preparation of the fluid, the
 9 analysis of the fluid did not find any malignancy in
 10 the fluid. Part of the things they were having trouble
 11 figuring out.

12 "He then had a repeat thoracentesis by
 13 pulmonary medicine that again was negative for cytology
 14 but exudative with some bloody fluid and inability to
 15 drain all of his infusion. He was therefore sent to
 16 Dr. Richard Thompson in Lincoln, Nebraska, "and
 17 underwent a right thoracotomy with total lung
 18 decortication and pleural biopsy on 12/3/2013." Those
 19 are procedures where they're now taking tissue, not
 20 just fluid, from the lung itself.

21 This biopsy returned with an epithelioid
 22 pleural mesothelioma." When you take that tissue and
 23 you stain it, it's a very complicated thing called
 24 immunohistochemical staining. That's how you
 25 differentiate malignancies. And his unfortunately came

Page 118

1 back finally with the entire profile consistent with
 2 mesothelioma and diagnostic of mesothelioma as opposed
 3 to some other malignancy.
 4 And thereafter they talked about a CT scan of
 5 the chest showed some mildly prominent lymph nodes in
 6 the mediastinum. They're concerned about that because
 7 that helps facilitate. Remember the green veins in the
 8 chart I showed you, the spread of the malignancy, the
 9 mesothelioma, that there's no other involvement. It's
 10 a very ominous sign. But they didn't see any obvious
 11 metastatic or spread disease spreading the tumor.
 12 "He does have known severe obstructive
 13 pulmonary disease and is currently on oxygen therapy."
 14 That's from his cigarettes. Very different process
 15 he's dealing with. "He is not a surgical candidate for
 16 any aggressive resection of his disease.
 17 "Restaging CT scan after three cycles on
 18 2/20/14 showed stable disease," meaning their hitting
 19 it with these very experimental chemotherapy drugs,
 20 basically poisons. Ones called ALIMTA and ones called
 21 cisplatin, and they have some moderate impact on
 22 slowing the growth of the mesothelioma, and they found
 23 that that was indeed the case with him. It's probably
 24 why he is still as good a shape as he is in.
 25 "He had delay in receiving cycle four" after

Page 119

1 the stable disease of treatment "due to recurrent
 2 pneumonia." That's a collection of fluid inside your
 3 lungs, not outside, as an infusion that required
 4 hospitalization in March. The "sputum showing
 5 pseudomonas and aspergillus fumigatus." This is --
 6 sputum is spit and things they find in the spit that's
 7 helpful for them to diagnose whether you have an
 8 infection going on inside you.
 9 "The plan is to give eight cycles of
 10 chemotherapy and possibly maintenance treatment
 11 thereafter. Restaging CT scans after five cycles
 12 showed a nice response."
 13 So the efforts to go through the chemo, you'll
 14 hear about how sick that makes you. The chemotherapy
 15 that they administered. It's making good progress as
 16 best you can, but it unfortunately is not a curative in
 17 his particular circumstance.
 18 It's our burden to introduce evidence in two
 19 areas of the law, vis-à-vis these trial defendants.
 20 One has to do with the product liability. And the
 21 judge didn't instruct you today on the substantive law
 22 in California on products liability. But it's
 23 basically going to be that a product needs to perform
 24 as safely as an ordinary consumer with respect to
 25 perform when it's used as intended.

Page 120

1 And if a product doesn't meet that standard
 2 and somebody is injured, there is liability for that
 3 injury on products liability. It doesn't matter who
 4 knows what, when, about it, it's a simple protective
 5 consumer oriented standard.
 6 A product needs to perform as safely as an
 7 ordinary consumer would expect when it's used as
 8 intended.
 9 So that means -- you know, cars are dangerous.
 10 You can get run over by a car, but that's what they're
 11 meant to do. That doesn't make them defective in
 12 design. But a car sitting at a stoplight and suddenly
 13 explodes, that would violate the ordinary expectation
 14 of a car consumer. That's basically how it works out.
 15 And we will show you that the people working
 16 with these valve packings which they thought were
 17 entirely innocuous, the workers, they never expected to
 18 be put at risk of an incurable cancer decades later by
 19 just pulling this stuff off, clipping it, wrapping it
 20 around a stem, and doing their job as a machinist. If
 21 that's the case, these products failed at product
 22 liability function.
 23 There's also a basis for liability under
 24 products liability for failure to warn, and we will
 25 show you what was known or knowable about the dangers

Page 121

1 of asbestos products and that John Crane and Goodyear
 2 and Thorpe never warned about the dangers of asbestos
 3 associated with these products when they're used as
 4 intended.
 5 Separate and apart from the product liability
 6 then, we'll introduce the evidence about negligence.
 7 And unlike just a simple product focus, did the product
 8 adhere to the standard I mentioned a moment ago, this
 9 is related to who knew what when, conduct base,
 10 knowledge base. And the standard is, what did these
 11 companies know or should they have known about the
 12 dangers associated with their products.
 13 And we will show you that the very things I'm
 14 talking about here predate the exposures Mr. Whalen had
 15 to these company's products.
 16 A duty of ordinary care to avoid injury to
 17 others is to warn and communicate about dangers
 18 associated with the product or to redesign them,
 19 because as you're going to find out, packing doesn't
 20 have to have asbestos in it to work. There's all kinds
 21 of packing without asbestos.
 22 Asbestos works really good, and it's
 23 available, but it doesn't have to be in these products.
 24 And it doesn't have to be in industrial strength
 25 gaskets. It doesn't have to be in insulation. It

Page 122

1 doesn't have to be in lagging. It was good in that
 2 product, in those products. It worked wonderfully and
 3 readily available as an ingredient, but make no mistake
 4 the evidence will show you you don't have to have
 5 asbestos in any product, and they don't today. And
 6 that they didn't warn about the dangers of asbestos.
 7 Well, what is the evidence going to be about
 8 what was known about the dangers of asbestos and when.
 9 And in the interest of time, we're going to bring you
 10 an individual who's taken a specific focused look at
 11 this. You're going to meet him next week, probably
 12 Monday. His name is Dr. Richard Cohen. He's an
 13 associate professor at UCSF, and he has board
 14 certification in internal medicine in something called
 15 occupational disease and preventative medicine,
 16 practicing M.D.
 17 And he's gone back in the literature and
 18 looked to see what was published in mainstream medical
 19 journals and other scientific journals about the
 20 dangers of asbestos and what was knowable about these
 21 products.
 22 And we will show those articles, we'll go
 23 through the nomenclature. And what you'll come to find
 24 out is by specific dates in time, the things I'm
 25 talking to you about today, were well-established in

Page 123

1 medicine and available in science for anybody who
 2 wanted to find out about them.
 3 I already told you that asbestosis was coined
 4 as a unique disease related to asbestos exposure by
 5 Dr. Cooke in 1924. Same with these pleural scars and
 6 such.
 7 Now, what happens in medicine is there are
 8 things called case reports that get published. A
 9 doctor sees a bunch of people that are exposed to like
 10 asbestos textiles, and they come into their office and
 11 they say I've got this blazing fibrosis and scarring.
 12 A doctor may write up that case report and
 13 publish it in the Journal of American Medical
 14 Association or the British Journal of Medicine or
 15 Lancet, or the New England Journal of Medicine. And
 16 he'll write it or she'll write it by saying, hey, I saw
 17 this patient had a raging scarring of her lungs or his
 18 lungs, and unique about them was their only job had
 19 ever been working for a textile mill where they made
 20 asbestos cloth. And I think there may be some
 21 connection. Anybody else see anything like that.
 22 And other doctors will read this in the '20s
 23 and '30, and they'll look and they'll say, you know,
 24 I've got a couple ladies and gentlemen that meet that
 25 as well, they'll write a case report.

Page 124

1 And pretty soon there may be 5, 6, 12, 20 of
 2 them. And somebody will get the attention, and say
 3 let's do an epidemiologic study. Let's get a group.
 4 Let's control the variables. Let's allow for
 5 confounders, and let's analyze the population, and
 6 let's see, does this agent cause this problem.
 7 And that began in the '20s and into the early
 8 '30s, specific to asbestos exposure.
 9 And again, there's some debate about when, but
 10 most people believe that by 1935 everybody knew that
 11 asbestos was dangerous and caused this incurable
 12 scarring of the lungs called asbestosis. The very
 13 thing that I'm telling you about today.
 14 And in fact, all of these notions here that we
 15 went over about the disease asbestosis being a disease
 16 of long latency, you'll see the Merewether paper from
 17 1930 that lays all of this out. You'll see total dose
 18 response. You'll see individual susceptibility and
 19 incurable fatal disease reported by Dr. Merewether.
 20 He is the chief inspector of factories in --
 21 happens to be -- England, and that's picked up by the
 22 Harvard School of Medicine and publishes the article in
 23 their journal in the '30s.
 24 And you will see the cascade of information
 25 that comes across medical and scientific communities

Page 125

1 about these very things being established specific to
 2 asbestos as a hazard.
 3 You'll see industries dealing with it. You'll
 4 see in 1937 Standard Oil of New Jersey, which now
 5 became Exxon, but they were running refineries that had
 6 a lot of big vessels that used a lot of steam, a lot of
 7 pipe, a lot of insulation, and they comment on, in the
 8 petrochemical industry, we see people getting
 9 asbestosis. We see people getting disease, and they
 10 lay out how to prevent it.
 11 Here's what you do to prevent it. Get rid of
 12 the asbestos, substitute something else. Or if you're
 13 not going to do that, put on respiratory protection.
 14 Put on clothes that don't get contaminated. Don't let
 15 people create dust. Wet everything down with
 16 surfactants.
 17 In the '30s they're talking about how to stop
 18 asbestos-related disease. You'll also see, then, that
 19 some doctors begin to report, and I don't have time to
 20 go through and show you all of these articles.
 21 But you'll see there 's no -- there's no
 22 debate of what these people are talking about, and it
 23 has to do specifically with dangers of asbestos.
 24 You'll see that they start reporting and seeing the
 25 cancers.

<p style="text-align: right;">Page 126</p> <p>1 Here's kind of what these things will 2 generally look like, just to give you some idea. So, 3 for example, here's the Journal of Industrial Hygiene 4 from the Harvard School of Public Health. And here 5 where they're talking about -- this is Dr. Merewether's 6 paper -- the "Occurrence of Pulmonary Fibrosis and 7 other Pulmonary Affections in Asbestos Workers," by 8 Merewether. Again, this is 1930.</p> <p>9 Pulmonary fibrosis means lung scarring. Other 10 pulmonary diseases -- asbestos workers were people who 11 were making asbestos-containing products. And you'll 12 see the publication in there is quite explicit in what 13 they know in our discussing about this problems.</p> <p>14 Talking about asbestosis in the '30s, "The 15 disease insidious in its onset," exactly like I've been 16 describing. You don't have any perceived trauma you're 17 feeling. "Stealthily advances but with faint warnings 18 of its progress, inexorably it cripples the essential 19 tissues of the lungs," as we've seen.</p> <p>20 "Yet for a considerable period causes almost 21 no inconvenience to the worker. As time goes on, 22 however, the lungs find more and more difficulty in 23 re-aerating the blood, and breathing is quickened on 24 slight exertion. Still the worker is unable to remain 25 at work, but is unaware of his undue shortness of</p>	<p style="text-align: right;">Page 128</p> <p>1 under the following conditions is seriously harmful." 2 And they talk about different kinds of dust, and when 3 you get down to asbestos, asbestos in every operation 4 in which it is used. Period. End of story. It's bad 5 to breathe asbestos, and it was known to be such, well 6 established in the 1930s.</p> <p>7 Now, some doctors -- that's why I wrote 1935. 8 That's a conservative estimate. By that time it really 9 wasn't new or novel. It was sort of like yesterday's 10 newspaper. Nobody's publishing case reports saying, 11 hey, I think there may be a scar disease associated 12 with exposures to asbestos.</p> <p>13 What is new or novel and to give you some idea 14 of how long people have been looking at it, for 15 example, here is a paper in 1935, October of 1935, and 16 we'll talk about all of these things in context, by 17 Dr. Gloyne who did a lot of studying of 18 asbestos-related disease, and this is an example, 19 ladies and gentlemen, of the case reports I was talking 20 about.</p> <p>21 So they all know that asbestos exposure can 22 cause the scar response that's dangerous. Here 23 Dr. Gloyne is reporting two cases of squamous 24 carcinogen of the lung occurring in asbestos. 25 Squamous carcinogen of the lung means lung</p>
<p style="text-align: right;">Page 127</p> <p>1 breath on extra effort. Usually, however, he ascribes 2 it to causes other than the dust he is inhaling."</p> <p>3 I am not getting younger, I could lose a few 4 pounds, I'm kind of out of shape. That's the kind of 5 things people were thinking. But the doctors knew 6 exactly what they were seeing, and it was indeed this 7 disease, asbestosis. As you move through into the '30s 8 you begin to see a recognition among people in 9 industry. Here's an example.</p> <p>10 And again, I hesitate to show you these, 11 because they're not complete. In other words, we have 12 multiple articles we're going to show you folks to give 13 you the appropriate context about what was known. But 14 these are just some examples.</p> <p>15 The self proclaimed magazine of safety among 16 engineers called Safety Engineering, this is an issue 17 from November of 1931, and they're concerned about dust 18 as a source of problems in people working in 19 environments, and they publish here by Dr. Willson, the 20 very least employer should know about dust and fumes 21 diseases.</p> <p>22 And at the end of the article rather 23 matter-of-factly because of the level of literature 24 available, Dr. Willson certainly says it like it was. 25 "We do know, however, that breathing of dust</p>	<p style="text-align: right;">Page 129</p> <p>1 cancer. Here he is reporting of two patients that came 2 to him that not only had asbestosis and worked around 3 asbestos dust in the environment but they also 4 co-present with lung cancer.</p> <p>5 And he's wondering is there some relationship 6 between asbestos or asbestosis maybe, and cancer. As a 7 way to prompt people to do research. And we'll go 8 through the literature, and you will see an amazing 9 amount of attention put on that.</p> <p>10 And so again, depending on who you ask, within 11 the next 20 years, conservatively, by 1955, it was well 12 established that yes, asbestos exposure causes lung 13 cancer. No doubt about it. And it was so published in 14 the literature.</p> <p>15 What you'll also learn is that -- and by the 16 way, Mr. Whalen was 10. What you'll also see is that 17 back in this time period, doctors saw a cancer in your 18 chest as basically they called it lung cancer. But 19 they began to realize that there were different organs 20 in your chest other than just your lungs, and they 21 certainly knew about the pleura. And they began to 22 differentiate lung chest cancers from cancers of the 23 pleura.</p> <p>24 And, in fact, making that distinction, we'll 25 through the evidence, clearly by 1960, it was well</p>

Page 130

1 established that asbestos exposure caused this
 2 incurable cancer of the lining of the lung,
 3 mesothelioma.

4 All along in the literature, they are making
 5 comment about there is no safe level of exposure, the
 6 dust is invisible, whatever levels we've looked at we
 7 see disease. We were not able to say that you can
 8 expose people without increasing their risk of it.

9 And I wanted to show you by the 1950s you will
 10 see the leading people looking at cancer. Cancer in
 11 the '40s and '50s was not as prevalent in society as it
 12 is today. It was a little bit more of a new idea.
 13 Here is Dr. Hueper who was the chief of carcinogenic
 14 cancerogenic studies at our National Cancer Institute,
 15 part of the National Institutes of Health back in
 16 Bethesda, one of the central places in the United
 17 States to study cancer.

18 And Dr. Hueper's report about environmental
 19 and occupational cancer, and surveys that he's involved
 20 in. And you will see that he is now breaking down a
 21 study and able to describe specific trades and aspects
 22 of source points of exposures to asbestos in various
 23 settings that lead to and cause cancer.

24 Construction-related activities, people who
 25 were in mining as well as people who encounter asbestos

Page 131

1 as carpenters, gasket makers, insulation workers,
 2 plumbers who worked with packing.

3 Right there you'll see pump-packing mechanics
 4 whose main exposure is to valve packing when you're
 5 unpacking a valve, or a pump that's leaking and
 6 cleaning it out. And this, by the way, the date of
 7 this is 1950.

8 So on any conservative estimate, the evidence
 9 will show you folks that there was a tremendous amount
 10 of information available around the world, as we will
 11 show you, about the dangers of exposure to asbestos
 12 including specific to the diseases we're talking about
 13 here, mesothelioma.

14 As an example, by the way, this is from 1957
 15 down in Australia. The world's literature now is
 16 expressing their views. This is talking about
 17 asbestosis. It says, "The following operations are
 18 involved, handling the substance in its raw state,
 19 grinding the substance prior its use in some process,
 20 mixing it with diatomaceous earth or kaolin to form
 21 lagging materials, sawing, cutting, and finishing any
 22 product containing asbestos. For example, brake
 23 linings, asbestos sheeting, and various insulating
 24 materials; tearing down old lagging. This is a very
 25 dangerous process even in the open air; spraying

Page 132

1 asbestos on walls and ceilings as an insulator," et
 2 cetera.

3 They are now in the medical journals around
 4 the world describing specific ways that people are
 5 being exposed to asbestos that lead to disease. And,
 6 in fact, they start following specific case reports.

7 You'll see evidence from a journal called the
 8 Lancet. The Lancet is one of the world's leading most
 9 prominent medical journals, and here it is in 1960.
 10 We'll show you the other journals as well, where the
 11 doctors are reporting about asbestosis. And here
 12 they're talking about mesotheliomas in your abdomen,
 13 the peritoneal mesothelioma involving the same cells
 14 that are in your pleura, involving the same serosal
 15 membranes.

16 And here they set forth charts of cases about
 17 people developing these diseases and what they did.
 18 The types of exposures that they have. And you can see
 19 all the various settings that are reported, and all the
 20 different circumstances confirming what Dr. Willson
 21 wrote about in 1931, that asbestos exposure is
 22 seriously harmful in every operation where it's dusty
 23 and used. Period. Going through table after table,
 24 and data after data, they go through this in great
 25 length.

Page 133

1 Despite all of this, these companies continue
 2 to make asbestos-containing products, and the evidence
 3 will show that none of them warned anybody about the
 4 dangers associated with it.

5 A couple more thoughts, and then I'll be done.

6 When it comes to causation, our burden is to
 7 prove that these companies' products were a substantial
 8 factor contributing to his risk of disease. We will
 9 show that with evidence and doctors.

10 But I think it's important to point out we
 11 don't have to prove something is the cause. The cause
 12 of his mesothelioma is asbestos. We have to show that
 13 John Crane, Goodyear, Thorpe, the aggregate, all the
 14 contributors, that they are each a cause, not the
 15 cause.

16 You're not asked to assess the majority cause
 17 to the contrary. Did it contribute as part of the
 18 aggregate dose in this man and the outcome for him, and
 19 we will show that it indeed did.

20 It's also our burden to introduce evidence
 21 about damages. This will largely be uncontroverted.
 22 The economic, what does it mean, the cost of medical
 23 treatments, chemotherapy, et cetera, relatively easy to
 24 do.

25 The noneconomic components personal to

Page 134

1 Mr. Whalen, what it's like to go through this, this
2 disease. Again, having nothing to do with his
3 cigarette problem, having everything to do with his
4 asbestos death he's now dealing with.

5 And the law certainly recognizes people in the
6 position of Linda Whalen and how it affects her life
7 becoming basically the monitoring of her husband's
8 demise.

9 As people get into end stage disease, they
10 become weak, they don't want to eat, their body begins
11 to use the nutrients in their muscles. You develop a
12 cachectic look is what it's called. It's sometimes
13 referred to loosely as the prisoner of war syndrome,
14 when you start looking at sunken eyes and cheeks,
15 because you just consume your own nutrients because you
16 don't want to eat.

17 And the reason you don't want to eat, is
18 because it's hurting like hell to breathe. And then
19 they give you narcotics to help with that pain, and
20 that makes you constipated, and so you don't want to go
21 to the bathroom.

22 So you don't want to eat, you don't want to
23 live, you don't want to do anything instead of just be.
24 And that's unfortunately in the future for Mr. Whalen,
25 and there's nothing doctors can do about it.

Page 135

1 And again, to emphasize, because we have
2 things we have to prove by this more likely true than
3 not true standard, which we will, and so do the
4 defendants. And I think it's useful for you to
5 understand that they are not the only source point of
6 asbestos exposure, as I've emphasized all morning and
7 this afternoon.

8 And so they are not 100 percent the cause of
9 Mr. Whalen's plight. There's true for Goodyear, that's
10 true for Thorpe, that's true for Dura Metallic, that's
11 true for General Electric, that's true for everybody.
12 That's true for John Crane.

13 But they were all part of the aggregate dose
14 that produced this response. And so we will be
15 introducing evidence about what remaining portion of
16 this hundred percent they're a part of belongs to them,
17 and it's their burden to prove what that number is down
18 from a hundred. Their burden of proof and what the
19 residual is.

20 It is not our burden to start at zero percent
21 and prove it up to a number. And that's the way the
22 law orients these circumstances, in terms of the tasks
23 before you, and as I said earlier this morning, and
24 I'll say it again now, their percentages are closer to
25 zero as a contributing part than they are closer to a

Page 136

1 hundred. But they are not zero, just as like they are
2 not a hundred.

3 And this trial is largely about the
4 appropriate percentage of contribution that they made
5 long enough ago for the biology to be involved in
6 producing this unfortunate mesothelioma. We will prove
7 that their products did not perform as safely as an
8 ordinary consumer would expect when they used it as
9 intended.

10 Therefore, they are liable under products
11 liability, regardless of what they knew, and what they
12 knew about the dangers of asbestos.

13 We will also prove that they are negligent,
14 because indeed there was a wealth of information for
15 them to understand that asbestos in any exposure is a
16 bad thing, and you can prevent it, and they talked
17 about how to prevent it way back into the '30s, and
18 it's not a situation where you could somehow say, well,
19 those are insulators that are getting sick from
20 asbestos, and my asbestos is encapsulated in a packing.

21 Yeah, but that packing wears out and people
22 have to change it out, and when they have to change it
23 out, everything that's not asbestos is burnt and cooked
24 out of that package, and that dust they're exposed to
25 hazardous and dangerous, and people shouldn't be

Page 137

1 exposed to it.

2 Those are the kind of things you'll hear about
3 in the evidence. I appreciate very much your patience
4 with me. As I said this morning, we have a lot of
5 materials we have to cover. And now you see the big
6 picture, I hope.

7 But in fairness now, it's their turn to tell
8 you what they think. And please give them the same
9 amount of attention you've been kind enough to give me.
10 I will tell you that one way we avoid people chirping
11 and objecting and delaying us, is that I show them all
12 of my stuff, what I've shown you now in opening, and
13 they've shown me all of their Power Points and
14 exposures and slides.

15 And there's not any surprises. We're both
16 prepared for what each side is going to say. So give
17 him attention, what he thinks the evidence is going to
18 show, and I look forward to working with you to go
19 through what he's talking about and make sure you have
20 the education, cross-examination, and vetting of all of
21 it to understand that these companies bear some
22 percentage responsibility for this enormous, terrible
23 outcome for Mr. and Mrs. Whalen. Thank you.

24 THE COURT: Okay. But before we hear from
25 anyone else, we're going to take our break. And so why