

Page 211 IN THE CIRCUIT COURT FOR BALTIMORE CITY IN RE: PERSONAL INJURY * ASBESTOS LITIGATION * * * * * * GEORGE JONES, et al., * November 12, 2008 * Trial Group Plaintiffs * Consolidated No. v. * 24-X-07-000297 * ACandS, INC., et al., * * Defendants * * * * * * CASES AFFECTED: * BENNIE BLACKMON * 24-X-06-000754 * * * * * OFFICIAL TRIAL TRANSCRIPT Opening Statements and Presentation of Evidence in the above-captioned case continued on Tuesday, November 18, 2008, commencing at 9:30 a.m., before the Honorable John M. Glynn, in Courtroom 236, Clarence M. Mitchell, Jr. Courthouse, 110 North Calvert Street, Baltimore, Maryland 21202, and reported by Denise M. Thomas and Barbara J. Evans, Notaries Public. EVANS REPORTING SERVICE Munsey Building 7 North Calvert Street, Suite 705 Baltimore, Maryland 21202 410.727.7100 800.256.8410	Page 213 1 PROCEEDINGS 2 * * * * * 3 (In open court.) 4 THE COURT CLERK: All rise. Circuit 5 Court for Baltimore City, Part 8, is now in session. 6 THE COURT: Please be seated. 7 Good morning. 8 ALL COUNSEL: Good morning, Your Honor. 9 THE COURT: You had some question you 10 wanted to ask. Somebody had a question. 11 MR. MACDONALD: Your Honor, there are 12 just a couple preliminary issues. The first is a 13 Motion for Summary Judgment. You ordered the use 14 plaintiffs -- 15 THE COURT: Yes. 16 MR. MACDONALD: The first thing that 17 needs to be done from the rules perspective is 18 plaintiff needs to file proof of return, which I 19 understand they have. And I'll be asking for an 20 entry of any returns. 21 MR. ZACHAROPOULOS: Good morning, Your
Page 212 1 APPEARANCES: 2 3 On behalf of the Plaintiffs: 4 Scott L. Frost, Esquire 5 George Tankard, Esquire 6 Demetrios Zacharopoulos, Esquire 7 8 On behalf of the Defendants: 9 R. Thomas Radcliffe, Jr., Esquire 10 Steven J. Parrott, Esquire 11 Neil MacDonald, Esquire 12 Eric R.I. Cottle, Esquire 13 James Lowery, Esquire 14 15 Also Present: Eric Massof, Law Clerk 16 Jenelle Moore, Court Clerk 17 18 19 20 21	Page 214 1 Honor. Demetrios Zacharopoulos from Waters & Kraus 2 on behalf of the plaintiff. 3 I have with me three proofs of service 4 along with the letters and a copy of the complaint 5 that went out to the three use plaintiffs. 6 Page 3 of each document is a copy of 7 the certified return that has been signed. So at 8 this time, I would like to move each one of these 9 documents to become part of the file. 10 THE COURT: They are received. 11 MR. MACDONALD: And then, Your Honor, 12 pursuant to the motion filed by Crane Co., we would 13 ask for entry of the summary judgment on behalf of 14 the defendants as to the use plaintiffs not 15 represented by counsel. 16 THE COURT: Those will be entered. 17 Apparently, they have done nothing to 18 protect their rights whatsoever. What is the number 19 of that order so I can get it entered? 20 MR. MACDONALD: I will get that. 21 THE COURT: Make sure Eric gets that.

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Page 215 1 Okay? 2 MR. MACDONALD: Yes, Your Honor. 3 THE COURT: What else? 4 MR. MACDONALD: The other matters this 5 morning, we did file a motion to compel on 6 settlement documentation that hasn't been provided. 7 And I mentioned it to counsel this morning. We had 8 thought we were going to have the information last 9 week. 10 In any event, because it was just filed 11 today, I would ask that Your Honor order some 12 timeframe for them to respond, but keeping in mind 13 that we need the settlement documentation in order 14 to know what we have to prove as far as our 15 cross-claims are concerned, whether we need to go 16 through all the evidence and ask substantial factor 17 causation questions or whether these are automatic 18 shares. 19 So I would ask that the information -- 20 that any response to this motion filed this morning 21 be required to be responded to seasonably so that we	Page 217 1 MR. ZACHAROPOULOS: Yes, Your Honor. 2 THE COURT: Tomorrow morning. 3 MR. MACDONALD: That's fine. 4 MR. ZACHAROPOULOS: That's fine. 5 MR. RADCLIFFE: Your Honor, I guess we 6 need to revisit the use plaintiffs. My 7 understanding is Mr. Blackmon had four children who 8 are not parties to this case. 9 And I understand that one of them is 10 deceased, but that we found out yesterday that that 11 deceased child had a daughter or another child who 12 may be a wrongful death beneficiary under the 13 statute. 14 My understanding of the statute is that 15 it is mandatory, it is not permissive, and that it 16 is an indispensable party. The estate on behalf of 17 that minor child is an indispensable party. 18 THE COURT: What is this person's name? 19 MR. PARROTT: Kayla. 20 THE COURT: Kayla what? 21 MR. RADCLIFFE: The child? I don't
Page 216 1 can hopefully have the information we are entitled 2 to as quickly as possible. 3 THE COURT: Is this controversial in 4 some way? 5 MR. ZACHAROPOULOS: It's not, Your 6 Honor. And we are going to work it out for sure. 7 THE COURT: Okay. When do you think 8 you'll be able to do that? 9 MR. ZACHAROPOULOS: I am hoping by the 10 end of today, first thing tomorrow. 11 THE COURT: We will just say -- we will 12 give you until the 25th, next week. Is that too 13 late for you? 14 MR. MACDONALD: I believe it is, Your 15 Honor, because I need to know what the plaintiff's 16 witnesses that are coming up next week -- before I 17 can ask them questions. 18 THE COURT: All right. I got you. I 19 got the point. 20 All right. When can you do it? By 21 tomorrow, you think?	Page 218 1 know their last name. 2 MR. ZACHAROPOULOS: Your Honor, it's 3 Samantha Jo Ramsey. 4 THE COURT: Samantha Jo Ramsey? That's 5 the -- 6 MR. ZACHAROPOULOS: The name of the 7 decedent's daughter. 8 THE COURT: So the party is the 9 daughter, not the estate? 10 MR. RADCLIFFE: The wrongful death 11 beneficiary is the daughter. Once she passes, her 12 rights as a wrongful death beneficiary vest in the 13 estate to be transmitted to her daughter, the 14 granddaughter. So that estate on behalf of the 15 granddaughter, as I understand it, is an 16 indispensable party for the wrongful death claim. 17 THE COURT: All right. What have we 18 done about that? Has the plaintiff done anything on 19 that? Did the plaintiff know about this? 20 MR. ZACHAROPOULOS: No. 21 THE COURT: When did you learn this?

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Page 219 1 MR. ZACHAROPOULOS: Just now. 2 MR. FROST: We probably learned about 3 it yesterday, Your Honor, but we have not -- 4 THE COURT: What are we going to do 5 about that? What can we do about that? We are 6 ready to go, so what do we do now? Anybody? Any 7 brilliant ideas? 8 MR. MACDONALD: Your Honor, the only 9 thing that can happen is -- 10 MR. RADCLIFFE: We have to sever the 11 wrongful death action. 12 MR. MACDONALD: Actually, I think it 13 would be a dismissal because it would be a mistrial. 14 MR. RADCLIFFE: We can proceed with the 15 survivorship. 16 THE COURT: So we dismiss any wrongful 17 death claim as to that plaintiff? 18 MR. RADCLIFFE: No. The entire 19 wrongful death claim. The wrongful death claim 20 cannot proceed without that indispensable party. So 21 it will have to be dismissed and refiled with all	Page 221 1 Now, I'll be honest, I haven't read the 2 statute to figure out if you don't know where a 3 person is, how you would give notice. And I would 4 assume that -- 5 THE COURT: You probably publish it in 6 papers with general circulation in whatever 7 jurisdiction you thought they lived in. 8 Does anybody know where she lived? 9 MR. FROST: What I have been told is 10 that once the mother died, the person has had no 11 further contact with the family as of this point. 12 We have no idea where she is. 13 THE COURT: When last heard of, where 14 did she live? 15 MR. FROST: Hold on a second. 16 THE COURT: I'm not sure that's going 17 to do me any good, but -- 18 MR. MACDONALD: It actually is 19 pertinent because the 15-101 does say you give 20 notice at the last known address. 21 MR. FROST: It appears that there was a
Page 220 1 parties at a later date. 2 MR. MACDONALD: Otherwise, Your Honor, 3 it would be an advisory opinion, anything that this 4 jury would do. The jury would sit for three weeks 5 and would render a non-binding opinion. 6 THE COURT: What do we do about that? 7 That sort of makes this whole thing a waste of time. 8 MR. RADCLIFFE: It doesn't make it a 9 waste of time, Judge. We are ready to proceed on 10 the survivorship claim. 11 MR. FROST: Well, it does make it a 12 waste of time, Your Honor. 13 THE COURT: The wrongful death claim -- 14 MR. FROST: Is the claim that we are 15 trying. 16 The real fundamental problem is nobody 17 knows where this person is. So according to what I 18 have been told this morning, even if they are 19 correct that she is a wrongful death beneficiary, 20 not knowing where that person is makes it impossible 21 for me to give notice.	Page 222 1 divorce in the family prior to the death and that 2 the father had custody of the daughter and took the 3 daughter out of state. And no one knows -- at least 4 this part of the family has no idea where they are. 5 THE COURT: And they were last in South 6 Carolina? 7 MR. FROST: Yes, Your Honor. 8 THE COURT: They were in South 9 Carolina? 10 MR. FROST: North Carolina. North 11 Carolina. The Carolinas. 12 THE COURT: Right. I got you. 13 I have to admit, I don't claim to be an 14 expert on this area of the law. What are the 15 implications of all this? What is it -- in 16 practical terms, where does it leave us right now? 17 MR. RADCLIFFE: Where it leaves us 18 right now, I believe, is that the wrongful death 19 claim has not been joined properly, so it is not 20 right, and it should not be tried. The survivorship 21 claim is ready to go.

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Page 223 1 THE COURT: Well, how would that affect 2 this trial? 3 MR. RADCLIFFE: It doesn't affect the 4 trial at all. We go forward on the survivorship 5 claim, we hear all the same evidence, and the jury 6 is asked to award damages that only relate to the 7 survivorship claim. 8 THE COURT: How are they going to do 9 that in their heads? 10 MR. RADCLIFFE: The same way they do it 11 all the time, Judge. It's the pain and suffering 12 from whatever plaintiffs prove up until the time 13 that he passed away, any economic loss that there is 14 as a result of the illness. This is no different 15 from what the juries do all the time, it's just half 16 of what they do. 17 MR. MACDONALD: And, actually, 18 Mr. Hoffman's office never even brings wrongful 19 death claims. So it's just like his cases would be, 20 you don't have a wrongful death claim. 21 THE COURT: Now, at the moment, there	Page 225 1 say on the record what I think. I might get in 2 trouble. I don't know what the appellate court is 3 going to do, Judge. I don't know. If you are 4 asking me do I think that the sky is going to fall, 5 no, I don't think the sky is going to fall. 6 THE COURT: Okay. Let's do this. This 7 is an issue that I have never thought about. It's 8 never really come up that I can remember. Let's 9 get -- Eric, are all the jurors here now? Let's get 10 the case. Do the opening statements and reserve on 11 this issue, and by tomorrow morning, figure out what 12 you think. 13 MR. FROST: Yes, Your Honor. 14 MR. COTTLE: Your Honor, before we 15 bring in the jury, we just have an objection to a 16 slide or two that the plaintiff is going to show in 17 opening. 18 THE COURT: Yes. What is wrong? 19 MR. COTTLE: It deals with the each and 20 every exposure. Basically, the slide says each and 21 every exposure caused or contributed to the disease.
Page 224 1 is a wrongful death claim in this case? 2 MR. FROST: Yes, Your Honor, there is. 3 Since I have just heard about this a few minutes 4 ago, Your Honor, I am not really sure how to react. 5 THE COURT: Well, neither am I, 6 frankly. So we are probably both in the same boat. 7 MR. FROST: We are. I guess I need 8 to -- 9 THE COURT: Let me ask you this. What 10 terrible thing happens -- I am always a big fan of 11 keep moving forward no matter what happens. What 12 happens if we -- basically, this morning, we are 13 going to do opening statements, things of that 14 nature. We have already impaneled a jury and they 15 have been sworn. 16 If we do the opening statements and get 17 started and then deal with this after Mr. Frost has 18 an opportunity to figure out what he thinks, 19 something terrible happens? 20 MR. RADCLIFFE: If I was to say off the 21 record what I thought -- I don't know if I should	Page 226 1 We discussed this last week. 2 THE COURT: I know. It relates to the 3 issue that we are going to have to piece together on 4 an ongoing basis. 5 What do you want to do about those 6 slides? 7 MR. FROST: Your Honor, I thought the 8 ruling last week was I was going to be able to open 9 on it because it's part of my evidence. And I am at 10 my own peril because if I don't, if it's not in, 11 then, you know, the case takes its own course. 12 THE COURT: Falls apart. 13 All right. We will do it that way and 14 see what happens. You have a continuing objection 15 on that issue. 16 MR. COTTLE: Perfect. 17 MR. RADCLIFFE: Thank you, Judge. 18 THE COURT: All right. What else? 19 Anything else, gentlemen, ladies? There are no 20 women at the bar. 21 All right. So do you want to retrieve

Page 227 1 the jury? 2 (Jury present -- 9:42 a.m.) 3 THE COURT: Welcome back. Have a seat, 4 everyone. I hope you had a good weekend, despite 5 the dismal performance of the Baltimore Ravens on 6 Sunday. 7 I will just remind you briefly, listen 8 to all the evidence, keep your minds open until you 9 have heard all the evidence. Don't discuss the case 10 with anybody until I give it to you at the end of 11 closing arguments at the end of the case. 12 Now, you have all been sworn in, right, 13 Madam Clerk? 14 THE COURT CLERK: Yes. 15 THE COURT: What happens now is counsel 16 will give brief opening statements. Those are not 17 what we call arguments. It's an opening statement, 18 a preview of what they anticipate you will be 19 hearing over the next two weeks. Both sides get to 20 address you. 21 But the opening statements are not	Page 229 1 Mr. Frost, are you ready to go? 2 MR. FROST: Yes. 3 THE COURT: Mr. Frost, you may address 4 the jury. 5 OPENING STATEMENTS 6 MR. FROST: Good morning. 7 THE JURY: Good morning. 8 MR. FROST: When a company makes a 9 product, it must make sure that it's safe. 10 MR. RADCLIFFE: Well, Judge, I object. 11 That's an incorrect statement of law. 12 THE COURT: Don't argue the law. It is 13 an argument of sorts. Continue. That is not true 14 in terms of the law, but go ahead. 15 MR. FROST: If a product is not safe 16 and someone gets hurt, then the company is 17 responsible for that harm. 18 Now, the other thing that's important 19 is that the more dangerous something is, the more 20 careful you have to be with that thing. 21 Now, in this case, it's your job to
Page 228 1 evidence. If parties should say something that 2 never gets proven in the case, then it's like they 3 never said it. It's not evidence in and of itself. 4 Okay? Everybody on the same page with me? 5 What we are going to try to do in terms 6 of schedule, so you all know, we are going to try to 7 maintain, mostly for the lawyers' sake and your 8 sake -- my children have all grown up and left home. 9 No one cares when I get home, so it doesn't matter. 10 My wife has a poor sense of time, so she frequently 11 doesn't even know what time it is when I get home, 12 so it doesn't matter to me. 13 But we will try to go from 9:30 14 until -- we will take a break in the middle of the 15 morning, like around 11, break at 12:45 or so, come 16 back at 2, go to 4:30 or 5, take one break in the 17 middle. Okay? 18 Any problems, let me know. Get my 19 attention. Any issues that interfere with your 20 ability to follow the evidence, write me a note, 21 okay, pass it to the Clerk.	Page 230 1 judge the facts. And we are going to bring you a 2 lot of evidence. And this morning, I am not going 3 to tell you how you should decide this case. What I 4 am going to do is to tell you what is the evidence 5 that you are going to see in this case and then kind 6 of give you some ways to evaluate that evidence. 7 And one of the important things is how 8 you weigh that evidence. And the Judge is going to 9 instruct you on how you weigh that evidence. 10 But since this is a civil case, you 11 weigh that evidence on the standard more likely than 12 not. And that more likely than not standard is just 13 a very slight tipping of the scales just ever so 14 much. 15 And what that means is that when you 16 are evaluating this evidence, when you are back in 17 the jury room and you are talking about what the 18 evidence was, then what you do is you evaluate that 19 evidence with just that slight tipping of the 20 scales. And if the evidence that I present to you 21 just slightly tips those scales, then on that issue,

Page 231 1 the answer has to be yes. 2 And what is important about that is 3 that that applies to every single issue in this 4 case. So when you are looking at credibility of 5 witnesses, you are looking at every single issue, 6 including the issue of how much money to award in 7 this case, it's just that slight tipping of scales. 8 So keep that in mind as you are going through the 9 evidence. 10 The other thing that's important in 11 dealing with the evidence is that there is different 12 types of evidence. There is what we call direct 13 evidence which is basically someone saw someone run 14 a red light and ran into someone, and then there is 15 things called indirect evidence. 16 And the way to think about indirect 17 evidence is what we lawyers call circumstantial 18 evidence, but it's really fairly simple. 19 When I was younger, my father used to 20 read to me Robinson Crusoe. And at the very 21 beginning of Robinson Crusoe, he wakes up on the	Page 233 1 about is what these companies knew and then what 2 they did. 3 Now, the first part you are going to 4 find out is these companies knew that asbestos was 5 dangerous. A lot of folks believe that we only 6 recently knew about the dangers of asbestos. But 7 you are going to find out through the evidence in 8 this case from all of the experts that beginning in 9 the 1930s and even before that, the dangers of 10 asbestos were known. 11 Now, I want to talk to you about the 12 companies that are here, Goulds Pumps and Crane 13 valves. 14 I will talk to you first about Goulds 15 Pumps. Goulds Pumps is an old business. It's been 16 around for 150 years. They manufacture things that 17 are called pumps. And we are going to talk to you a 18 lot about pumps. And you are going to hear from 19 Captain Lowell about pumps later this afternoon. 20 And he will explain those to you, exactly what pumps 21 are and how they work.
Page 232 1 beach and he is shipwrecked. And when he wakes up, 2 he thinks he is all alone, but when he wakes up and 3 he looks around a little bit, he sees some 4 footprints in the sand, and so he knows he is not 5 all alone. 6 Well, in the law, we call that 7 circumstantial evidence. So what that means is you 8 may not have an eyewitness, but you can have things 9 that show you that those particular things occurred. 10 And that's why you have just that slight weighing. 11 So it's important to keep all these things in the 12 mind as you are looking at the evidence in this 13 case. 14 Now, in this particular case, there is 15 basically three parts to this story. The first part 16 deals with the defendants in this case and what they 17 knew about the dangers of asbestos. The second part 18 is because of what they chose not to do, 19 Mr. Blackmon suffered from a horrendous disease and 20 he died from that disease. 21 So the first part I want to talk to you	Page 234 1 But Goulds has a long history beginning 2 in the 1800s with building pumps. And you are going 3 to find out throughout this process that Goulds 4 built pumps, Goulds was one of the largest 5 manufacturers of pumps in this country and was on 6 the cutting edge of pumps. 7 And you can see that they have had a 8 long history of innovation. And you will see 9 throughout this that Goulds has a long history of 10 being on the cutting edge of their pumps. But what 11 they also were not on the cutting edge of is taking 12 asbestos out of their pumps. 13 You will find that in the 1930 14 timeframe, they started putting asbestos in their 15 pumps. Even though everyone in the world literature 16 was hearing about the dangers of asbestos, they 17 chose to put it in their pumps. 18 Now, Goulds Pumps, these pumps can 19 range from being small pumps to being a pump as 20 large as a human. And that's what they manufacture. 21 They manufacture large pumps and small pumps.

Page 235 1 Now, one of the things you need to do 2 when you are evaluating the evidence in this case, 3 when folks show you pictures of things or they bring 4 out certain sizes of things, I want you to ask 5 yourself is that what was on the ships that 6 Mr. Blackmon was on, because you are going to hear 7 that Mr. Blackmon served on ships. 8 So when you are evaluating these 9 things, I need you to think about the size of 10 things, because you will hear that some of these 11 pumps that Mr. Blackmon worked on were as big as 600 12 pounds. So we are talking about some large pieces 13 of machinery that he is working on. 14 And Goulds made a variety of these 15 things and a variety of sizes of them. This is 16 actually a picture of the types of pumps that are 17 involved in this case. And Captain Lowell is going 18 to explain to you this afternoon where the asbestos 19 is in these pumps. 20 The thing that you are going to find 21 out about Goulds -- and you have to keep people	Page 237 1 worked as a machinist mate for 20 years, and if they 2 are in my area, I worked on them. 3 And you are going to hear from Captain 4 Lowell and I think every Navy expert that's true. A 5 machinist mate's job is to work on pumps and valves 6 and some other things. 7 So what you are going to see is that in 8 the area where Mr. Blackmon worked -- and we are 9 only talking about the area that he worked -- that 10 the records show that 12 of the 40 pumps in his area 11 on those three ships that he spent the primary 12 amount of time of his duty on were Goulds. So 12 13 out of 40 of the pumps are Goulds pumps on those 14 three ships. 15 I want to talk to you a little bit 16 about Crane. Crane makes valves. They are one of 17 the largest manufacturers, and have been for years, 18 of valves in this country. 19 Crane was founded in 1855. In 1868, 20 they started putting asbestos in their valves. And 21 we will talk to you a little bit about what a valve
Page 236 1 separate a little bit. You have to keep Crane 2 separate because they made a different product than 3 Goulds Pumps. 4 But what you are going to hear is that 5 Mr. Blackmon was on five ships. He spent most of 6 his time on a certain type of ship, what the United 7 States Coast Guard calls a class of ships. 8 And these pictures that you see in 9 front of you now are three of the ships that he 10 served on in that class. 11 Why is that important to you? Because 12 you are going to hear that there are ship records 13 that indicate all of the Goulds pumps on those class 14 of ships. And, therefore, those are the Goulds 15 pumps that are in the area that Mr. Blackmon worked 16 in. 17 Now, why is that important? Because 18 you are going to hear from Mr. Blackmon when he was 19 very sick. And when you hear from him when he was 20 very sick, he will not mention the name of Goulds. 21 What he will tell you is I worked on pumps. I	Page 238 1 is. 2 Now, these products, they usually 3 contained two types of asbestos. They contain what 4 is called a packing material and a gasket material. 5 And Captain Lowell this afternoon will explain all 6 that to you. 7 But the bottom line is that on each of 8 these products, the Goulds pumps and the Crane 9 valves, there is asbestos in them and on them. 10 So Crane also is unique in that in 11 order for these pumps and valves to work in a steam 12 system on a ship, they have to have gasket material 13 between them because these things are pieces of 14 metal. 15 And as the pieces of metal, you can't 16 just put them together on a ship, so what you have 17 to do is you have to have something that goes in 18 between them. And what that thing is is a gasket. 19 And what a gasket does is it allows you 20 to put those bolts together very tight and pull it 21 together and keep it from leaking out. And when it

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Page 239 1 starts leaking, then you have to change out the 2 gaskets. 3 So the asbestos in the pumps and valves 4 are at those points. There is also some on the 5 inside, too. And Captain Lowell is going to explain 6 that to you. But in between and inside, they have 7 these things called gaskets. 8 Now, this gasket material is a material 9 usually supplied by someone else, not the 10 manufacturer of the Goulds pumps. 11 In Crane, it's different. Crane 12 actually manufactured their own asbestos-containing 13 gasket material. And you will hear that Crane when 14 they supplied their valves at times put their own 15 material in their valves, which makes sense because 16 why would you go buy gasket material from other 17 folks if you make it yourself? And that gasket 18 material is called Cranite. And it was 75, 85 19 percent asbestos. And that's just a better picture 20 of it. 21 Crane also sold and distributed other	Page 241 1 there would have been Crane valves on it because 2 Crane valves were a common valve on steam ships, 3 which are the types of ship Mr. Blackmon served on. 4 And you will hear that Crane was a 5 widely known valve manufacturer. And these are just 6 some types of valves. And the reason I want to show 7 you some different sizes is when you see different 8 sizes of valves, you need to understand that they 9 start from the very small size to a bigger size like 10 these, and then they get even bigger, as big as a 11 pallet, as big as a person. 12 And you will see that the way these 13 things fit is they fit into a steam system. And you 14 are going to see that Mr. Blackmon's job was 15 basically to work on these types of things and also 16 to monitor them to make sure that the second that 17 they are out of tolerance, that you then figure out 18 what that is. 19 And we have already talked about the 20 Cranite gaskets. 21 So what is a gasket and what does it
Page 240 1 asbestos products. And why is that important? It's 2 just so that you know how much they knew or should 3 have known about the dangers of asbestos and whether 4 they should have gone out and done a little research 5 on their products. They sold thermal insulation, 6 pipe covering, a bunch of other things. 7 So who did they sell these things to? 8 Well, you are going to hear a lot about the United 9 States Coast Guard because that's what Mr. Blackmon 10 served in for over 20 years. He began in the 1950s 11 up until the early 1970s. 12 Also, you will hear that these folks 13 sold to industry, that just like that large Goulds 14 pump that was bigger than a man -- that's not on a 15 ship, but that just shows you what these folks do, 16 they sell to industry, they sell to the Coast Guard, 17 they sell to other folks in the marine industry. 18 And Crane had a particular specialty in 19 that they had the hugest supply on the market. You 20 will hear evidence that if a ship was a steam ship, 21 in certain timeframes, that there is no doubt that	Page 242 1 look like? Well, what you have in front of you 2 right there is a flange. A flange is basically two 3 pieces of metal, like I said before. And what 4 happens is that you have these -- you see those big 5 holes up there that kind of look like donuts? Those 6 donut holes are where the bolts go through. And 7 what happens is when you take the bolts off, you 8 pull it apart. And when you pull it apart, it looks 9 like this. 10 Now, you do your work on the inside of 11 it, whatever has to be done, and then you have to 12 put it back together. And when you put it back 13 together, you have to put in a new gasket. 14 Now, the problem is that when you put 15 in the new gasket, you can't put it in when it looks 16 like this, so you have to clean it up. And the way 17 you clean it up is you take a brush and you brush it 18 off. And that brushing, the wire brushing -- and in 19 this case, you will hear about some electric wire 20 brushing -- that is where an individual gets exposed 21 to those gaskets which are 75 to 85 percent

Page 243 1 asbestos. 2 There is also this stuff called packing 3 on the inside. And when you put that into the 4 valves, you also get exposed to asbestos. 5 So when you see a flange like this and 6 it's pulled apart, basically, what you have is that 7 asbestos just pulling apart, and then both sides 8 have to be cleaned by the individual working on it. 9 Now, the thing that's important is that 10 you are going to hear that there are different 11 levels of exposures to asbestos. And you may hear 12 some folks say that gaskets and exposure to gaskets 13 isn't really dangerous. And you will have testimony 14 and some documents in front of you that show you 15 that exposure to gaskets are significantly high. 16 And in this case, basically, Mr. Blackmon's job was 17 to work with gaskets and packing. 18 And so when you look at this evidence, 19 I need you to evaluate it and look at it in that 20 context of what was he doing day-to-day and what 21 were his job requirements.	Page 245 1 England. And they went and they looked at what was 2 happening in some English factories. And they found 3 out that people were getting sick. 4 And what they did was they came up with 5 suggestions in order to protect people. And you are 6 going to hear that the suggestions and the 7 recommendations that Merewether and Price said in 8 1930 are the same ones that people say today, that 9 you protect the workers, that you inform them, that 10 you wet down areas and that you take precautions. 11 All of these things are things that we still tell 12 people today. And Merewether and Price said it in 13 the 1930s regarding asbestos. 14 Now, you may ask yourself, well, that 15 was over in England. Well, you are going to hear 16 evidence that shortly after this study was published 17 in England, it made its way immediately to the 18 United States and was widely reported in the United 19 States. It was everywhere, and people were 20 discussing it. 21 So you will hear that beginning in the
Page 244 1 Now, what was known about asbestos? 2 Well, it was known for decades that asbestos can 3 kill. And the thing about this is that when you are 4 evaluating this evidence, you have two ways to do 5 it. One is what did they know and what should they 6 have known. And either way, as long as it meets 7 that slight burden, then the plaintiff or my side 8 wins. 9 So when you are evaluating this 10 evidence about what was known or should have been 11 known, you have to look at it based on that just 12 slight tipping of the scales. 13 And what will the evidence be? I think 14 it will be undisputed that the literature beginning 15 in the 1800s show asbestos in small amounts is 16 deadly. 17 In the 1930s, the books started to pile 18 up and the articles and the literature showing that 19 asbestos kills. In the 1930s, there is a seminal 20 study, you are going to hear an awful lot about it, 21 it's called Merewether and Price. It occurred in	Page 246 1 1930s, there is no doubt how to protect folks from 2 asbestos. 3 Now, you will also hear evidence 4 regarding Crane Company. You are going to hear 5 about Dr. Harvey. Dr. Harvey has one of the 6 preeminent resumes in industrial hygiene. Some 7 people credit him as being one of the very first 8 doctors in this country that dealt with industrial 9 diseases. 10 And you will hear that he was on 11 committees and that he was involved with various 12 organizations beginning in the 1900s and 1930s and 13 that all of these organizations talked about the 14 dangers of asbestos. And Dr. Harvey was the medical 15 director for Crane Co. So you are going to hear 16 that Crane Co. had actual knowledge of the dangers 17 of asbestos. 18 You are also going to hear some 19 information about Goulds Pumps. You are going to 20 hear that they were members of trade organizations I 21 guess is the best way to call them. But, basically,

Page 247 1 these are folks that are concerned about protecting 2 workers, and they are members of these. 3 And what these folks did is they 4 collected all the world's literature like Merewether 5 and Price, and they distributed it to their members 6 so that those folks could know what was going on. 7 And you will hear that this began in 8 the 1930s and Goulds was a member at various times 9 of these trade organizations, different ones, and 10 that these organizations were talking about the 11 dangers of asbestos. 12 In the 1940s, as we move through time, 13 you will see that -- we talked not only about the 14 dangers of asbestos, but then it starts coming out 15 that not only is asbestos dangerous and can cause a 16 disease called asbestosis, which is a deadly 17 disease, but asbestos can cause even cancer. 18 And so in the 1930s, there is a 19 debilitating disease that can kill you called 20 asbestosis. And the reason that it's named 21 asbestosis is it was named after asbestos because	Page 249 1 products to the United States Coast Guard and that 2 these products when they came to the Coast Guard, 3 they contained asbestos. 4 You are going to hear that they never 5 put any warnings on these products so that either 6 the Coast Guard could protect their men or that the 7 men could protect themselves and that these products 8 released asbestos when they were worked on and that 9 that's the way that they are designed to work. They 10 don't work any way without you disturbing asbestos 11 in order to maintain them. 12 And you are going to hear particularly 13 in this case that Mr. Blackmon never received any 14 warnings in order to protect himself. And you are 15 also going to hear that these companies had the 16 ability to warn and that, really, it was kind of 17 easy for them to do this. 18 You will hear that these companies put 19 and actually were required to put plates on their 20 products. It's hard to see, but that says Goulds 21 Pumps. And it's a plate on a piece of machinery.
Page 248 1 that's what caused it. 2 So in the 1940s, what happens is the 3 doctors continue to study these folks, and they find 4 that people are getting cancer, lung cancer. 5 By the 1960s, thousands of articles are 6 written about asbestos and the fact that it causes 7 cancer. 8 Now, the other thing in regards to this 9 literature is that you will see that and you will 10 hear a lot about particularly what the doctors were 11 doing and that the doctors were reviewing these 12 things and that the doctors were looking at 13 everything, that there were some doctors from Mount 14 Sinai in New York, and they were looking at these 15 issues. 16 But ask yourself, what are these 17 companies doing? Are the companies doing anything 18 while all this knowledge is building up? Are they 19 doing anything to help folks or to protect folks? 20 And that's why we are here. And you 21 are going to hear that the company sold their	Page 250 1 And it has some information like serial numbers and 2 some things. But you also could put information on 3 there such as warnings. 4 You are also going to hear in regard to 5 Crane valves that Crane valves, you could actually 6 have an instruction tag on those and that these 7 instruction tags were helpful when installing. 8 And so you are going to hear that this 9 is something -- I am not asking them to do anything 10 that they couldn't have done and that it wasn't easy 11 to do. 12 You will even hear that in 1985, Crane 13 Co. started putting a warning tag on their valves 14 for asbestos. You will also hear that Goulds Pumps 15 never, ever put a warning on any of their products. 16 This is a valve. And we will talk a 17 lot about valves, so I don't want to waste your time 18 with that. But they have the ability to put caution 19 plates on them, to put warning plates on these 20 things so that they can warn folks that are working 21 with these products about the dangers contained

Page 251 1 within them. 2 The evidence will be in regards to 3 Goulds Pumps and Crane that they did no research of 4 their own product, that they did no testing to 5 ensure that these products that contained asbestos 6 were exposing folks to one of the most harmful 7 things known to man. And that you will hear in 8 regards to Mr. Blackmon that there were absolutely 9 no warnings. 10 So why didn't they warn? Just ask 11 yourself that when you are looking at this evidence. 12 Why didn't they warn? 13 So what happened with Mr. Blackmon? 14 His name is Bennie Blackmon. I am going to call him 15 Mr. Blackmon out of respect for him. He is 16 deceased. You will hear from his family. They are 17 here in the courtroom. And I am going to let them 18 tell you their story. 19 But what is the story that you all need 20 to know in regards to these manufacturers? 21 Well, Mr. Blackmon was in the United	Page 253 1 folks may remember during Katrina, those are the 2 folks that went out there and were doing the search 3 and rescue when everyone else was trying to figure 4 out what to do. Those were the guys out in the 5 helicopters jumping in to save folks. And that's 6 what the Coast Guard does, they guard our coast and 7 they help people, people that are in distress. If 8 you go out on a boat, these are the people that go 9 out and save you. So their mission is different. 10 Now, in wartime, the Navy -- they fall 11 under the Navy, and the Navy can use them for 12 whatever because they have boats. But their mission 13 day-to-day is to find and help people. It's not a 14 military mission as such. Even though they wear 15 uniforms, their mission is not the military mission 16 of destroying things. 17 So when you look at this evidence, I 18 need you to know that there is a huge difference 19 between the United States Coast Guard and the United 20 States Navy, the United States Army and the Air 21 Force and all those other folks.
Page 252 1 States Coast Guard. As a young man, as you can see, 2 he was a strapping young man. And he began, as a 3 lot of young folks do, working as a fireman's helper 4 in the United States Coast Guard. 5 It's important while you review this 6 evidence that you understand that Mr. Blackmon was 7 in the United States Coast Guard. Some folks -- if 8 you have had anybody that serves in the military, 9 you will know that there is different services. 10 There is the Army, the Air Force, the Navy, the 11 Marines. And a lot of folks forget, but there is 12 the Coast Guard, too. 13 And the Coast Guard's mission is 14 different. The Army goes out and fights wars on the 15 ground, basically. The Air Force bombs folks. The 16 Marines support the Navy because they are basically 17 the Army of the Navy. The Navy goes out in large 18 ships and searches and destroys the enemy. And 19 there are platforms for sending out the Marines. 20 The United States Coast Guard is 21 different. The United States Coast Guard, as you	Page 254 1 But what did Bennie do on these ships? 2 Well, he was a machinist's mate. And you will hear 3 that he started at the bottom and he rose all the 4 way to what is called E9. So he rose as far as he 5 could in the enlisted ranks. And you will also hear 6 evidence that that's not easy to do. 7 You will hear that he was very good at 8 his job and that his job day-to-day almost every 9 single day that he was in the United States Coast 10 Guard was to keep these ships running. 11 And you will hear about what a 12 machinery space is. Basically, it's a space on a 13 boat that drives the whole boat. And Captain Lowell 14 will explain a little of that to you. 15 But, basically, in order for a boat to 16 go, it has to have steam that drives the big 17 propellers at the end of it. And that steam driving 18 the propellers -- it has a bunch of equipment in it 19 and a bunch of valves and pumps and other things in 20 the whole system that runs the ship, that allows it 21 to go through the ocean.

Page 255 1 The other thing is that you have pumps 2 that take water because if you have to think about 3 it, a boat has to be able to exist for days on its 4 own. It was kind of like an RV, I guess. You have 5 to be able to pump freshwater in and sewage out and 6 things like that. So you are going to hear about 7 the different pumps and things on a ship. 8 But the bottom line is in regards to 9 Mr. Blackmon, his job every day as a machinist's 10 mate was to work on pumps and valves in his 11 machinery space. And so he is the one who is trying 12 to keep -- make sure that the boat goes forward. 13 And you are going to hear all about 14 these products and where they were and how often he 15 would have been exposed to them. 16 And so the real reason that we are here 17 is that Mr. Blackmon worked on all these products. 18 He worked on these Goulds pumps, the 12 out of the 19 40 in his engine space. He worked on Crane valves. 20 And you will hear that the majority of the valves he 21 worked on are Crane valves. And you will hear that	Page 257 1 chili or something and you are cutting the onions 2 and you can smell the onions if you don't know how 3 to do it right, if you are like me. And when you 4 are cutting it, you can smell it, you can taste it, 5 your eyes start to water. 6 Well, with asbestos, when it's in the 7 air, you don't have any of those properties. It's 8 just in the air, and your body is breathing it. You 9 don't cough, you don't do anything. It's invisible. 10 Now, you will see discussions about 11 visible dust, and that's how you know that if you 12 have visible dust, that you are being exposed to 13 massive amounts of asbestos. But you are going to 14 hear that these particles are very small, that they 15 are invisible, that they are odorless and that they 16 are tasteless. 17 And what you also see and what I have 18 up there is that some of these fibers are so small 19 that it takes sophisticated microscopes in order to 20 really see what you have there. And that it's 21 important to know that when individuals are working
Page 256 1 because of that exposure to asbestos from these 2 products, that he died. 3 Now, the thing about asbestos that you 4 need to understand is that asbestos is a natural 5 mineral. It comes out of the ground. It was 6 discovered, I guess, many centuries ago. It also 7 was discovered that folks get sick if they mine it 8 and mill it. 9 But the reason that asbestos is 10 something that's used is that it has a high 11 strength. Asbestos fibers are almost like steel. 12 And because of that, they have a high tolerance to 13 heat and to flames. And so it has been used in 14 various products over the years because of that. 15 And what you will hear is because it 16 has that strong steel strength, that that particular 17 property makes it very dangerous to the human body. 18 The other thing that you are going to 19 hear about asbestos is that it doesn't have what we 20 call onion properties. And what that means is when 21 you are at home and you are going to cook up some	Page 258 1 with asbestos products and it liberates dust into 2 the air, that dust is dangerous and that the worker 3 has no idea that they are being exposed because 4 their body is not telling them that. 5 You will also hear that there are 6 billions of fibers in just one little thimble, that 7 in these products, particularly when you have 8 gaskets and packing that are used on these Goulds 9 pumps and these Crane valves, that 85 to 95 percent 10 of asbestos in those gaskets, that just a little 11 thimble when you start liberating that contains 12 billions of fibers. 13 And so when you are looking at the 14 evidence in this case, remember that there are 15 billions of fibers out there and that Mr. Blackmon 16 while he is working on these things is breathing all 17 of those in. 18 You will hear that there is no safe 19 level of exposure to asbestos, that asbestos is one 20 of the most dangerous naturally occurring substances 21 known to man.

Page 259 1 You will hear that when OSHA came into 2 being shortly around the time when Mr. Blackmon left 3 the service of the United States Coast Guard, that 4 the very first thing that OSHA regulated was 5 asbestos, the very first thing, because that's how 6 dangerous it was. 7 You also will hear about this disease 8 called mesothelioma. We haven't discussed it much, 9 but we are going to talk about it right now. 10 Mesothelioma is a cancer caused only by exposure to 11 asbestos. That's it. 12 So in regards to mesothelioma, if an 13 individual is diagnosed with mesothelioma, the very 14 first thing a doctor will say to them is were you 15 exposed to asbestos. It's called a signature 16 disease. Remember I talked about asbestosis named 17 after asbestos? Well, mesothelioma is a disease 18 only caused by exposure to asbestos. 19 And in this case, there is going to be 20 no doubt that everyone agrees that Mr. Blackmon 21 suffered from mesothelioma.	Page 261 1 chemotherapy, it's only going to extend your life 2 for a couple months. 3 Now, how does an individual get exposed 4 to asbestos and how does asbestos cause this disease 5 mesothelioma? Well, you are going to hear that the 6 scientific evidence is that asbestos is what we call 7 a dose-response disease. It's one of those diseases 8 that you can't pinpoint exactly what fibers caused 9 the disease because what it is is as an individual 10 is exposed to asbestos over their working life, each 11 of those fibers add up. And as they add up, at some 12 point, an individual may get a disease. 13 Now, I will tell you that not everyone 14 that is exposed to asbestos gets mesothelioma. 15 Mesothelioma is a very rare disease. So there is a 16 lot of folks that have been exposed to asbestos over 17 the years, but they don't have mesothelioma. 18 And science doesn't know exactly why 19 some folks get mesothelioma and some folks don't. 20 But what the scientists do know is that each time 21 you work with a product that contains asbestos, that
Page 260 1 The other thing you are going to hear 2 about mesothelioma is that once you get 3 mesothelioma, it's unlike any other cancer in the 4 world. There is no cure. There are cures for a lot 5 of cancers. 6 The other thing you are going to hear 7 about mesothelioma is that once you have that 8 diagnosis, that you are looking at maybe a year, 9 maybe 18 months, but, normally, six months to a 10 year, and you will die. There is no cure. You can 11 go through chemotherapy and you can extend your life 12 by a few months. That's it. 13 When you go to your doctor and he is 14 looking at the prognosis, what he will tell you is 15 that you are going to die. I can give you 16 chemotherapy, and that chemotherapy is going to make 17 you wish that you died. That chemotherapy is going 18 to take a long time, it's going to hurt, it's going 19 to change your body, it's going to change how you 20 feel, it's going to change everything about you. 21 And when you are done with that course of	Page 262 1 that exposure -- that asbestos you are breathing 2 into your body adds up. And as it all adds up, it 3 adds up and adds up, at some point 30 to 40 years 4 later, that asbestos causes this disease. 5 And you are going to hear from some 6 preeminent scientists that are going to explain that 7 to you. And they are going to do a better job than 8 I have. 9 But what you need to know is each and 10 every exposure is causally related to mesothelioma. 11 So every time an individual works with an 12 asbestos-containing product, those products if they 13 get mesothelioma contributed to that disease. 14 Now, we haven't talked about the 15 mechanism of the body. You are going to hear from 16 doctors. You are going to hear from Dr. Brody who 17 is going to explain to you what happens when 18 asbestos gets into the body. 19 What you are going to hear is that 20 asbestos when it's breathed in, it gets trapped in 21 the lungs. And when it gets trapped in the lungs,

Page 263 1 it stays there for an awful long time. Some 2 asbestos is cleared very quickly, some of it you 3 cough up, some of it is just naturally taken out of 4 the body and breathed out. 5 What you are going to hear is that the 6 asbestos that's the most dangerous is the stuff you 7 can't see, and that's the stuff that gets the 8 deepest into your lungs. 9 And what happens when it gets into the 10 lungs and it's trapped down in the lungs? Well, 11 normally, a healthy human lung is going to look like 12 that one on the left. And that's what it looks like 13 on autopsy. When that asbestos gets into the lungs, 14 what it does is it causes this cancer. And the 15 cancer that is caused is basically a growth. 16 And what you are going to hear is that 17 in regards to your lungs, your lungs are amazing 18 things. When you hear this evidence, you are going 19 to think, wow, lungs are amazing, because what you 20 will hear is your lungs are inside your chest 21 cabinet. And inside your chest cabinet, there is a	Page 265 1 could try to have your lungs removed. But it's 2 pretty hard to live with just one lung. 3 You will also hear that only certain 4 people are even considered to have their lungs taken 5 out and that, yet again, even if they have their 6 lungs taken out, that the rate of their survival is 7 very low from the operation itself and that it only 8 extends their life yet again for a few months. 9 So this disease process takes over the 10 lungs. And what I have shown you there is a lung 11 that has the disease mesothelioma. And, basically, 12 as you can see, instead of looking nice and pink, 13 it's got all that white in it. And that's all part 14 of the cancer. 15 So how does that happen? Well, as the 16 asbestos is breathed into your lungs, it goes down 17 into the lungs and it deposits itself. And then 18 once it's deposited itself, it then migrates to this 19 Saran wrap surface. And then once it's there, it 20 sits there and it waits and it waits. And at some 21 point, the disease process begins. And usually it's
Page 264 1 very thin Saran wrap covering of your entire lungs, 2 and it's very thin. And it, literally, looks a 3 little bit like Saran wrap. 4 But the reason you have that is because 5 your lungs have to go in and out. As we are all 6 sitting here, our lungs are going in and out. And 7 if you didn't have that Saran wrap around it to keep 8 it from your chest cavity, then your lungs would, 9 literally, rip apart. 10 And so what you have in your lungs is 11 you have this Saran wrap. And that's the 12 mesothelial lining. That mesothelial lining is 13 where the cancer starts with mesothelioma. And 14 that's why it's called mesothelioma. 15 So in that lining that's around your 16 lungs, what happens is the cancer starts. And as it 17 starts in your lungs, it starts getting bigger and 18 bigger and bigger, and eventually it suffocates the 19 lungs and you can't breathe anymore. 20 Now, the only thing that you can try to 21 do is chemotherapy, like we talked about, or you	Page 266 1 30 or 40 years later. It's what we call latency. 2 With asbestos, you will hear that all 3 of these diseases have this latency period. You 4 don't immediately if you are exposed to asbestos get 5 these diseases. It takes years and years and years. 6 And so once you are exposed, then you have that time 7 bomb sitting in your lungs. 8 So at the top of this, this is a lung 9 at the beginning -- the very top -- of this process. 10 This is a cross-section of the lung. And as you go 11 down, you will see the white area. That's the 12 tumor. 13 And what the tumor is doing is it's 14 growing. It's getting bigger. And as it gets 15 bigger, it starts to collapse the lungs. And you 16 will hear that as that happens, it's painful. You 17 will hear that really the only thing that doctors 18 can do is to provide pain medicine and that the 19 tumor will continue to grow. 20 And if you look at the very bottom, 21 that white area you see at the very bottom is that

Page 267 1 tumor almost at the very end. And you see how big 2 that lung is? It's just that little bit of black. 3 And so that's what this disease does, it crushes 4 your lungs. And once your lungs are crushed, you 5 die. 6 Now, you will hear that the products 7 that Mr. Blackmon worked with were manufactured by 8 Goulds Pumps and Crane Co. valves and that they all 9 contained asbestos -- I don't think there is going 10 to be any dispute about that -- and that he worked 11 with those particular products. 12 You are also going to hear that in 13 regards to Mr. Blackmon's case, these folks have not 14 accepted responsibility. 15 MR. RADCLIFFE: I object to that. 16 That's argument, Your Honor. 17 THE COURT: It's argument. Just 18 continue. 19 MR. FROST: You will also have to 20 decide -- and that's one of the reasons we are 21 here -- how much money will make up for that. And	Page 269 1 hear about things that we would never wish on 2 anyone. 3 But what is your job? Well, what your 4 job is is to basically fix what can be fixed, help 5 what can be helped and make up for the harms and the 6 losses. 7 And what do I mean by that? Well, fix 8 what can be fixed. That's the easy one. 9 You are going to hear that there have 10 been medical expenses in this case. And we will be 11 asking you to take care of those expenses. And what 12 I mean take care of, I am not asking you to give the 13 family any more than what was already paid. And 14 since it's already been paid, the family is not 15 really gaining anything from that. So that's fixing 16 what can be fixed. It's medical costs. 17 And you are going to hear that they are 18 a little bit over a hundred thousand dollars, which 19 isn't a large number because there is really nothing 20 that the medical community can do for mesothelioma. 21 The doctors did everything they could, but there is
Page 268 1 this is the part that's probably the most 2 uncomfortable for everyone because there is no way 3 we can bring Mr. Blackmon back. We all know that. 4 But in our society, the only thing we can do since 5 we can't bring him back is to seek monetary damages. 6 And it's important that you evaluate 7 this case with that mind-set knowing that when you 8 are evaluating damages, that you are dealing with 9 that slight tipping of the scale and that we are 10 dealing with a disease that is not only devastating 11 to Mr. Blackmon and caused his death but 12 fundamentally changed the relationship between 13 Mr. and Mrs. Blackmon, that is fundamentally changed 14 that relationship from a husband who is a loving 15 husband who is providing for his wife to a wife who 16 is now the caretaker for her husband. 17 And you will hear evidence about his 18 relationship with his son. You will hear what 19 happened over those time periods. And you will hear 20 some evidence that's not going to be fun. You are 21 going to hear about extreme pain. You are going to	Page 270 1 really nothing they can do other than give him pain 2 medicine. 3 Helping what can be helped, that's 4 dealing with Mrs. Blackmon and how you can help her 5 move forward such as dealing with these issues that 6 she has with the loss of her husband. 7 And, also, make up for what can't be 8 fixed or helped. And what I mean about that is 9 making up for -- is looking at the harms and the 10 losses that have occurred in this case and for 11 dealing with those issues about what did 12 Mr. Blackmon go through, how painful it was, what it 13 was like and how it fundamentally changed his family 14 and, again, holding those folks responsible who 15 caused this. 16 So when you are looking at how to award 17 damages, you should look at it in this way, fixing 18 what can be fixed, helping what can be helped and 19 making up for those things that we can't fix or 20 help. 21 And when you are dealing with all that,

Page 271 1 there is still that slight tipping of the scales. 2 So when you are back in your closed-room 3 deliberations and folks are saying, you know, I'm 4 not sure, I'm not a hundred percent sure or not 90 5 percent sure or 75 percent sure, just remind them, 6 it's just got to be that slight tipping of the 7 scales. And that's on all issues in this case. 8 We talked about the medical costs. You 9 are going to hear about the extensive pain medicine 10 and things that Mr. Blackmon had to take. And you 11 are going to hear about his whole course of what 12 happened to him. And it's going to be some tough 13 testimony. And there will be points when it's just 14 going to be difficult. 15 But we have to present that to you so 16 that you have an understanding of what has been lost 17 and what the true harms are. And it's going to be 18 tough for everyone. 19 And you are going to hear about the 20 family. You are going to hear about Colleen and 21 Eddie and their grandchildren. They are here. They	Page 273 1 your sympathy to play into that. What we want you 2 to do is to compensate the Blackmon family for these 3 harms and these losses and to not consider anything 4 from the outside but to compensate them for the 5 harms that have been done to them. 6 And I think you will find at the end of 7 this case that those non-money losses are the hugest 8 part of this case. 9 The thing that you are going to find 10 about this disease, and particularly Mr. Blackmon's 11 course of disease, is that he had been a strong man. 12 He had lived and was a very proud military man. 13 You will hear that his son, Eddie, 14 served, just retired from the United States Air 15 Force, spent 22 years on active duty. And you will 16 hear that Mr. Blackmon's dream was to be there when 17 he retired. 18 And you will hear that since Bennie had 19 spent, I think, 21 years on the United States Coast 20 Guard and retired, that it was important for him to 21 see his son not only succeed, not only go into the
Page 272 1 will be here for the trial. This is an important 2 day for them. 3 This lawsuit was filed by Mr. Blackmon. 4 And this day is their day to ensure that what he 5 started is finished. 6 You are going to also hear evidence 7 about what Mr. Blackmon was like before and what he 8 was like after. What I would suggest is that as you 9 are reviewing this evidence, make yourself a chart 10 and look at what he was like before and then compare 11 that with what he was like afterwards so that you 12 have kind of a way to evaluate how dramatically life 13 changed. So before and after I think is a way to 14 evaluate this evidence. 15 But I think what you are going to find 16 is that particularly in this case since Mr. Blackmon 17 was retired and that the medical expenses are very 18 low since there was nothing medical science could 19 do, that the greatest harm in this case are those 20 intangible things. 21 But what we don't want is we don't want	Page 274 1 Air Force, not only be there, but to see him do what 2 he did which is to serve his country for over 20 3 years and then retire with honorable service. 4 And you will hear that he was not able 5 to do that and that his last months where he was 6 just surviving kept him from being able to see that 7 day. 8 And those are the types of issues that 9 you all need to consider when you are dealing with 10 how do you replace those things. Well, you may not 11 be able to replace them, but the only thing you can 12 do under our rules is to provide money to compensate 13 for those things. 14 And the other thing you are going to 15 hear about is Mrs. Blackmon, Colleen. You are going 16 to hear her story about how her and Bennie met and 17 their over 30 years of marriage together. And you 18 will hear from her why it was important that she 19 follow through with this lawsuit and that we come 20 here today and that this is what she can do for him. 21 But it's more than that. It's what we

Page 275 1 as a society have to do to make sure that these 2 types of things don't happen again. 3 And you are going to hear about their 4 plans. You are going to hear about what they were 5 going to do with their retirement and the things 6 that they actually had done with their retirement. 7 And so these are the things that you need to 8 evaluate. 9 Now, there is always another side, and 10 I think you are going to hear from the other side in 11 a few minutes about how it's not their fault. I 12 think you will hear some folks blame the United 13 States Coast Guard. 14 MR. RADCLIFFE: Object. This is 15 argument. 16 THE COURT: It's sort of argument, but 17 you can continue. 18 MR. FROST: And I also believe you may 19 hear some folks talk about the United States Navy. 20 Ask yourself when folks are talking about the United 21 States Navy whether Mr. Blackmon ever served in the	Page 277 1 to blame the right folks and not the wrong folks. 2 You may even hear some folks say that 3 the type of asbestos they had in their products was 4 safe or that it didn't cause cancer or that 5 exposures to our asbestos is different because it's 6 going to be very low levels. 7 What you will hear is that every 8 scientific agency that has dealt with this issue of 9 different types of asbestos -- because there are 10 different types of asbestos. But they are all 11 called asbestos for one reason which is they all 12 cause asbestos diseases. 13 You will hear from every agency, 14 including NIOSH, OSHA, EPA, the World Health 15 Organization, the World Trade Organization. 16 Everyone who has dealt with this issue about 17 asbestos has indicated that all types of asbestos 18 cause disease and the types that were involved in 19 these particular pumps and valves called chrysotile, 20 that that causes disease. 21 And you will also hear that not only is
Page 276 1 Navy, because he didn't. The Navy built some of 2 these ships, but you are going to hear today this 3 afternoon that they were built by the United States 4 Coast Guard and that the United States Coast Guard 5 is a separate service from them. 6 So this case isn't about the Navy, it's 7 about Mr. Blackmon and his experience in the Coast 8 Guard. 9 You may hear some folks blame some 10 other companies. Remember when I told you before 11 that each and every exposure to asbestos causes this 12 disease? Well, Mr. Blackmon was exposed to some 13 other companies' products. There is no doubt about 14 it. And those companies contributed to his disease. 15 What I need you to do is to not just 16 listen to someone saying, well, this product or that 17 product caused it, but look at the evidence and make 18 sure that if a product is there and Mr. Blackmon 19 worked on it, then that's fine, then those products 20 contributed. But evaluate the evidence, because 21 it's important when you are evaluating this evidence	Page 278 1 it causing disease, but that that type of asbestos 2 has been banned as deadly throughout the world by 3 all these different countries. 4 So when you are dealing with folks 5 telling you that this stuff is safe, think about the 6 folks who don't have an interest here, the World 7 Health Organization, OSHA, EPA, all these countries 8 that have banned it. 9 And some folks may even blame 10 Mr. Blackmon. I hope not. I think his service was 11 honorable. He did the right thing. He did his job. 12 He did exactly what we asked the United States Coast 13 Guard men to do. And he was proud of his service. 14 So we get back to the original points. 15 When you make a product, you must make sure it's 16 safe. If it's not safe and it hurts someone, then 17 you are responsible. And the more dangerous 18 something is, the more careful you have to be with 19 it. 20 Now, at the end of this case, we are 21 going to be able to come back to you again and talk

Page 279 1 about what the evidence was and evaluate how you 2 look at these things, particularly the harms and the 3 losses. And I will give you a framework to talk 4 about how to evaluate those things and how to put 5 numbers on it at the end of the case. 6 So when you are looking at this 7 evidence, make sure you are looking at what were the 8 harms, what were the losses. And, then, at the end 9 of the case when I come back to you, we will talk 10 about how to do the only thing that you can do which 11 is to place a money value on those things. 12 Thank you. 13 THE COURT: Thank you. 14 Who would like to begin for the 15 defense? 16 MR. RADCLIFFE: I would, Your Honor. 17 THE COURT: Please proceed. 18 MR. RADCLIFFE: Good morning. My name 19 is Tom Radcliffe. My trial partner is Steve 20 Parrott. And together, we are going to be 21 representing Goulds Pumps for this trial.	Page 281 1 fast were you driving? You have got to apply the 2 law. You determine what the facts are. 3 Now, we don't disagree about 4 everything. There is a lot of stuff that we are 5 going to say we agree is the case, but there are 6 some disputes. 7 First, we are here because Mr. Blackmon 8 had a cancer. That cancer is mesothelioma. There 9 is no dispute about that. 10 Second, mesothelioma can be caused by 11 exposure to asbestos. There is really no dispute 12 about that. The question is what kind of asbestos 13 and how much asbestos? That's where the dispute 14 arises. 15 Third, Mr. Blackmon did not have a 16 significant exposure to any Goulds pump product that 17 might have contained asbestos. And I will talk more 18 about Goulds Pumps' products later on. 19 But as you have already heard, Goulds 20 made pumps. Goulds did not make products that 21 contained asbestos. Sometimes the pump had a gasket
Page 280 1 This is our opportunity, my opportunity 2 to give you the roadmap, so to speak, to let you 3 know what it is that I think the evidence is going 4 to show. What I say is not evidence. What 5 Mr. Frost said is not evidence. But if we say 6 something to you and we don't prove it, then we 7 haven't lived up to our opening promise, so to 8 speak. 9 So here it is, my chance. And I am 10 going to try to take an hour or less with you. I 11 know that sounds like a long time, but I will speak 12 fast. So I am going to jump right into it. 13 We are here because there is a 14 controversy. We are here because we don't agree on 15 the facts. And the jury's job is the facts. You 16 all are the judges of the facts. 17 The judge, Judge Glynn, is going to 18 tell you what the law is. At the end of the case, 19 he will say here is the law. Just like someone 20 saying to you you can't drive faster than 35 miles 21 an hour on this road. The factual question is how	Page 282 1 included with it. Sometimes the pump had packing 2 included with it. 3 But when you are talking about a huge 4 pump that's metal, that's not asbestos. That didn't 5 contain asbestos. It was only a component part that 6 the customer said here is what we want the pump for, 7 here is what it has to do, and so there is a 8 determination made about what type of gasket it has 9 to be. I will come back to that. 10 And second, the evidence is going to 11 show you that Goulds Pumps is not at fault. 12 All right. I am trying to figure out 13 how it is I address these issues with you, what it 14 is that I can do to help you understand what I am 15 trying to convey. And I came up with these three 16 questions. 17 So the first is what do we know about 18 Mr. Blackmon, about mesothelioma and about asbestos? 19 The second is was Mr. Blackmon exposed 20 to a substantial level of asbestos from a Goulds 21 pump? And I use the word substantial in there

Page 283 1 because, as I said, at the end of the case, the 2 Court is going to instruct you on the law. And I 3 believe you are going to hear the Judge say it's 4 required that the exposure be a substantial 5 contributing factor. That's what is required. It 6 can't be trivial, it can't be insignificant, it 7 can't be passive. The Court is going to tell you 8 the law of the State of Maryland is it must be a 9 substantial contributing factor. 10 So when we talk about the evidence, 11 when we hear and question witnesses, ask yourselves 12 is that substantial or is that meaningless, trivial? 13 And the third question I would like to 14 address with you is did Goulds Pumps do anything to 15 be at fault for this case? 16 All right. So question number one, 17 what do we know about Mr. Blackmon, mesothelioma and 18 asbestos? 19 Mr. Blackmon was born in 1934. He 20 enlisted in the Coast Guard in 1952. He actually 21 didn't even graduate high school. He did get his	Page 285 1 for a 70-some year old gentleman. He had a few 2 issues. He had some COPD which is an abbreviation 3 for chronic obstructive pulmonary disease. It's 4 caused by smoking. He had an appendectomy, rotator 5 cuff. 6 Where does all this evidence come from? 7 It doesn't come from me. It comes from the medical 8 records. So here -- I have kind of shortened this 9 medical record. It's the top part and the bottom 10 part. 11 But from 2001, he's got -- he actually 12 had something in his chest that was removed. They 13 said it was benign, unrelated to the meso. COPD, 14 long history of cigarette smoking, some other issues 15 that he had. But all in all, a fairly healthy 16 gentleman. 17 More medical records. And all these 18 medical records will be in evidence for you to 19 review. This is from November 10th of 2003. You 20 can see he's still got the COPD which is causing him 21 some shortness of breath.
Page 284 1 GED later through the Coast Guard. So he was one of 2 those young men who came out of high school early 3 and went right into the Coast Guard, right into the 4 service. He retired from the service in 1973. As 5 Mr. Frost said, he had received several promotions 6 during that time. 7 He was married to his current wife in 8 1970. He did have an earlier marriage from which he 9 had four children. And in his current marriage, he 10 adopted his son. His wife had a son by a previous 11 marriage. And so Mr. Blackmon adopted that son and 12 made him his own son. 13 And after he got out of the Coast 14 Guard, he didn't stop work. He continued to work. 15 And, in fact, you will hear from Mr. Blackmon. And 16 he alleges exposure to asbestos after the Coast 17 Guard. He alleges exposure to asbestos in the Coast 18 Guard, and he alleges exposure to asbestos after the 19 Coast Guard. 20 All right. So what do we know about 21 Mr. Blackmon's health? He is a fairly healthy man	Page 286 1 He's got a negative exercise stress 2 test. That's when they check out your heart. They 3 found that his heart was pretty good. But he did go 4 back later for some heart. And you can see he has 5 some atrial valve sclerosis, but no stenosis. 6 Stenosis is the bad part where you have to get a 7 stint, where you have to get further treatment. 8 So anything that I can tell you, that 9 he was disabled or he wasn't able to do what he 10 wanted to do at the age of 73, 74? No. I think he 11 was 73 when he passed. He was a typical gentleman 12 for that age. 13 All right. One more medical record, I 14 guess, October of 2006, malignant mesothelioma. So 15 he was diagnosed eventually. He had some problems 16 beginning in August of 2006, was going back and 17 forth to the doctors. They had some problems 18 diagnosing him. And they were finally able to reach 19 a diagnosis in October. 20 All right. So that's a little short 21 resume on Mr. Blackmon. We will certainly hear a

Page 287 1 little bit more about him as we go on. 2 What do we know about mesothelioma? 3 Mesothelioma is a cancer. It arises from a body 4 cavity, the lining of a body cavity. You have a 5 body cavity in which your heart sits, you have a 6 body cavity in which your lungs sit, and you have a 7 body cavity in which your abdominal organs sit. 8 So we have the pleural cavity for 9 lungs, we have the pericardium, the pericardial 10 cavity for your heart, and we have the peritoneal 11 cavity for your abdomen. 12 Mr. Blackmon had a pleural 13 mesothelioma. It's the same lining around your 14 heart, around your lungs, around your abdomen. If 15 you get a cancer of that tissue, of that organ, it's 16 called a mesothelioma. 17 Mesothelioma is often fatal. Mr. Scott 18 said it's always fatal. That's not exactly correct. 19 You will hear that there are people who survive for 20 a very long time. We don't talk about cure when we 21 talk about cancer. If you talk to anybody who has	Page 289 1 start to grow uncontrollably and spread and invade, 2 that is cancer. 3 Cancer is very common. It causes -- of 4 all the people who die in the United States each 5 year, 25 percent of those people die from one cancer 6 or another. 7 All right. Mesothelioma, it's a long 8 latency period. Mr. Frost mentioned this. What 9 that means is from the time that you were first 10 exposed until when you are diagnosed, it's a very 11 long time. It can be 30 or 40 years. 12 It usually occurs, mesothelioma, in 13 later decades in life. And it's very common -- if 14 it's related to exposure to asbestos, it's very 15 common to have evidence of exposure to asbestos, 16 other evidence, pleural plaques, asbestosis. 17 And they can actually look at your lung 18 tissue and see if you have asbestos fibers at an 19 abnormal level in your lung tissue. Mesothelioma 20 can be caused by exposure to asbestos, no doubt 21 about that.
Page 288 1 cancer, they will say I am a five-year survivor, I 2 am a ten-year survivor. 3 Nobody ever talks about cures, but 4 there are people with mesothelioma who have lived 5 for five years, ten years, 15 years after diagnosis. 6 It's very rare. It's very unusual. And 7 mesothelioma usually is fatal. 8 And what you have to do is confirm it 9 pathologically. You can't take an X-ray and say you 10 have mesothelioma. You can't take a blood test. 11 You actually have to have tissue that you can 12 examine under a microscope. 13 Let me back up a little bit and talk to 14 you about cancer. What is cancer? Cancer is 15 something that we are all familiar with, but just so 16 we have our definitions, cancer is a group of 17 diseases characterized by uncontrolled growth and 18 spread of abnormal cells. 19 So, simply, you have some cells in your 20 body from your bones, from your liver, from your 21 lungs, from your brain, wherever. If those cells	Page 290 1 So what do we need? You have to have 2 exposure to asbestos, you have to have sufficient 3 duration and intensity. In other words, the 4 exposure has to last long enough and the amount of 5 asbestos in the air has to be great enough to cause 6 mesothelioma. And you have to have proper latency. 7 Those are the issues that the doctors will have to 8 discuss when they come in and take the stand in this 9 case. 10 Pleural mesothelioma does happen 11 without exposure to asbestos. Mr. Frost said that 12 asbestos is the only cause. Not really. There are 13 other causes of mesothelioma reported in the 14 literature. 15 It's not too important in this case 16 because you will hear that this is a mesothelioma 17 caused by exposure to asbestos. 18 And Mr. Frost also said that each and 19 every exposure contributes. Again, that's not 20 really true. You have to have a significant 21 exposure to asbestos.

Page 291 1 If we had scientists go out right now 2 on the street and sample the air, they would find 3 asbestos. It would be a very small amount, but they 4 would find asbestos. That's the air that everybody 5 breathes on a daily basis 24 hours a day for however 6 many years you have been living. That amount of 7 asbestos is meaningless. It does not cause disease. 8 And even more asbestos than that does 9 not cause the disease. The problem is we can't 10 figure out -- we can't run a test and expose people 11 to asbestos to find out what is safe and what is not 12 safe, so we have to deal with the exposures that 13 occurred. 14 The exposures that occurred in some 15 places like a power plant where they are very high 16 or perhaps on a ship where they are very high, we 17 know that those exposures can cause or contribute to 18 disease. We just don't have the studies at low 19 exposures right now to tell us what is safe and what 20 is not safe. 21 Mesothelioma, if it's caused by	Page 293 1 some in South Africa, there is some in Russia, there 2 is some in Australia. They have asbestos throughout 3 the world. 4 Asbestos is a commercial term for about 5 six different varieties of this mineral. There are 6 other more scientific terms for the specific species 7 of rock, but we just refer to them as asbestos. 8 Different types of asbestos have 9 different appearance. They look different when you 10 look at them under the microscope. They are 11 different colors, they have different chemical 12 composition, and they react differently in the body. 13 All of the fibers, all of the asbestos 14 fibers are commercially useful because they are 15 strong, they are durable, they are fire resistant, 16 they are heat resistant, and to a greater or lesser 17 extent, they are acid resistant. 18 The commercial types of asbestos that 19 are most important in this country are as follows: 20 Chrysotile. And that's white because chrysotile is 21 always referred to as the white fiber, and it's also
Page 292 1 exposure to asbestos, we know a couple of things. 2 First, the asbestos has to become 3 airborne. If you don't breathe it, it's not going 4 to cause mesothelioma. 5 It has to be a sufficient dose. There 6 has to be enough asbestos that you breathe. 7 Inhaled fibers have to remain in the 8 lung. Sometimes when you take a breath in, you 9 exhale some of the dust that you breathe in. And 10 asbestos isn't the only dust that everybody breathes 11 in on a daily basis. 12 And it has to bypass the body's defense 13 mechanisms which are very good at clearing asbestos 14 from the body. And as I have said before, not all 15 mesotheliomas are caused by exposure to asbestos. 16 But what is asbestos? Asbestos is a 17 mineral. It's actually mined from the ground. It's 18 a naturally-occurring mineral. It occurs in various 19 areas throughout the country. It's actually the 20 state rock in California. A lot of asbestos 21 occurred up in Canada where they mined it. There is	Page 294 1 called serpentine. You can see that it's kind of 2 curvy and wavy. 3 Amosite is a brown fiber. It is an 4 amphibole. It is straight. 5 And crocidolite is called the blue 6 fiber, and it also is straight. 7 And these fiber types are very 8 important for a reason that I will get back to in 9 just a moment. 10 But mesothelioma is a disease that 11 occurs in about 2500 people to 3,000 people a year 12 in this country. And this is data from the National 13 Institute of Health. It is a government entity that 14 tracks mesothelioma. 15 And you can see that the peak -- this 16 is the incidence of mesothelioma in men. 17 A moment ago, I told you that not all 18 mesotheliomas are related to exposure to asbestos. 19 How do I know that? Well, this is some of the data 20 that shows it. Because what we have is starting in 21 World War II is when the country greatly increased

Page 295 1 the amount of asbestos it used on a daily, monthly, 2 yearly basis. 3 Because of the war, there was a huge 4 increase in shipbuilding, there was a huge increase 5 in building guns and building tanks. And asbestos 6 was actually considered to be a mineral commodity 7 that was -- its use was strictly controlled by the 8 government. It was a scarce raw material because we 9 had to get it from other countries. And the 10 government during the war controlled who got to use 11 it. 12 So this huge increase in asbestos 13 resulted in disease many, many years later. 14 Remember we talked a little bit about latency? 15 Thirty or 40 or 50 years later, people get 16 mesothelioma. 17 The huge shipbuilding and other 18 construction for World War II started about 1940. 19 And you can see that the increase in mesothelioma 20 went up until about 1994, '95. So about 55 years 21 after the increase in the use of asbestos from World	Page 297 1 people would get mesothelioma even if there wasn't 2 any exposure to asbestos. 3 So this is one of the reasons that we 4 know that there is -- there are mesotheliomas that 5 occur without exposure to asbestos. There is 6 similar data like this. 7 I mentioned a huge increase of use of 8 asbestos. This graph right here is the consumption 9 of asbestos over time. And you can see in 1916, 10 '26, '36, '46 and so on. 11 So right about in here is where World 12 War II started. And just an enormous increase in 13 the amount of asbestos that was used in industry, 14 shipbuilding and other industries. It maintained a 15 high peak until about 1976 and then a rapid decline 16 mostly due to government regulations, although there 17 is still some asbestos being used in this country 18 today. There are still products made with asbestos. 19 And the interesting thing about that is 20 if you look at the incidence of mesothelioma, it 21 kind of mirrors this. If you move up just about 40
Page 296 1 War II, we have the peak of the incidence of 2 mesothelioma in this country. And since that time, 3 the incidence of mesothelioma has started to 4 gradually decline. 5 In other words, we have seen because of 6 the shipbuilding, because of the other construction 7 from the war, a lot of people, unfortunately, got 8 ill and got sick and got cancer. But the good news 9 of that is that that number of people has started to 10 decline on a yearly basis. 11 This red line here is men. This blue 12 line is women. Women get mesothelioma. Now, there 13 certainly were women who worked in the war effort in 14 World War II. But you can see that this is a very 15 stable line. It's about 500 cases a year. About 16 500 women every year get mesothelioma. 17 And one of the things that the experts 18 will tell you, the doctors will tell you is that 19 because that level hasn't changed, that is largely 20 considered to be what we call a background level of 21 mesothelioma. In other words, that's how many	Page 298 1 years later, because of latency, it mirrors this. 2 And it's expected to decline. This is 2006 right 3 here. 4 So all this is predicted. This is not 5 something that's been measured. It's just what the 6 authors of this particular article are predicting. 7 But the huge incidence of mesothelioma, at least 8 according to these authors and a lot of others, was 9 caused by overexposures to products, thermal 10 insulation products that contained asbestos that 11 could easily liberate fibers. 12 All right. I know I am going quickly, 13 and I apologize, but I don't want to take too long. 14 And you are going to hear a lot of this throughout 15 the trial. 16 So just to sum up what we know about 17 Mr. Blackmon, about mesothelioma and about asbestos, 18 first, Mr. Blackmon was diagnosed with mesothelioma. 19 No dispute about that. 20 And, second, it probably was caused by 21 exposure to asbestos. No one is going to stand up

Page 299 1 and say differently. 2 But we also know it takes a substantial 3 amount of exposure, not something in passing, not 4 trivial. You have got to have a real dose in order 5 to have asbestos cause mesothelioma. 6 And, fourth, not all exposures 7 contribute. 8 All right. I want to get to the second 9 question that I told you I wanted to address with 10 you, and that is what about exposure to Goulds 11 Pumps? And Mr. Frost talked about this a little 12 bit. 13 My client, Goulds Pumps, again, big, 14 huge piece of metal that pumped a liquid. It could 15 have been water. In this case, it was water or 16 sewage or freshwater for drinking, or sanitary, but 17 it wasn't the steam that you heard about. 18 So what do we know about the alleged 19 exposure to asbestos from a Goulds pump? 20 First of all, I want to talk to you 21 about something called the burden of proof. And	Page 301 1 you are listening to the evidence because it's 2 pretty interesting what we have here. 3 One of the things that plaintiffs have 4 to prove is exposure. They have to prove that 5 Mr. Blackmon was exposed to asbestos from a Goulds 6 pump. It sounds pretty basic, right? 7 This is also -- a couple legal issues. 8 This is also what we call a failure to warn case. 9 Plaintiff's claim is that Mr. Blackmon got this 10 disease, one, because he was exposed and, two, 11 because nobody warned him about the exposure. 12 They claim that had Mr. Blackmon been 13 warned, this disease never would have happened. All 14 right? 15 So this is plaintiff's burden. This is 16 what they are trying to prove to you in this case. 17 What do we know? There are four ships 18 at issue here. I only have -- there is five ships 19 at issue. I only have pictures of four of them. 20 The Androscoggin, the Winnebago and the Mendota are 21 all what we call sister ships. They are the Owasco
Page 300 1 it's important on all of the issues. And Mr. Frost 2 mentioned it to you a little bit. Remember he told 3 you the scales and he had to tilt the scales a 4 little bit? That's what we call the burden of 5 proof. 6 And it's plaintiff's obligation -- 7 plaintiffs have to prove -- plaintiffs come to this 8 court. They want damages. They claim that my 9 client is responsible. 10 Well, we don't just assume that that's 11 true. We say if you think that's true, you need to 12 prove it. It's your burden. And if you don't prove 13 it, your claim fails. We don't give them the 14 benefit of the doubt. We don't tell them that we 15 are going to lower the burden for them just on this 16 one issue. Plaintiffs have the burden of proof. 17 And this is no surprise. Mr. Frost 18 will tell you he knows this. It's a burden he takes 19 on. He does these cases. But plaintiffs have the 20 burden of proof. 21 And I want you to think about that when	Page 302 1 class of ships. The Ingham -- these ships are all 2 about 227 feet long. 3 You can see the Mendota, that's got the 4 typical Coast Guard colors that you think. These 5 pictures of the Winnebago and the Androscoggin are 6 actually taken during Vietnam where they painted the 7 ships for warfare. They don't want to advertise 8 here is the ship, take a shot at us if you want to. 9 This is what the ships looked like for rescue, this 10 is what the ships looked like for warfare. 11 This is the Ingham. This was also 12 involved in Vietnam. And this is the Ingham as 13 well. So you can see the difference, the Ingham 14 during war and the Ingham when it's just patrolling 15 the coast. These are all ships on which 16 Mr. Blackmon served. 17 There is another ship called the 18 Violet. It's a buoy tender, which it's kind of old, 19 so there is not really a lot of pictures available 20 of that one. 21 But when we talk about exposures in the

Page 303 1 Coast Guard, these are the ships we are talking 2 about. 3 All right. So Mr. Blackmon was 4 questioned. What his lawyers did was because he was 5 ill and because his doctors were saying that he 6 might not make it to trial, plaintiff's lawyer said 7 we are going to ask you questions on a videotape. 8 If this case goes to court, we want the jury to be 9 able to see you. We are going to ask you questions, 10 and we want you to answer those questions. We are 11 going to put it on videotape. And plaintiffs are 12 going to play it up there on the screen. 13 So this is something that plaintiff's 14 lawyers did. They asked him numerous questions 15 about exposure to numerous products. 16 And let me go back to burden of proof. 17 Remember the burden of proof? Plaintiffs have the 18 burden of proof. 19 They asked him about the pumps. No 20 doubt about it. 21 Did you work on pumps?	Page 305 1 the ships. 2 But there is more than just one type of 3 pump. There are numerous pumps. There are pumps 4 that are involved in the hot side of things, the 5 steam, because there is boilers on the ships and the 6 boilers produce steam and the steam turns the 7 turbines and the turbines then can produce power, 8 and there is pumps that circulate the water. 9 And then there is ambient or the cold 10 side of things that might be for cold water that you 11 drink or it might be for sanitary supplies or it 12 might be for fire. And the pumps that operate in 13 those different systems are different types of 14 pumps. 15 And what you are going to hear is that 16 the Goulds pumps on the ships are the ambient, the 17 cold water. You are going to hear that they don't 18 require as much maintenance. 19 You are going to hear from Mr. Blackmon 20 himself. What does he say? I will tell you -- and, 21 again, at the deposition, plaintiff's counsel who
Page 304 1 Yes, I did. 2 What did you do on the Owasco class 3 cutters? Remember, that was the Androscoggin, the 4 Mendota and the Winnebago. 5 And they asked him who made the pumps? 6 Who made the pumps on which you worked? Not who 7 made the pumps on the ship, who made the pumps on 8 which you worked? 9 Most of the ones that kick up is the 10 Westinghouse, I believe, and the -- I am trying to 11 think. The name of the auxiliary feed pump was -- I 12 would have to look at that list to tell you. 13 Now, there is not going to be any 14 dispute that Goulds Pumps were on these ships. In 15 fact, somebody that we retained, someone named 16 Mr. McCaffery who served in the Navy and is an 17 expert on ships, we actually hired him to go to the 18 National Archives to find documents. 19 We said, can you tell us if Goulds 20 pumps were on these ships? And he came back and he 21 said, yes, they are. There are some Goulds Pumps on	Page 306 1 knew they had the burden of proof never said at that 2 video deposition did you work on Goulds Pumps? They 3 never asked that question. 4 And here is the reason why. They asked 5 him, well, what about the gaskets on the cold pumps? 6 And he said, the pumps that might be a 7 cold water or a freshwater, sometimes on these type 8 pumps, you might put a compound on them -- he is 9 talking about the gaskets -- to keep them from 10 sticking to the flange. And being they're cold 11 service of something, sometimes the gasket would 12 just come off real easy. 13 So the evidence from -- I think 14 undisputed evidence from both sides is that on a 15 cold water pump, there is less maintenance. It 16 might be once a year, it might be less frequent than 17 that. You can put something on the gasket that 18 doesn't cause it to stick, and it's probably just 19 going to fall off. 20 So if you think about was there 21 exposure, one, have plaintiffs carried their burden

Page 307 1 of proof by actually going out and proving more than 2 there were Goulds Pumps on the ship? Because that's 3 actually evidence that we gave to them. We told 4 them that there were Goulds Pumps on the ship. 5 So have they proved exposure to 6 asbestos from a Goulds pump? And if they did, which 7 I submit they haven't, does it get anywhere near 8 substantial or meaningful exposure? And it doesn't. 9 Mr. Blackmon is the only witness to 10 tell us what he did with pumps. He is the only 11 witness to tell us what he did. 12 We supplied the information to 13 plaintiffs to tell them that we were on board the 14 Owasco class ships. That information shows all cold 15 service pumps. None of this evidence is going to be 16 disputed. And there is less maintenance and little 17 chance of exposure on those pumps. 18 So when it comes down to have 19 plaintiffs shown exposure to asbestos connected with 20 a Goulds pump? No. 21 All right. The last issue that I have	Page 309 1 what was known, what was knowable at that time and 2 try to figure out -- I didn't say we are going to do 3 it. We will present the evidence. But one of your 4 functions is what was known in the '50s, what was 5 known in the '60s? 6 We can't use what we know in 2008. We 7 can't use what we learned five years ago or ten 8 years ago. We have to actually look at what they 9 knew 30 years ago or 40 years ago. And that's what 10 we as lawyers call state of the art. 11 So we are going to look back in time, 12 which I am going to go through with you. And, 13 again, this burden of proof thing, I know I keep 14 raising it, but just because someone says that a 15 pump is hazardous or a gasket is hazardous doesn't 16 make it true. There has to be some evidence behind 17 that. There has to be some information, some data 18 behind what they said. 19 Now, asbestos can be hazardous. Nobody 20 disputes that. But if you put asbestos in a 21 product, does it automatically make it hazardous?
Page 308 1 to address or that I would like to address with you 2 is -- and I am actually doing good on time, if 3 that's any consolation -- is did Goulds do anything? 4 You heard a little bit about what was 5 known. Mr. Frost went through it. And he kind of 6 presented that, gee, the companies knew it and they 7 are the only ones who knew it and they should have 8 done something. That's not really the way that 9 things shake out when you look at all the evidence. 10 I want to spend a little time on 11 something called state of the art. And state of the 12 art is important to this type of case because we are 13 not here to judge with hindsight. 14 We are not here to say, gee, in 2008, 15 everybody knows you are supposed to wear a seat 16 belt, so if somebody didn't wear a seat belt in 1950 17 when, by the way, they didn't even have seat belts, 18 they were an option on cars, that you were 19 negligent. That's not what we are going to do. 20 We are actually going to take what was 21 known in 1950, 1960, 1970, hear from the experts	Page 310 1 That's what the plaintiffs want you to believe. The 2 evidence is going to show something different. 3 So state of the art. Well, let's go 4 way back in time. This is a publication called 5 Scientific American. And I can't see it there, but 6 it's actually published in the 1800s. This is a 7 newspaper. It's only about ten pages. 8 And it's hard to see, but all this 9 stuff right here, they are actually talking about 10 this mineral asbestos and how it's a great 11 discovery. 12 Back in the 1800s, we knew a lot less, 13 but the people then were talking -- and already 14 then, asbestos had been in use for centuries. It 15 reportedly in the '60s and '70s, it was incorporated 16 into 3,000 different products. 17 They used to put it in tiles, these 18 tiles that you see on the wall here, on the ceiling. 19 These cornices in the courthouse right there, they 20 used to be made with a plaster material that 21 contained asbestos. Asbestos served many useful

Page 311 1 purposes, so much so that it was advertised as the 2 magic mineral. It was heat resistant. 3 It actually helped -- if you put it in 4 joint compound, it retained water, so it helped the 5 joint compound dry slower which meant that your 6 finish didn't crack and that you had a better 7 looking appearance. It helped the trowel smooth 8 on -- the asbestos slipped off of the trowel. It 9 really is a mineral that found many, many uses. 10 Despite how many uses it found, we 11 agree, asbestos can cause disease. It can cause 12 asbestosis, it can cause mesothelioma. If you smoke 13 and smoke a lot, asbestos can contribute to a lung 14 cancer. It can also cause something called pleural 15 plaques. None of that is in dispute. The question 16 is going to come down to how much asbestos is 17 required. 18 So what do we know about asbestos and 19 disease? Well, where it was first recognized is 20 where they were mining it. They would take asbestos 21 out of the ground. It was a dusty operation. There	Page 313 1 did after that was to make a curtain. They had 2 curtains that went in front of the screen. And that 3 curtain caught on fire and really caused the fire to 4 spread. So they started making the curtains out of 5 asbestos so it wouldn't burn. 6 There were actually -- for cribs, they 7 made sheets that you would put on the crib because 8 fire was a very big hazard in the '30s and '40s. 9 People had open fires. They didn't have central 10 heating. You had a burner or an open fireplace in 11 your house to keep you warm, so there were a lot of 12 fires. 13 You didn't want your child to burn, so 14 you could get an asbestos sheet to put on the crib 15 so if there was a fire, that sheet could protect 16 your child. 17 So, again, if you go back in time, 18 there is a different mindset about asbestos. It's 19 not considered the same as it is today. 20 All right. So how was it first 21 recognized? This is a picture of a textile factory.
Page 312 1 would be a lot of dust. 2 You will hear about fiber/cc years or 3 millions of particles per cubic foot. Those are 4 ways that we measure dust in the air. And the level 5 of exposure that these miners and millers were 6 exposed to is hundreds, if not thousands, of times 7 higher than what the level at which people were 8 exposed in the '60s and '70s. 9 In the United States, disease was first 10 recognized in textile mills. Textile mills is where 11 they took almost 100 percent raw asbestos fiber 12 which you can actually weave -- because it's a fiber 13 like cotton or silk, you can weave it. You can make 14 it into a thread. You can make it into a yarn and 15 you can weave it into a blanket. So these textile 16 mills were making textiles. 17 If you are a student of history, there 18 was a big fire in a theater in Chicago in the 1920s 19 and 1930s. It killed a lot of people because the 20 owners of the theater had barred the exits. 21 And one of the things that companies	Page 314 1 And you can see actually that this textile factory, 2 this is dust collecting equipment because even in 3 the 1930s, they realized that there couldn't be too 4 much dust. 5 This material right here, raw asbestos. 6 It just looks like cotton, there is so much of it. 7 This is not operating. If you can see it from this 8 far away, you can see that the evidence is, 9 literally, hanging in threads off these machines. 10 The descriptions of these textile 11 factories when in operation is that you couldn't see 12 from one side of the room to the other, the dust was 13 so thick. No surprise that people there got 14 asbestos. 15 Where else did people get reported as 16 having an asbestos-related disease? Well, this is a 17 factory. This is where they make thermal insulation 18 or pipe covering. You can see it's a cylinder. And 19 if you look way over here, you see that the 20 cylinders are cut in half, so they are half moons. 21 And you put them on either side of the pipe and then

Page 315 1 you tie them on. That insulated the pipe. That 2 kept the steam in the pipe rather than having the 3 steam come out of the pipe and you lost efficiency. 4 And, also, where did the people get 5 disease? Well, people called insulators that we 6 will hear about -- this is another type of thermal 7 insulation. This is called block. 8 This is -- none of the pictures I am 9 showing you have anything to do with the ships on 10 which Mr. Blackmon served. These picture are to 11 illustrate the types of exposures where people could 12 get ill. 13 This is actually a BG&E power station 14 here in Baltimore. And this is a turbine that's 15 being built. And this is called the crossover from 16 the high-pressure turbine to the low-pressure 17 turbine. And this is all thermal insulation. And 18 you can see the guys, they are just up there 19 crawling around on it. The asbestos got all over 20 their clothes. 21 So, again, any surprise that people who	Page 317 1 exposed for 40 hours a week, 50 weeks a year for a 2 working lifetime. It's permitted under U.S. law, 3 under OSHA. 4 So let's take a look at what the 5 medical and scientific literature actually said. 6 Okay. The evidence from way back when supported a 7 threshold. And what does a threshold mean? That's 8 a level of exposure, if you stay below it, you are 9 going to be okay. If you go above it, you are going 10 to be at a risk of getting a disease. 11 The data suggested that workers exposed 12 to low doses were not at increased risk. Again, 13 along with the threshold is you are worried about 14 the people who are exposed above it or maybe even 15 close to it. 16 People who are exposed way down here, 17 nobody ever thought that they were going to get 18 disease. And the focus was on reducing exposures to 19 eliminate disease. 20 One of the things that you will hear 21 about is that during the entire time that
Page 316 1 worked under these circumstances got ill? Not 2 really. 3 So from the 1930s, there was disease in 4 textile workers. Scientists and doctors have 5 searched for a safe level of exposure. Just like 6 anything else, we want to know what is safe. 7 Radiation. We all go to the dentist's 8 office. I hope we all go to the dentist's office. 9 You get your teeth X-rayed. Well, hold on a second. 10 Radiation can kill you. But the radiation you get 11 for your teeth or if you broke your arm and they had 12 to X-ray your arm, that radiation is thought to be a 13 safe level. Even though it's acknowledged that 14 radiation can kill you, we are looking for a safe 15 level. 16 Most authors stated that asbestos was 17 very useful material. And even today, asbestos is 18 not outlawed. If you heard, as I did, that asbestos 19 is outlawed in this country, that's not correct. 20 Asbestos is not outlawed in this country. There is 21 a level of asbestos to which you are permitted to be	Page 318 1 Mr. Blackmon served in the Coast Guard, nobody said 2 let's get rid of asbestos. Nobody said that. 3 The people who were trying to prevent 4 asbestos-related disease said let's make sure that 5 we are not exposing these men at a level that's not 6 safe. We don't need to stop using it, let's just 7 make sure that the way we use it is safe. 8 All right. And one of the concepts 9 that you will hear about and see is that the people 10 who were thought to be at risk -- actually, we knew 11 they were at risk from the '60s on -- were the 12 guys -- the insulators, the guys who were working 13 with thermal insulation. 14 We knew about the textile factory 15 workers, we knew about the miners and millers. That 16 doesn't really translate -- didn't translate until 17 the insulators. But starting in the 1960s, it was 18 well recognized that the insulators were thought to 19 be at risk. 20 And if we can protect the insulators, 21 if we reduce their exposures to where they are not

Page 319 1 getting disease, then somebody who is ten feet away 2 who might be exposed -- because you can be exposed 3 at a much lower level -- isn't going to get disease 4 either. 5 So these are some of the concepts that 6 you will see were discussed up through today, 7 actually, but certainly up through the time that 8 Mr. Blackmon worked for the Coast Guard. 9 Now, since he worked for the Coast 10 Guard, we are going to spend a little bit of time 11 talking about the United States government. And the 12 United States government you will see was involved 13 in studies of workers exposed to asbestos from the 14 earliest date. The United States government knew 15 everything there was to know about exposure to 16 asbestos. 17 How I can say that? Well, here is one. 18 Difficult to read, but this is a report by someone 19 named Lanza. And it's called Effects of the 20 Inhalation of Asbestos Dust on the Lungs of Asbestos 21 Workers. This is a United States government	Page 321 1 workers. You remember the picture I showed you 2 where the asbestos was, literally, dripping off the 3 machines? 4 And he studied the workers in those 5 plants. And he said, well, we looked at these 6 workers, and we think if you can keep exposures 7 below 5 million particles per cubic foot, below 5 8 million particles per cubic foot -- remember the 9 threshold I told you about, the level above it is 10 hazardous, below it is dangerous? They said, we 11 think if you can keep it below 5 million particles 12 per cubic foot, we don't think disease is going to 13 occur. That was 1938. 14 This is a different article called 15 Asbestosis. And they are talking about asbestosis 16 because no one really had associated cancer with 17 exposure to asbestos yet. So the disease that they 18 thought was significant was asbestosis. So they are 19 talking about asbestosis. 20 This is an article -- I know you can't 21 read that -- that is read to the American Public
Page 320 1 publication. You can't see the date there, but I 2 will tell you, if my recollection is correct, it's 3 1936. 1936, the government publishes about 4 asbestos. The government tells people here is what 5 we know about asbestos-related disease. 6 And let me draw your attention to one 7 thing up here, United States Treasury Department 8 which at the time was in charge of the Public Health 9 Service. 10 What you are going to hear about is 11 that the Coast Guard is under the control of one of 12 two government agencies. The first one is at times, 13 it's under control of the United States Navy. The 14 second one is it's under the control of the United 15 States Treasury Department. 16 So the government from 1936 on knew 17 about the hazards of exposure to asbestos. 18 It doesn't stop there. This is an 19 article by someone named Sayers and Dreessen. This 20 is an article from 1939. In 1938, a different 21 article, Dr. Dreessen had studied the textile	Page 322 1 Health Association. I can't read it from here. 2 Industrial hygiene section of the American Public 3 Health Association. So the government is actually 4 going out and teaching people about asbestosis. 5 And one of the things that they wanted 6 to do was to find out what concentrations of 7 asbestos dust can be tolerated without injury. 8 Getting back to that threshold. What concentrations 9 can be tolerated without injury? 10 So what did they say? Well, 11 conclusions right there. And one of the things they 12 discussed is what we have to know is how high were 13 the exposures of the people that we were studying 14 before we could figure out what level is safe? 15 And they remark that there were 16 exposures from .1 fibers per cc -- which, 17 coincidentally, this is not .1 fibers per cc, this 18 is .1 million particles per cubic foot. I will come 19 back to that. Exposures from .1 million particles 20 per cubic foot. So if you take a cubic foot, .1 21 million is 100,000 particles of asbestos in a cubic

Page 323 1 foot. That was the low end. And the high end was 2 76 million. So the same cubic foot. And into it 3 you have 76 million particles. That was the range 4 in these textile facilities, from not very dusty to 5 very dusty. So that was one of the conclusions. 6 And what did they say? It appears that 7 if asbestos dust concentrations in the air breathed 8 are kept below 5 million particles per cubic foot, 9 new cases of asbestosis will not appear. 10 So the United States government at the 11 industrial hygiene section of the American Public 12 Health Association meeting in public in 1939, the 13 American government says asbestosis will not appear 14 if you keep the level below 5 million particles. 15 All right. So is that the end of the 16 story? No, it's not. Because, remember, we are 17 going back in time. We started in the 1930s. 18 In 1946, I believe, a voluntary 19 organization actually promoted something called a 20 TLV or a threshold limit value where they said 5 21 million particles was the level, the threshold for	Page 325 1 measure asbestos as well. We changed from a million 2 particles per cubic foot to fibers per cc. 3 And so the OSHA law in '72 was five 4 fibers per cc. In '76, it was reduced further to 5 two fibers per cc. In '86, it was .2 fibers. And 6 '94, it's .1. 7 And that's what I had started to tell 8 you earlier. That's the level today. Since 1994, 9 the level for exposure to asbestos in the workplace 10 has been .1 fibers per cc. 11 A cc -- if you have seen a sugar cube, 12 that's about the size of a cc. So .1 fibers is 13 one-tenth. You are not going to have one-tenth of a 14 fiber. But if you have ten sugar cubes stacked -- 15 the government says you are allowed to have one 16 fiber of asbestos in an area that's equal to ten 17 sugar cubes stacked together. 18 All right. So dose is what we have 19 talked about. Dose is the length of time that you 20 have been exposed times the concentration. That 21 gives you the information you need to talk about
Page 324 1 asbestosis. The United States government adopted 2 that level in law in 1960. 3 So the government actually is applying 4 that level to people who have government contracts. 5 So if you want to do business with the government, 6 if you want to sell something to the government, if 7 you want to do a construction project for the 8 government, the government says you have to have 9 safe business and you have to stick to the 5 million 10 particle per cubic foot standard. So the government 11 is actually insisting that its contractors stick to 12 that. 13 Well, that's not the end of the story 14 because as we learned more, as science and medicine 15 learned more, we found that that wasn't necessarily 16 a protective level. 17 So starting in 1972, OSHA -- OSHA was 18 enacted -- OSHA was passed into law in 1970 and 19 became effective in 1971. OSHA reduced the level to 20 five fibers per cc. And what they did was they 21 changed -- we actually had a change in the way we	Page 326 1 thresholds. These are the legal thresholds that 2 have been in place since 1960. 3 Mr. Blackmon, of course, alleges that 4 he began to be exposed when he joined the Coast 5 Guard in the 1950s. So we are going to keep 6 progressing with our knowledge up through time. 7 But let me talk to you just about dose 8 for just one minute. 9 THE COURT: Pardon me, Mr. Radcliffe. 10 Do you think it would be a good time to take a 11 break? Because the jury has been out here for a 12 long time. 13 MR. RADCLIFFE: Certainly. 14 THE COURT: I apologize. I promised we 15 would give you a break in the morning. So I will 16 give you a brief recess. Reserve all judgments. 17 Don't talk about the case. Just take five minutes 18 and be back ready to go, and Mr. Radcliffe will 19 continue. You are excused for five minutes. Okay? 20 Take a brief recess. 21 THE COURT CLERK: All rise.

Page 327 1 (Recess taken -- 11:25 a.m.) 2 (After recess -- 11:32 a.m.) 3 (Jury present -- 11:34 a.m.) 4 THE COURT: Welcome back. Have a seat. 5 You may resume your argument. 6 MR. RADCLIFFE: Thank you, Your Honor. 7 All right. So the court reporter is 8 mad at me because I am speaking too quickly. I am 9 trying to get done but not speak so quickly she 10 can't write down what I am saying. 11 Dose. It's the amount of asbestos in 12 the air times how often you take it. A dose of 13 aspirin is the amount of aspirin you take times how 14 many you take. You can take one aspirin an hour or 15 you can take two aspirin every two hours. 16 Dose is something that we deal with 17 with everything. There is a dose for everything. 18 There is a dose for water. I don't know if any of 19 you heard, there was a radio show out in California 20 that they just had these people drink water, who 21 could drink the most water. Someone drowned from	Page 329 1 experiments with rats to see if he can cause 2 disease. He exposes them to 5,000 fibers per cc. 3 Remember the sugar cube? 5,000 fibers in the size 4 of a sugar cube. 5 Remember also that the exposure level 6 for people in the United States is .1 fiber per 7 sugar cube. And at 5,000 fibers per sugar cube, he 8 gets a reaction, but he does not get mesothelioma 9 and he does not get disease, he gets a reaction. So 10 dose is important. Its something we are going to 11 talk about. 12 And even when we talk about these 13 articles, the state of the art, we are talking about 14 dose. I showed you -- I was wrong earlier. I said 15 1936. It's a 1935 article by Lanza. This is the 16 Public Health Reports. This is the one that the 17 Treasury Department published, the Treasury 18 Department in charge of the Coast Guard. And he 19 says here is what causes asbestosis. 20 The Public Health Service later 21 actually goes into shipyards and does studies for
Page 328 1 drinking water. 2 There is a dose of water that is 3 lethal. There is a dose of aspirin that is lethal. 4 There is a dose of sunlight that is lethal, but we 5 don't think about that when we walk out and go to 6 our cars or maybe even if we are sitting on the 7 beach or whatever we are doing. 8 Dose applies to everything. Dose 9 applies to asbestos. Dose applies to cyanide. 10 There is dose of cyanide that's lethal. There are 11 lesser doses that are not lethal. They are not 12 necessarily healthy for you. 13 But dose applies to everything that we 14 know in nature. It applies to alcohol, it applies 15 to cigarette smoke, it applies to salt, it applies 16 to anything you can think of. 17 And when we talk about asbestos, dose 18 is important. Even the experts the plaintiffs bring 19 to testify will agree that dose is important. 20 One of their experts, Dr. Brody, will 21 talk about the dose he gives to rats. He	Page 330 1 the government, for the Navy to find out about 2 asbestosis. And Lanza publishing for the world 3 gives some recommendations. What were those 4 recommendations? Keep the exposures low, use 5 housekeeping, things like that. 6 1943, the government again. And let me 7 just tell you, I am skipping over lots of documents. 8 I cannot possibly cover every single document with 9 you in the short time that I have, so I am kind of 10 skipping along, hitting some of the high points. 11 When we hear witnesses testify, we will get to some 12 more in depth of these articles. 13 1943, a government document, United 14 States Navy Department, United States Maritime 15 Commission. They talk about asbestosis. This is 16 Safety and Health, Safety and Industrial Health in 17 Shipyards, Contract Shipyards. 18 The shipyards that built the 19 Androscoggin, the Winnebago and the Mendota were 20 contract shipyards. That means they were not owned 21 by the Navy, but the Navy contracted with them. And

Page 331 1 they built those ships in '43, '44. And those 2 shipyards had to comply with these minimum 3 requirements, one of which dealt with asbestosis. 4 And what did the government tell to the 5 shipyard? Look out for asbestosis, look out for it. 6 What do you want? Segregation, use of exhaust 7 ventilation and respirators, periodic medical 8 reports. 9 They didn't say stop using asbestos. 10 They didn't say don't use it or you can't use it. 11 They said use it, but you have to follow these 12 precautions. You have to make sure that people 13 aren't overexposed. Because, remember, if people 14 aren't overexposed, if their dose doesn't exceed the 15 threshold, they are not going to get disease. 16 Okay. 1954, it continues. You just 17 see the government knowledge. And, remember, the 18 government is the Coast Guard. The government 19 employed Mr. Blackmon. The government is conducting 20 studies of insulator exposures. This is when we 21 actually start to see some evidence.	Page 333 1 1957, again, the government adopts the 2 ACGIH TLV. I told you that there was a voluntary 3 organization. That was called the ACGIH, the 4 American Conference of Governmental Industrial 5 Hygienists. 6 And they got together and they said 7 let's do something about the many, many chemicals 8 and exposures that happened. They published a list 9 of TLV, threshold limit value, beginning in 1946, 10 said here is the exposure limits for all these 11 substances. 12 Well, the government adopts it no later 13 than '57. Why do I say '57? Excuse me. Why do I 14 say at the latest? Well, this is a 1957 document. 15 And you will see the purpose, to 16 provide a replacement enclosure. So they are 17 replacing something that was already in existence. 18 Was it '56 that they started, '53, '50? I don't 19 know. But no later than '57, the government has the 20 TLV. 21 So remember, in 1960, the Walsh-Healey
Page 332 1 We talked about textile factories, we 2 talked about miners and millers and even people who 3 worked in factories where they made thermal 4 insulation, those people were getting ill. 5 If you are in a factory that's making 6 pipe covering, you are making tens of thousands of 7 pieces a day. The exposures are high. If you are 8 out in the field and you are applying 30 pieces a 9 day or a hundred pieces a day, that's a fraction of 10 the factory exposure. And it wasn't thought that 11 they had enough exposure to get ill. 12 But here, we start to see, wait a 13 second, the government is doing studies of 14 insulators. Those are the people who were working 15 with the thermal insulation, taking it off, putting 16 it on, cutting it, sawing it, pounding it, creating 17 dust. Those are the people who are getting ill. 18 1954, the government knows about it. 19 The government also knows what to do. Exhaust 20 ventilation, segregate the work areas, give them 21 respirators if they need it.	Page 334 1 Act, the government imposed minimum requirements for 2 contractors. You have to be safe, you have to 3 follow these safety guidelines, one of which is a 5 4 million particle per cubic foot level. 5 Now the government is saying, wait a 6 second, we are going to impose it on ourself. We 7 are going to impose -- the same level that we impose 8 on the contractor, we are going to impose it on 9 ourselves. We are going to say you can't be exposed 10 above 5 million particles. 11 All right. 1959 again, the government 12 is engaged in studies of workers, asbestos workers. 13 Those are the people who worked with the thermal 14 insulation at Mare Island. 15 And what do they recommend? The 16 government is saying here is what we are going to do 17 with our employees. Here is what we are going to 18 do. 19 Mare Island was actually a United 20 States government shipyard. There was a contract 21 yard which wasn't owned by the government but built

Page 335 1 ships for the government, and then there are 2 actually shipyards that are owned by the government 3 where the government employs all the people, 4 civilian employees of the United States government. 5 So the government says what we are 6 going to do is we are going to educate our people, 7 we are going to give them respirators, and we are 8 going to provide exhaust ventilation, 1959. 9 All right. So state of the art, we are 10 beginning to see -- we haven't even finished yet. 11 We are only up to 1959. State of the art you see is 12 the government, the people who bought the pump from 13 Goulds, the people who employed Mr. Blackmon were 14 intimately involved with the study of asbestos, knew 15 not only the hazards of asbestos but what to do to 16 control the hazards and to prevent disease. 17 So 1960, things begin to change a 18 little bit. First of all, we hear about 19 mesothelioma. There were cases of mesothelioma 20 reported before 1960, but what happened in 1960 is 21 this report where they found a number of cases, 33	Page 337 1 It started studies in the United 2 States. Well, what kind of studies? You heard -- I 3 think Mr. Frost mentioned Mount Sinai. Mount Sinai 4 had somebody who is very famous in asbestos 5 publications. His name is Dr. Selikoff. That's his 6 name right there, Irving Selikoff. And he published 7 extensively. He probably published somewhere near a 8 hundred articles on asbestos-related disease. 9 And not only that, but early on in the 10 '50s, he worked with the union, the insulators 11 union, the people who were applying the thermal 12 insulation to study them. 13 He actually got with the union and 14 said, look, your people are getting ill. The union 15 said we know it, we know we are ill, we don't know 16 how to stop it. And Dr. Selikoff said, let me study 17 your workers, let me try to help you, let's see if 18 we can come up with some information. They said 19 great. 20 So he started to study the union and 21 then he began to publish his findings. One of the
Page 336 1 or 34 of them, all together in one place. 2 And remember, I had said that in South 3 Africa, they mined asbestos. They mined a very 4 specific type of asbestos there. It's called 5 crocidolite. 6 And what these authors reported is we 7 found mesothelioma, a lot of them, in association 8 with people who work with or around or are exposed 9 to crocidolite, blue asbestos. It was the thin, 10 sharp, straight asbestos fibers. 11 So this really captured everybody's 12 attention. Everybody starts thinking, wait a 13 second, are other types of asbestos causing 14 mesothelioma? 15 Nobody woke up the day after this was 16 published and said, oh, my gosh, it's time to ban 17 asbestos, we can't use it ever again. That's not 18 the way science and medicine works. There is 19 questions, there is a hypothesis, and then people go 20 out to prove it or disprove it. But this, no doubt, 21 was an important publication.	Page 338 1 things he published was relation between exposure to 2 asbestos and mesothelioma. All right. That's one 3 of the things we were dealing with. 4 And what does he say? I am going to 5 have to get close. In 1960, Wagner -- he is South 6 African, so he pronounces it Wagner -- Wagner 7 reported 33 cases of diffuse pleural mesothelioma 8 from the Northwestern Cape Province of South Africa. 9 That's the article I just showed you, 1960, the big, 10 oh, my gosh, what is going on article. 11 This remarkable concentration of cases 12 in one area of South Africa was explained by the 13 hypothesis that mesothelioma was the result of 14 exposure to one special type of asbestos, 15 crocidolite, mined almost entirely in that region. 16 Now, that's not me. That's not my 17 experts telling you it was caused by crocidolite. 18 That's what Dr. Selikoff said in 1965. 19 What else? We undertook to study the 20 question whether mesothelioma of the pleura and 21 peritoneum -- remember I told you about the

Page 339 1 peritoneum is your abdomen -- had an important 2 relation with asbestos exposure in the United 3 States. 4 1965. Is the question settled? Would 5 one of the world's leading experts publish in 1965 6 we undertook to study the question if it was already 7 known and accepted? 8 If something is known and accepted by 9 experts, wouldn't his article say we all know that 10 exposure to asbestos causes mesothelioma, regardless 11 of fiber type? But, no, that's not what he says. 12 He says, we have got this finding of 13 crocidolite, and that's what explained it, but wait 14 a second, we are not satisfied with that, we are 15 going to do further tests and we are going to figure 16 out if exposure to other types of asbestos are 17 important in causing mesothelioma. And he does the 18 test. 19 In this publication, he publishes the 20 answer. And this is his answer. He looked at 307 21 people, found ten deaths by mesothelioma. And,	Page 341 1 to five-inch gasket. The fluid goes through here 2 and you put the bolt holes through there. This is 3 what we are talking about for Goulds. 4 This is the same as a textile factory? 5 This is the same as thermal insulation, thermal 6 insulation that if you crushed it with your hand, 7 you would create powdery dust that would come up in 8 the air, this which you can bend all around which 9 Mr. Blackmon says that you put a compound on so it 10 kind of just fell off when you took the flange 11 apart? No. It doesn't make sense. And it's not 12 what the experts say either. 13 Again, Dr. Selikoff. Information 14 currently available concerning asbestosis has been 15 derived from studies of employees of asbestos 16 textile factories and should probably be referred to 17 such individuals. This is, again, 1965. 18 Dr. Selikoff is telling the world if 19 you study textile factory workers and you find out 20 information, then that's information for textile 21 factory workers.
Page 340 1 incidentally, he looked at 31,000 people who were 2 thought not to be exposed to asbestos and found 3 three deaths. 4 So, again, how do we know that not all 5 mesotheliomas are caused by exposure to asbestos? 6 Because if you look at enough people, 31,000, you 7 find some mesotheliomas. But this data showed him 8 and he wrote that, wait a second, asbestos exposure 9 in this country can cause mesothelioma. So that's 10 1965. So the knowledge continues to advance. 11 Knowledge continues to grow. 12 What else happens? Well, there has 13 been a suggestion, I think, that wait a second, if 14 you knew asbestos was hazardous in the textile 15 industries, if you knew asbestos was hazardous for 16 miners and millers, that's all you needed to know. 17 We know that you are making a pump. We 18 know that the product that people are saying is 19 asbestos containing is this gasket which 20 Mr. Blackmon or Mr. Connor I believe you will hear 21 from from -- somebody at Goulds -- says it's a four	Page 342 1 If you want to know about people who 2 worked with asbestos cement, then you should study 3 asbestos cement workers, or asbestos insulation 4 workers, you need to study asbestos insulation 5 workers or asbestos miners or asbestos mill workers. 6 All these people have different 7 exposures because, remember, we are talking about 8 dose which is the length of the exposures and the 9 intensity of the exposure. It can be a certain 10 level in a textile factory, a lower level in a mine 11 or a higher level. 12 So you have to study the people in 13 question to determine is there risk. And that's, 14 again, what the experts were saying in 1965. 15 All right. So '60s, things began to 16 change. We hear about mesothelioma as a result of 17 exposure to crocidolite. Studies begin in the U.S. 18 that confirm that mesothelioma can be an important 19 concern for thermal insulation workers in the U.S. 20 Information from previous studies of 21 textile workers, miners and millers we are told is

Page 343 1 not relevant to what is going on for us. And even 2 experiences in other countries, South Africa, are 3 not directly related to what happened in the U.S. 4 Well, is this some big conspiracy? Is 5 this some big secret? Did nobody know about it? 6 Was it not reported? No. 7 This is very difficult to read, I know, 8 but December 4th, 1968, this is the Washington Post, 9 40, 50 miles down the road in Washington, D.C. The 10 title of the article, U.S. Warned of Asbestos Peril. 11 And this is actually Dr. Selikoff 12 meeting with the -- meeting with -- talking about 13 the nation's 350,000 shipyard workers. Shipyard 14 workers. And he met with Public Health Service, the 15 Navy and the Labor Department. So -- and there are 16 newspaper articles before this time. There are 17 newspaper articles going back to '64. Asbestos can 18 be hazardous if you are exposed to too much. 19 All right. Well, what did the 20 government do? The government took steps. The 21 government actually took the information that they	Page 345 1 rules. 2 Time marches on. 1970, another article 3 by Dr. Selikoff. What does he say? Mining, 4 manufacturing. The risk of heavy exposure to dust 5 has been recognized for some time. 6 Absolutely. We agree. The textile 7 factories, the mining, that hazard goes back to the 8 '30s and maybe even earlier. No question about 9 that. 10 What we are talking about, was there a 11 hazard on board ships at the Coast Guard? And if 12 there was, were there steps taken to protect the 13 workers? And if there are steps taken to protect 14 the workers, if the Navy, the government and the 15 Treasury Department are telling its employees here 16 is what you do to protect yourself, isn't that a 17 warning? Doesn't that make the effort to make sure 18 that they are not harmed? 19 Experience had indicated that reduction 20 of dust levels -- dose again -- to reduce the dust 21 levels below the threshold could result in greatly
Page 344 1 had and they insisted upon work practices to protect 2 the employees. 3 This gentleman is an insulator. You 4 can see that he is covered with asbestos-containing 5 dust. You can see also that he is wearing a 6 respirator. 7 This is actually on board ship during 8 ship construction which is different than ship 9 operation, of course. But it gives you an idea of 10 what it's like to handle thermal insulation, the 11 type of stuff that's really dusty. It's all over 12 him. He is cutting it with a saw. It gets all 13 over. Different than working with a gasket. 14 These are the folks that were thought 15 to be at risk. And he is told to wear a respirator. 16 Unfortunately, the people always didn't listen. 17 There is the respirator. But the Navy, the 18 government, the Treasury Department, the Coast 19 Guard, they all had rules. And they insisted that 20 their employees follow the rules. The employees 21 decided whether or not they wanted to follow the	Page 346 1 improved health experience among asbestos factory 2 workers. 3 So from the asbestos factory workers, 4 we learn we can make it safe for these workers. We 5 can have a safe working environment if we keep the 6 dust levels low enough. We have to find out what 7 that level is. And the first thought was 5 million 8 particles per cubic foot. 9 Our primary concern is with the 10 insulation worker. Now, Dr. Selikoff is talking 11 about people who use products, people like 12 Mr. Blackmon who wasn't an insulator, but he used 13 products. He actually used thermal insulation. 14 Not only because we have established 15 the risk -- which, remember, Selikoff was publishing 16 there is a risk of mesothelioma in 1965 -- but if 17 his exposure is brought under control, then the 18 other problems will resolve automatically. 19 Like I said earlier, if the guy who is 20 working with it is working with it in a safe manner, 21 he is not at risk, then somebody who is further away

Page 347 1 who is not exposed at that same level will be 2 protected automatically. That's 1970, before 3 Mr. Blackmon gets out of the Coast Guard. 4 Now, why is thermal insulation 5 important? This is a ship. It's not one of 6 Mr. Blackmon's ships. We don't have pictures of the 7 engine spaces on Mr. Blackmon's ships. I provide 8 this to you only as an illustration of what it was 9 like on board a ship. 10 Tight spaces, equipment all over the 11 place, thermal insulation that contained asbestos. 12 All of this white stuff that you see everywhere, 13 thermal insulation that contained asbestos. 14 Now, I don't know if there is a pump 15 anywhere, but I do see a valve, if I can be 16 pardoned. So there might be a gasket right there. 17 How do you get to the gasket? Well, 18 you have to knock off the thermal insulation. You 19 have to knock off the stuff that the government has 20 been publishing about for years to keep its workers 21 safe, don't have too much of an exposure, don't let	Page 349 1 Mr. Blackmon's employer, in 1971, an accurate 2 reflection of state of the art, an accurate 3 reflection of what people were thinking in 1971. 4 What about the insulators who are being 5 studied? This is actually in something called the 6 Insulation Hygiene Progress Report in the summer of 7 1971. It's a little difficult to tell, but these 8 gentlemen here are cutting thermal insulation 9 containing asbestos. They are cutting it in 1971. 10 Not only are they cutting it, but they are being 11 monitored. This arrow right there is pointing to a 12 little cassette. 13 If you want to know if people are being 14 exposed to asbestos, you have to monitor them. You 15 have to figure out how much asbestos gets into their 16 breathing zone. 17 It's known that asbestos can be 18 hazardous. And they are trying to figure out if 19 these people were being overexposed. Doctors and 20 scientists were monitoring them. 21 You would think that if any old
Page 348 1 too much dust be generated, before you can get to 2 it. 3 Thermal insulation is the reason that 4 Mr. Blackmon has mesothelioma. Gaskets played no 5 role. 6 1971. This is Dr. Cralley. He is a 7 Ph.D. He works for the Bureau of Occupational 8 Safety and Health. That's part of the Public Health 9 Service, the United States government, 1971. 1971, 10 he is writing about the safe use of asbestos. It's 11 a very useful material. What does he say? Asbestos 12 can be used safely. 13 This is not me arguing, as Mr. Frost 14 suggested, that asbestos can be used safely. This 15 is a Ph.D. scientist from the Public Health Service 16 of the United States government. Asbestos can be 17 used safely in modern technology if adequate 18 precautions are taken to prevent excessive -- not 19 any exposure, not a passing or trivial exposure, but 20 excessive and unsuspected exposures. 21 The United States government,	Page 350 1 exposure could do it, they would have said, hey, 2 guys, put on a mask, put on a respirator, but they 3 didn't, because in 1971, it wasn't just any 4 exposure, it had to be, according to the government 5 and according to the experts, an excessive exposure. 6 1972, Dr. Selikoff again. We have 7 learned that proper engineering procedures will 8 allow asbestos to be used safely. There is that 9 word again, safely. 10 1972, the government, NIOSH, National 11 Institute for Occupational Safety and Health, what 12 do they publish? They publish criteria for exposure 13 to asbestos developed to ensure that it would 14 protect against asbestos-induced neoplasms, cancer. 15 A safety factor has been included to 16 arrive at a safe level. No one disputes that if the 17 asbestos exposure is high enough and long enough, 18 dose, it can cause asbestosis and cancer. The 19 dispute is which exposure is safe. 20 This is the government proposing the 21 safe level that eventually was going to become law.

Page 351 1 It's fair to say the controversy has centered on an 2 area between a two fiber and a five fiber. Do you 3 remember the chart I showed you, five fibers in '72 4 and two fibers in '76? 5 So the government was debating which 6 level is safe. And the government says there is a 7 conflict, we really don't know, but we are going to 8 resolve the issue in favor of safety, so they say we 9 are going to make it two fibers per cc in '76. 10 This was a law that was passed in '72, 11 and we are telling you in '76, because there is some 12 doubt, we are going to make it two fibers per cc. 13 So, again, the government in '72 -- 14 when we talk about a safe level and a threshold, 15 that's what the government said. 16 Here are OSHA requirements for the 17 employers which apply to the government, by the way, 18 bagging, no labeling of installed products, 19 respiratory protection, separate change rooms, and 20 so on. We will hear more about that. 21 Here is Dr. Selikoff again. This is	Page 353 1 asbestos gaskets on a Goulds pump, wouldn't you ask 2 the question? And we have covered state of the art 3 briefly. I know it probably seems like a long time. 4 Just a moment on Goulds. You have 5 already heard a little bit about Goulds. No dispute 6 Goulds made pumps. Whether it was a small pump or a 7 huge pump, a big piece of metal designed for one 8 purpose, and that is to move fluid from one area to 9 another area. 10 In order to make that work, the 11 government or Coast Guard would come to Goulds and 12 say we want a fire pump, we want a sanitary pump, we 13 want a freshwater pump, and Goulds would say, well, 14 what kind of gaskets do you want to use or what is 15 the application, and this is the gasket you want to 16 use for that. 17 You will see that the government had a 18 very specific list. The government set requirements 19 about what the gaskets could or could not contain. 20 The government, as we know, is very sophisticated 21 when it came to asbestos and asbestos-containing
Page 352 1 1976. He says there is no need to ban asbestos 2 fiber. We can use it safely. 3 '78. I have been talking about 4 gaskets. How is it that I can tell you -- how is it 5 that I can say that this is not hazardous? How is 6 it that I can stand here before you and say, sure, a 7 gasket contains asbestos, but they are not 8 hazardous? What is my basis for that? 9 Well, this is 1978. And this is a 10 study on board ships. This is actually done at 11 Bremerton, Washington, 1978. And they conclude 12 gasket removal and cleanup, airborne dust 13 concentrations are considerably less than the 14 currently accepted and proposed levels. So remember 15 the dose, remember the TLV. Gasket cleanup is lower 16 than that. 17 All right. We covered Mr. Blackmon, 18 mesothelioma, asbestos very quickly. We have 19 covered the alleged exposure, which you remember -- 20 I will keep on coming back to burden of proof. If 21 you wanted to know if someone was exposed to	Page 354 1 products. 2 Goulds made the pumps, sold the pump to 3 the government. The Coast Guard put it on board a 4 ship which was built in '43 or '44. Mr. Blackmon 5 didn't get on board that ship until the '50s. 6 Now, if, as plaintiffs claim, there is 7 maintenance all the time on these pumps, if you have 8 to replace the gasket, then any gasket that Goulds 9 put on its pump in the 1940s was long gone by the 10 time Mr. Blackmon got there. 11 Goulds did not make any products that 12 contained asbestos. Goulds didn't make the gaskets. 13 You will hear about packing. Most of the packing 14 which you will hear about in this case is metallic 15 packing, not asbestos but metallic. Goulds didn't 16 make those products. It had to buy them from other 17 companies. 18 You will actually hear about Garlock in 19 this case. And you can just barely see the 20 G-A-R-L-O here. This is a Garlock gasket. 21 Goulds, at customer request, if you

Page 355 1 want a gasket, we will put it in there. It could be 2 any type. It can be a Teflon gasket, it can be a 3 metal gasket. If you want packing, it can be 4 metallic, it can be asbestos. What do you, the 5 customer, want? 6 The evidence in this case relates on 7 the gaskets. So far, the only evidence that we have 8 seen is the packing was metallic and gaskets on a 9 picture, on a diagram are stated to be asbestos. 10 There is no testimony that the gaskets actually 11 contained asbestos. 12 And there is no evidence that Goulds 13 ever supplied any materials after the pump was 14 delivered. The pump is delivered, whatever is on it 15 is on it. There is no evidence that Goulds ever 16 sold any other products to the Coast Guard. 17 I think cases are a little bit of 18 puzzle for you, the jury. You have to figure out 19 how the facts fit. You have to figure out what 20 makes sense. You have to figure out with all the 21 evidence how it all works together.	Page 357 1 Guard, he worked as a boiler inspector at a power 2 generating facility. Those locations were covered 3 with asbestos. 4 Gaskets and packing are low-dose 5 products. The government says so. Everybody who 6 has written about it in the medical and scientific 7 literature says so. There are some experts hired by 8 plaintiffs who will come in and say, no, look at the 9 big levels I got, but that's not what is in the 10 medical literature. 11 Low doses do not cause or contribute to 12 disease. That's been a tenet of science and 13 medicine since they first started to study asbestos 14 disease. 15 We know that the asbestos exposures out 16 on the street don't cause disease. We just don't 17 know how much more than that, but we know it's a 18 level above that. 19 There is no evidence of substantial 20 exposure to Goulds Pumps, and Goulds Pumps was not 21 at fault.
Page 356 1 In this case, we know Mr. Blackmon had 2 mesothelioma, he has passed. We know that he 3 alleges exposure to a number of different products. 4 He alleges exposure -- he will tell you 5 about the thermal insulation, he had to remove it, 6 it was dusty, he thinks he breathed it. He will 7 tell you about the pumps. He says Westinghouse. He 8 had a sufficient exposure to those products to cause 9 mesothelioma. I don't think anybody is going to 10 doubt that. 11 Plaintiffs are going to somehow try to 12 argue that this additional exposure, if any, was 13 significant or substantial, although they won't use 14 those words, they will use each and every fiber 15 contributed or everything contributes to the whole. 16 They won't really come out and say what is 17 substantial and here is why I think it's 18 substantial. 19 And the exposure could have occurred in 20 the Coast Guard or after. He worked as a boiler 21 inspector. Boilers -- after he got out of the Coast	Page 358 1 I thank you for your attention. I 2 don't get -- none of the lawyers get to address you 3 like this until the very end of the case when we 4 come back and put it all together or try to put it 5 all together. 6 And so in advance, let me thank you for 7 your attention. Let me thank you for making a 8 sacrifice to come here, because if you didn't do it, 9 I really wouldn't be able to do my job. And I look 10 forward to speaking to you again. 11 THE COURT: Thank you. 12 MR. COTTLE: If it please the Court. 13 THE COURT: Yes. 14 MR. COTTLE: Good afternoon, Your 15 Honor. Good afternoon, counsel. Mrs. Blackmon, 16 good afternoon. 17 Ladies and Gentlemen of the Jury, my 18 name is Eric Cottle. Together with my partner, 19 James Lowery, we are proud to represent the ladies 20 and gentlemen of Crane Co. 21 And on behalf of the ladies and

Page 359 1 gentlemen of Crane Co., Jim and I would like to 2 extend our deepest sympathies to the Blackmon family 3 for your loss. 4 Crane Co. -- you heard a lot about 5 Crane Co. valves. And you have to remember that the 6 events that occurred during the course of 7 Mr. Blackmon's exposure occurred maybe 50 years ago. 8 And Crane Co. is a valve company and at 9 all relevant times exercised care and brought its 10 engineering and -- brought its engineering and 11 manufacturing process precisely to the level of care 12 that was known and understood during the relevant 13 time period. 14 Excuse me. A little technical 15 difficulty. My daughters have to set my computer 16 stuff up. And I text them everyday. And I just 17 learned how to do texting, and that was a very big 18 accomplishment. 19 One of the key issues that will be 20 involved in this trial is whether Mr. Blackmon had 21 substantial exposure to any products of Crane Co. or	Page 361 1 Mr. Blackmon's illness was caused by 2 the other more dusty -- those friable products that 3 we discussed earlier. And what the evidence is 4 going to show -- and it's going to be through a lot 5 of experts and science -- is that Crane Co. valves 6 were safe. 7 Now, Crane Co. has been around for 8 about 150 years. It was founded by two brothers. 9 And they made all types of valves. The valves were 10 built to handle many different types of 11 applications, but mainly for the control of fluids 12 and steam in some type of a system. 13 What is important to remember 14 throughout this trial as you are listening to the 15 evidence and especially as you listen to the state 16 of the art evidence is that Crane Co. never 17 manufactured, never milled, never mined any 18 asbestos-containing product. 19 Crane Co. built valves for many 20 applications, many industries, including the Coast 21 Guard, the Navy and the government. It had never
Page 360 1 Cranite. 2 Now, what our contentions are and what 3 we think the evidence will show is that exposures 4 from many of the dusty asbestos products are the 5 products that caused Mr. Blackmon's disease. And 6 you heard a lot about the thermal insulation. We 7 are going to get into that. I am not going to be 8 repetitive. 9 Now, Mr. Blackmon experienced most of 10 his significant exposures as a result of working 11 around thermal insulation that was on board the 12 ships that was in the U.S. Coast Guard. It was also 13 during home repair and remodeling projects and as a 14 boiler inspector. 15 At the conclusion of the case, we 16 believe the evidence will show that Crane Co. 17 exercised reasonable care at all times. And Crane 18 Co. was not liable for that external insulation that 19 you saw pictures of in the Navy in those tight 20 spaces. Crane Co. is not responsible, not liable 21 for any of those external insulation products.	Page 362 1 mined the products and never manufactured the 2 products. 3 Now, here is a picture here of men and 4 women at Crane Co. back in the era of the 1940s and 5 '50s. They worked hard to design and sell a good, 6 safe product. And at all times, they believed that 7 their valves were safe. 8 What we believe the science is going to 9 show is that the asbestos gaskets and packing used 10 in some of the valves were safe. And not all the 11 valves contained asbestos packing and gaskets. 12 Now, there are many types of valves. 13 And I will show one to you live. 14 May I approach? 15 This is an example of the valves that 16 Crane Co. sold to the Navy. They came as bare metal 17 valves. 18 We talked about the gaskets before. 19 There is a bonnet gasket that would go in between 20 the top and the bottom of the valve to create a 21 seal. That is one type of gasket.

Page 363 1 When we talk about the packing, here is 2 an example of packing. And this would go around the 3 stem. And what that would do is create a seal so 4 none of the gases or liquids can go out and injure. 5 So that is basically Valve 101. 6 And we are talking about a flange 7 gasket. Now, these gaskets were used to create a 8 seal. Sometimes valves were placed on a steam 9 system and they hook it to a pipe. And to create a 10 seal, you might use a gasket. Okay? 11 But these are the products that we are 12 talking about when we refer to Crane Co. products. 13 We sold the bare metal valves to the Navy, in this 14 case to the military, the Coast Guard. And these 15 are the products we are speaking of. We are talking 16 about packing and gasket products. 17 Now, why is that important? Not all 18 the valves had stem packing. Not all the valves had 19 connections that used gaskets. And not all the 20 valves, the head gaskets and packing were even 21 asbestos containing.	Page 365 1 the chrysotile fiber. This is the fiber that's 2 contained in the packing and gaskets. The type of 3 fiber is curly, it breaks easily, doesn't have iron 4 as a component. 5 The other two types, the amosite and 6 the crocidolite, sharper, more dagger-like types of 7 fibers. And that is a distinction that's very 8 important. 9 The amphibole fibers are the fibers 10 that are in the dusty insulation products. Those 11 are the fibers that contained iron. Not chrysotile. 12 The mechanism that you will learn -- 13 the science -- when you breathe in chrysotile, it 14 breaks up easily in the lung and the body clears it 15 easily using its mechanisms. It clears from the 16 lung easier. It takes months to clear or weeks, 17 compared to the amosite which takes up to decades to 18 clear from the lungs. 19 We discussed dose. And you've heard 20 the expression the poison will be in the dose. 21 Each -- asbestos diseases are dose dependent. And
Page 364 1 Now, I am going to go through these 2 slides here. I don't want to be redundant, but it's 3 very important that -- I want to stress some of the 4 different presentations that have been heard 5 earlier. 6 Asbestos is a natural-occurring 7 mineral. It's mined from the earth. It's 8 indestructible almost. 9 The great thing about asbestos, what it 10 was used for, it was a very fibrous material mined 11 from the earth. It was very flexible, a lot of 12 strength, easy to weave into wool and other 13 products. 14 Gaskets and packing are different. Why 15 is that? Because they contained the chrysotile 16 fibers which are less potent. And the science will 17 show that the chrysotile fibers do not cause 18 mesothelioma in a lifetime. 19 We went over the different types of 20 gaskets, different types of asbestos fibers. I just 21 want to point out some differences. On my left is	Page 366 1 you hear the expression of two aspirin will cure a 2 headache. A hundred aspirin, that's not too good. 3 It's probably not a good thing, can cause death. 4 Gaskets and packing, neither type of 5 asbestos are dose related. And just simply -- the 6 science will show there is not sufficient dose in 7 these types of products to cause the disease 8 mesothelioma. 9 The evidence is also going to show that 10 not all asbestos products are the same. 11 Encapsulated products, which are like packing and 12 gasketing here -- they are encapsulated -- they are 13 very different from the thermal insulation products 14 which you are going to see and talk about later. 15 Asbestos packing and gaskets are encapsulated 16 products. 17 And, also, the exposure. Not all 18 exposures to asbestos are harmful. Ordinary 19 background levels of exposures, such as we have here 20 in Maryland, are everywhere. The packing and 21 gaskets released very minimal levels of asbestos.

Page 367 1 And the science will show and the 2 evidence will show that there was no duty to warn 3 about asbestos packing and gaskets during the 4 relevant time period that we are talking about here. 5 Now, I am going to talk about the 6 valves that were on the Coast Guard ships. The ship 7 systems were completely designed and built by the 8 U.S. government, its shipyards and its U.S. 9 government engineers. They designed and specified 10 the steam power systems on these ships. 11 There are many types of valves that 12 were on Mr. Blackmon's ships. And not all the 13 valves contained asbestos. 14 The evidence is going to show that the 15 valves were made precisely to U.S. government 16 specifications and U.S. military drawings. The 17 ships were completely designed by the military. 18 Crane Co. was not the only supplier of 19 valves on the ship either. 20 Now, what the evidence is also going to 21 show is that the ships that Mr. Blackmon served on	Page 369 1 President Roosevelt directed that the Coast Guard 2 operate as part of the Navy and subject to the 3 Secretary of the Navy. And they remained that way 4 from 1941 to 1946. And that's important because at 5 least three of the ships that Mr. Blackmon served on 6 were built during this time period. 7 And even after 1946, the Navy and the 8 Coast Guard played intimate roles with each other. 9 And that was through executive order as well. 10 Mr. Blackmon served on the 11 Androscoggin. And that ship saw combat during the 12 Vietnam conflict. And during the time that the ship 13 served in the military during Vietnam conflict, they 14 were under Navy control. 15 What else is going on during that time? 16 We all know what happened in history, 1941. And you 17 saw the graph earlier. Asbestos was used during 18 this time to help build ships. 19 The sinking of the Arizona. This is 20 what was going on during this time. This is why the 21 military required asbestos-containing products on
Page 368 1 were, literally, filled with tons of 2 asbestos-containing thermal insulation. And this 3 insulation, according to his testimony, would flake 4 and release dust levels on the ship due to the 5 ship's motion, rough seas, and firing of guns. 6 These are all conditions that you are going to hear 7 about that would release that dusty thermal 8 insulation that Mr. Blackmon was exposed to. 9 And the levels of exposure aboard the 10 military ships have been measured higher than 11 background levels in the United States. 12 Now, we are going to talk a little bit 13 about the military's control over Crane Co. And I 14 told you -- we talked a little bit about the 15 military specifications. They designed the ships, 16 they assembled the components, they did the 17 drawings, they tested the systems, and they had 18 inspectors out. 19 One thing we want to talk about here is 20 the relationship between the Coast Guard and the 21 Navy. And in 1941, through executive order,	Page 370 1 its ships, because it was vital to the war effort. 2 Asbestos, according to the military, 3 was lightweight. The military can place more 4 weapons on the ships, put more armor on the ships, 5 and it helped defeat America's enemies. It also 6 saved sailors' lives. It made the ships faster and 7 more maneuverable. 8 Asbestos on these ships was also heat 9 resistant. It saved the sailors' lives on enemy 10 actions. And it also was water resistant, which is 11 important. It does not degrade fast, does not rot, 12 mold in a maritime environment. 13 The military made the decision to use 14 asbestos based on the United States government state 15 of the art knowledge about asbestos and its 16 operational necessities. Asbestos was vital to our 17 war effort. 18 Now, we touched on this a little bit 19 earlier about what was known. And I am just going 20 to kind of give you a summary of some of the slides. 21 But it's very important to understand what was known

Page 371 1 by the United States government about asbestos 2 insulation during Mr. Blackmon's service. 3 In 1918, the Hoffman report. 4 Government knowledge that asbestos -- they believed 5 that asbestos exposure can cause tuberculosis. It 6 notes that little research has been done about 7 asbestos, and it called for more extensive 8 investigation of the health aspects of asbestos 9 manufacture. That's in 1918. That's a United 10 States Bureau of Labor Statistics document. 11 In 1922, Dublin, published by the 12 United States Department of Labor, Bureau of Labor 13 Statistics. It notes workers face hazards posed by 14 asbestos dust. Dusts are associated with pulmonary 15 fibrosis due to asbestos injury. 16 So the government was aware of the 17 dangers of asbestos prior to 1918 and 1922. 18 This is a report by Lanza. It was 19 touched on earlier. 1935, it discussed the studies 20 of dust conditions in asbestos mines, mills and 21 asbestos insulation plants.	Page 373 1 And it notes that the Navy prefers the 2 use of amosite asbestos on these ships. This was 3 known in 1946, when at least three of the ships that 4 Mr. Blackmon served on were being built. So this is 5 the knowledge that the United States government had. 6 The Hueper report, risks of known lung 7 cancer. It views asbestosis as a prerequisite for 8 asbestos-related lung cancer, 1955. 9 The Selikoff report. And this is 10 important. In 1968, Dr. Selikoff presents asbestos 11 studies. And he shows that shipyards' exposure to 12 asbestos was a large rate. The Navy was well aware 13 of the hazards of asbestos exposure in 1968. 14 This is an internal Navy memo. And 15 this, again, showed that the United States Navy was 16 well aware of the hazards of asbestos. And what it 17 concluded was in the bottom, for these reasons, 18 packing and gaskets containing asbestos are not 19 considered to be a significant health risk. 20 So up until 1968, the U.S. government 21 internal memos are saying that these products,
Page 372 1 Why is that important here? Because in 2 1935, what everyone was concerned with was mines, 3 mills and insulation. Remember, Crane Co. was not a 4 manufacturer. It didn't mine insulation, it didn't 5 work with raw asbestos products. The conclusion was 6 that exposure to asbestos causes asbestosis. 7 The Dreessen report. Also, U.S. Public 8 Health Service, the Dreessen report. The 9 culmination of the report found numerous cases of 10 asbestos among asbestos textile workers. The 11 conclusion was that cases of asbestos will arise in 12 dust levels over a certain quality. This is also 13 1938, U.S. textile. 14 The Fleischer-Drinker report was a 15 large-scale study of insulation workers. This was 16 done in coordination with the Navy shipyards and 17 working on Navy ships being built. And what they 18 stated in that article was it is well known that 19 industrial disease is caused by only one thing, 20 asbestos, and breathing in asbestos dust is 21 dangerous.	Page 374 1 packing and gaskets, are safe, that they are not a 2 problem. This is what the state of the art was back 3 in 1968. 4 And that's important because in 1968, 5 we know one of the ships, the Androscoggin, saw 6 conflict during the Vietnam conflict. And during 7 his service aboard the ship, his duties fell under 8 the United States Navy's control. As a matter of 9 fact, Mr. Blackmon's unit received a Navy 10 commendation and medals for its service in Vietnam. 11 In 1968, while that ship is serving in 12 Vietnam under Navy control, the Navy is putting out 13 studies saying that packing and gaskets don't pose a 14 health risk. This is 1968. 15 The U.S. government occupational health 16 paralleled and sometimes led the development of 17 industrial hygiene and occupational medicine during 18 the 20th century. 19 The Navy was aware for decades, long 20 before Mr. Blackmon's service, of the potential 21 hazards of asbestos. But the focus was on airborne

Page 375 1 asbestos insulation, not on packing and gaskets. 2 They had programs in place during this 3 time period to protect and warn sailors about these 4 dangers. But these, unfortunately, were times when 5 these ships were being built, that these programs 6 sometimes did not get passed down to the seamen. 7 The Navy knew by at least 1922 that 8 asbestos was a potential hazard. Between the 1920s 9 and 1930s, the Navy is talking about in those 10 articles taking control measures. They are talking 11 about wetting down asbestos insulation, working in 12 ventilated areas, using respirators. This is in the 13 1920s, 1930s. The Navy knows this. The government 14 knows these things. 15 In the 1930s, the government knew that 16 there was a need for using protective measures for 17 sailors working with asbestos products. They knew 18 by '39 that they had to warn and protect sailors. 19 By 1945, the Navy concluded that 20 applying asbestos on board ships using standard 21 industrial hygiene measures was safe.	Page 377 1 earlier. And we are going to go into some detail 2 with our experts that asbestos-containing gaskets 3 and packing are safe. 4 The Bremerton study was mentioned 5 earlier in 1978. This is after Mr. Blackmon's 6 service in the Coast Guard, maybe five or six years. 7 Even after his service, studies are showing that 8 asbestos gaskets and packing are safe. 9 Dr. Selikoff we heard probably studied 10 asbestos the most of anyone. In 1978, he put out a 11 publication in a book again saying that working with 12 asbestos packing and gaskets are safe. 13 To sum it all up, there is nothing that 14 Crane Co. or any of these companies have done that 15 change Mr. Blackmon's exposure to thermal 16 insulation, to his total exposure to asbestos 17 products while he was in the Coast Guard. 18 That is a picture of the Androscoggin 19 painted in its military colors there. You can see 20 the gun in the front. It was used in the Vietnam 21 conflicts to help support troops landing, the
Page 376 1 We are not blaming the Navy, but we 2 have to have this all in context. The Navy and 3 government were well aware of wetting down 4 procedures and how to protect the sailors. The 5 knowledge did not always get passed to the seamen. 6 The Navy and the Coast Guard did not always use 7 routine measures to control dust. They did not 8 always have special ventilation for asbestos work. 9 And they did not always use the wetting down 10 procedures and operations. 11 Like I said, we are not blaming the 12 Navy, the government or the Coast Guard, but they 13 just simply did not -- they knew about these 14 procedures that could help prevent and save sailors, 15 but they just did not implement them. 16 And at all times during this time 17 period, the U.S. government and outside community 18 considered asbestos-containing gaskets and packings 19 safe. I summarized those studies. 20 In a 1968 memo, asbestos-containing 21 gaskets are safe. 1971 Harries study we discussed	Page 378 1 Marines. It was used as part of the Tet offensive. 2 He served on that ship with honor. 3 To give you an idea -- you saw pictures 4 of what the quarters looked like and some of the 5 engine spaces. But there is going to be testimony 6 from Mr. Blackmon about his sleeping quarters. And 7 you can see the sleeping quarters here. 8 You can see insulation running -- 9 MR. FROST: Your Honor, I do have to 10 object to this just because these are not Coast 11 Guard ships. I have seen these before, and they are 12 on Navy ships. So as long as he makes it clear that 13 these are not the ships -- 14 THE COURT: These are not the same 15 ships being discussed. 16 MR. FROST: These are not Coast Guard 17 ships. 18 THE COURT: They are Navy vessels. 19 MR. COTTLE: These are Navy ships. We 20 are giving you an indication of the testimony of 21 what some of the berthing quarters looked like on

Page 379 1 some of the ships. They were tight quarters. 2 There is testimony that Mr. Blackmon 3 slept on the top bunk and there was asbestos-covered 4 insulation on the bunk. And during rough seas, the 5 testimony would be that some of that would shake 6 when the guns were fired. The point is you can see 7 how the quarters contained asbestos thermal 8 insulation. 9 The true sources of exposure -- you 10 only heard about gaskets and packing from two 11 companies here. I want to give you the total 12 picture here are the miles of pipe insulation and 13 thermal insulation that was wrapped around these 14 pipes, that was wrapped around some of this 15 equipment on the ships that Mr. Blackmon served. 16 Mr. Blackmon is going to say that there 17 is insulation throughout the ship, even in the 18 sleeping quarters that we showed. The workers that 19 he worked around in those compartments removed this 20 dusty insulation, this pipe covering. 21 The testimony is going to be that it	Page 381 1 exposure, Westinghouse, Yarway, Foster Wheeler 2 boilers. You are going to hear about that when he 3 was a boiler tender. 4 You are going to hear about 5 Georgia-Pacific, Kaiser-Gypsum, Cleaver-Brooks and 6 all sorts of other companies that he worked around 7 that contained these friable, dusty products. So 8 it's not just two companies with packing and 9 gaskets, it's the total exposure in his career and 10 in his lifetime to these dusty other products. 11 Now, no steps by Crane Co. that they 12 could have done could change what the United States 13 Coast Guard has done to design or specify its 14 valves. They could have taken no steps. 15 Nothing that Crane Co. could have done 16 would change what the Coast Guard ordered 17 Mr. Blackmon to do. 18 We couldn't have changed the fact that 19 he had to be around the tear-outs and sleep in those 20 conditions in the tight quarters. 21 There is nothing Crane Co. could have
Page 380 1 was cut, it was sawed on many occasions, and it 2 created a massive amount of dust. He worked around 3 these conditions while in the Coast Guard. 4 You are also going to hear about other 5 products, insulating cement where he would mix or 6 workers would mix cement to insulate some of the 7 pipes or products. And the mixing and pouring that 8 cement into a trough and putting water on top of 9 that would create dust. 10 He worked around boilers that were 11 covered with blankets. He would tear off the 12 blankets, and that would create dust. That process 13 created a lot of dust. Turbines and generators were 14 also covered with asbestos-containing thermal 15 insulation which created a lot of dust. 16 There are also other sources. There 17 were pumps. You heard about that. And there are 18 other companies identified that manufactured pumps 19 on the ships that he worked on. 20 Insulation. There is mud, brick, pads, 21 pipe covering on steam lines. Other sources of	Page 382 1 done to prevent Mr. Blackmon's exposure to the 2 harmful asbestos insulation on the U.S. government 3 or Coast Guard vessels. There is nothing Crane Co. 4 could have done to prevent that. 5 And the evidence is going to show that 6 not all gaskets and packing contained asbestos and 7 not all valves were supplied by Crane Co. 8 Now, we have to look back. What was 9 understood about packing and gaskets during 10 Mr. Blackmon's service? 11 Now, I am talking about hindsight. And 12 we know that everything is clearer in hindsight. 13 And you have to remember as you are sitting here 14 today in 2008 -- you have to put yourself back 50 15 years to know what was taking place or what was 16 understood during that time period. 17 And we know in the 1950s, things were 18 different than they are in 2008. I remember sitting 19 in my father's car in the '60s with no seat belt in 20 the front. If we did that now in 2008, we would be 21 considered reckless. Okay? But we have to look

Page 383 1 back at what was known then and what is known now. 2 And taking that seat belt further, we 3 have the child in the seat by herself, then it 4 developed to a lap belt, shoulder harness and lap 5 combination, to car seats. Now we have air bags and 6 beyond. So technology is developing. 7 But we have to look at the technology 8 that was available back during the relevant time 9 periods of this case. And that's something that you 10 have to do and be prudent to put yourself back to 11 what was known during the 1950s, '60s, '70s and even 12 further back than that. 13 What else? We know that asbestos 14 during that time was commonly used and it was safe. 15 Fire mits for the oven gloves to protect you from 16 being burned. Asbestos snow was sold to put on 17 Christmas trees to help prevent fires. The Rowley 18 safety asbestos iron rest to save fires, to rest 19 your iron down so you weren't burned. 20 And I am not going to go through all 21 the events here, but we talked about the Chicago	Page 385 1 still was a vital aspect of safety. The research 2 during that period of 1951 to 1970 focuses on mines 3 and mills, but only on the end-users of finished 4 products, insulation. That's up until 1964. Still, 5 the focus is not on gaskets and packing which are 6 being associated with our valves. Up until 1964, we 7 are talking about mines, mills and insulation 8 products in 1964. 9 1971 to present -- we talked about the 10 P.G. Harries study. And we are going to go through 11 all these studies in detail. But even into 1990, 12 they published articles saying that asbestos packing 13 and gaskets are low-dose products and that they are 14 safe. And this is going to come from our experts. 15 So 1990s, which is, you know, almost 20 16 years after Mr. Blackmon left the U.S. Coast Guard, 17 the science and the studies are still showing that 18 packing and gaskets associated with valves that are 19 at issue are safe. 20 We are not going to get into the 21 Price-Merewether studies. Mr. Frost, he brought up,
Page 384 1 fire in 1903. 603 souls were lost. After that 2 fire, asbestos curtains were standard in theaters. 3 And it used to come down and say asbestos right 4 across to let everybody in theaters know that it was 5 safe because the curtains there wouldn't probably 6 catch on fire because they were asbestos. But that 7 was back then. 8 1904, the General Slocum fire off the 9 coast of New Jersey. Why was that important? There 10 was so many souls lost because the fire went through 11 that ship so quick because it didn't have asbestos 12 insulation. After that, the maritime industry 13 started to use asbestos insulation on the ships to 14 help save lives. 15 But the focus from the 1900s to the 16 1950s was -- the beneficial health research focused 17 on mining and milling of asbestos. It didn't focus 18 on packing and gaskets. It focused on workers 19 working with insulation, workers milling it and 20 workers making it. 21 1951 to 1970, they are saying asbestos	Page 386 1 you know, the studies. He showed you the books and 2 they were getting larger and larger and the 3 knowledge of these companies. 4 But you know what these studies were 5 dealing with in the 1930s? Mills. They dealt with 6 individuals making raw -- using raw asbestos. And 7 they still concluded asbestos could be used safely. 8 And keep in mind, raw asbestos, textile 9 mills were not Crane Co.'s business. We are a valve 10 manufacturer. 11 Again, the Dreessen study dealt with 12 textile mills only, dealing with raw asbestos. It 13 concluded that asbestos could be used safely. 14 Again, Crane Co. is not a miner, miller, does not 15 work with raw asbestos. 16 And the studies continue. Fleischer 17 and Drinker in 1946, they studied insulation workers 18 in Navy shipyards. They conclude exposures lower 19 than the textile mills, factory workers. The 20 conclusion: Insulation work is not dangerous in 21 1946. Again, focusing on the millers and the miners

Page 387 1 of these products. 2 The Wagner study, in conclusion, never 3 believed that chrysotile caused mesothelioma, which 4 is 1960. 5 Selikoff, the first large-scale study 6 dealt with asbestos insulation, not other products. 7 We talked about the Navy memo which 8 concluded gaskets and packing were not dusty. 9 Asbestos insulation is hazardous, but gaskets and 10 packing are not. That's the internal Navy memo. 11 And the P.G. Harries study, World 12 Health Organization. And there is more that, you 13 know, we can put in here that we will get to during 14 the trial. But there is no risk with asbestos 15 packing and gaskets in 1972. 16 It continues with Selikoff in 1976. 17 Selikoff in 1978 continued to conclude that asbestos 18 packing and gaskets posed no health hazards. 19 And you are not going to hear this from 20 the lawyers. We are actually going to bring in 21 experts that are going to talk about the state of	Page 389 1 They knew about this knowledge. 2 And Dr. Forman is going to come in and 3 give you the history of all the documents that were 4 presented today regarding state of the art. He said 5 the Navy's occupational health programs paralleled 6 at times what the industrial hygiene community knew 7 about asbestos-related disease. 8 And Fred Boelter, he is also a 9 certified industrial hygienist. He is going to come 10 in. And we talked about the dose, the poison is in 11 the dose. Well, he is going to talk about the 12 studies regarding valves and his conclusions that 13 Crane Co. valves would have not exposed plaintiff to 14 dangerous doses of asbestos from packing or gaskets. 15 He is going to conclude because gaskets 16 and packing are not friable products, okay, it's not 17 the dusty product that we talked about before, Crane 18 Co. valves are safe and Crane Co. valves would not 19 have been the cause of Mr. Blackmon's disease. 20 So what we would like you to do is the 21 plaintiffs have the burden of proof. But you have
Page 388 1 the art. 2 One of the experts we plan to call, 3 Admiral David Sargent. He is a retired Rear 4 Admiral, U.S. Navy. He is going to testify that all 5 asbestos products used in or around Crane Co. valves 6 were specified by the United States Navy, the 7 government. The Navy supplied it, and they were 8 installed by the Navy shipyards and builders. 9 The Navy and the Navy shipyards and the 10 United States government were highly sophisticated, 11 and they were concerned about insulation materials 12 on ships. 13 You are also going to hear from 14 Dr. Samuel Forman. He is a doctor, board certified 15 in occupational medicine. He was actually hired by 16 the Navy to do a study to figure out what did the 17 government know about asbestos. 18 And he concludes by the 1940s, the Navy 19 and United States government had extensive knowledge 20 about asbestos hazards on ships and the Navy and the 21 U.S. government shipyards. They had the knowledge.	Page 390 1 to keep an open mind throughout the presentation of 2 trial because there are two sides to the story. And 3 today, our intent was to give you a flavor of the 4 state of the art and what both sides are about. 5 It's not a case of two companies coming 6 in with packing and gaskets. You have to look at 7 the entire picture and the entire history of what 8 occurred during the relevant time period, the total 9 exposures that Mr. Blackmon had during his career to 10 those dusty, friable insulation products. You have 11 to look at the total picture of those products. 12 And I think the keys you are going to 13 have to decide is that Crane Co. valves were not a 14 substantial contributing factor in causing 15 Mr. Blackmon's disease, and it was those other more 16 toxic, more potent, more friable, more dusty 17 products that were mentioned and you have seen in 18 the slides that was the cause. 19 And as far as the failure to warn or 20 the duty to warn about asbestos packing and gaskets, 21 we are going to -- evidence is going to show that

Page 391 1 those risks of packing and gaskets were not 2 recognized during the time period that Mr. Blackmon 3 may have been exposed to those products, so there is 4 no duty to warn about those products, and they did 5 not pose a risk. 6 At the end of the conclusion of the 7 case, we believe the evidence is going to show that 8 the gaskets and packing used with the valves were 9 just not a substantial contributing factor to 10 causing Mr. Blackmon's disease and it was the other 11 more potent asbestos products on board the ships, at 12 other job sites that caused Mr. Blackmon's 13 mesothelioma, that the Crane Co. valves were safe 14 and Crane Co. exercised reasonable care and that 15 Crane Co. had no duty to warn about valves that 16 contained asbestos packing and gaskets. 17 I want to thank you for your time. You 18 have been so patient here with us. I tried to do 19 our presentation streamlined with everyone here. 20 Jim and I, we look forward to talking to you again 21 during the course of this trial. Thank you.	Page 393 1 a good lunch. 2 Have a seat. 3 Are we ready to go? 4 MR. ZACHAROPOULOS: I will just get 5 Mr.~Frost. 6 THE COURT: There he is. 7 Would you like to call the witness? 8 MR. FROST: I guess I can't call 9 myself. I apologize, Your Honor. 10 Your Honor, at this time, we would call 11 Mr. William Lowell. 12 THE COURT: Swear the witness, please. 13 Welcome. 14 THE COURT CLERK: Raise your right 15 hand. 16 Whereupon, 17 CAPTAIN WILLIAM A. LOWELL, 18 the witness herein, being first duly sworn under 19 penalty of perjury to tell the truth, the whole 20 truth, and nothing but the truth, was examined and 21 testified as follows:
Page 392 1 THE COURT: Thank you, counsel. 2 That's probably all the excitement I 3 can stand for one morning. Thank you for your time 4 and attention. I am going to excuse you to the jury 5 room. Madam Clerk is going to come up and get you 6 paid. Get lunch. Don't talk about the case. 7 Reserve all judgments. I will see all of you -- be 8 back in the jury room at 2:00 ready to go. See you 9 all at 2:00. We will be in recess. 10 THE COURT CLERK: All rise. 11 (Luncheon recess -- 12:44 p.m.) 12 (After recess -- 2:05 p.m.) 13 THE COURT CLERK: All rise. The 14 Circuit Court for Baltimore City, Part 8, now 15 resumes its afternoon session, the Honorable John M. 16 Glynn presiding. 17 THE COURT: Please be seated. Good 18 afternoon. 19 Eric, retrieve the jury if you would. 20 (Jury present.) 21 THE COURT: Welcome back. Hope you had	Page 394 1 THE COURT CLERK: Thank you. You may 2 be seated. Be careful. The chair doesn't move and 3 you have to sit on the edge. 4 THE COURT: You have to speak into the 5 mike or else it is hard to hear with all this noise. 6 THE COURT CLERK: Please state your 7 name and your business address for the record, 8 please. 9 THE WITNESS: My name is William A. 10 Lowell. My address 45, Sixth Avenue, Augusta, 11 Maine, zip code 04330. 12 THE COURT CLERK: Thank you. 13 THE COURT: You may proceed. 14 MR. FROST: Thank you, Your Honor. 15 DIRECT EXAMINATION 16 BY MR. FROST: 17 Q Good afternoon, Captain Lowell. How 18 are you? 19 A I am fine. Thank you. 20 Q And I call you Captain. Could you 21 explain to the members of the jury what your

Page 395 1 training background and experience is? 2 A Yes. Yes. I started in a maritime 3 college in 1953. It was year-round, 12 months a 4 year, and graduated in 1956. 5 At that time, I got a government third 6 engineer's license from Merchant Marine Service, a 7 commission in the United States Naval Reserve and a 8 degree in marine engineering. 9 Q And, Captain Lowell, are you the 10 individual that's going to explain to the members of 11 the jury what asbestos-containing products were on 12 the ships that Mr. Blackmon served on? 13 A Yes, sir. I can. 14 Q Okay. And you and I are going to focus 15 in this afternoon for brevity's sake on Goulds and 16 Crane, but there are some other products that were 17 in the engine spaces that Mr. Blackmon have worked 18 in too; is that correct? 19 A That is correct, sir. 20 Q But you and I going to focus in on only 21 those two for right now?	Page 397 1 graduated? You went in at 16. How old were you 2 when you graduated? 3 A I was 19. 4 Q And how were you able to graduate from 5 this college-level academy in three years? 6 A Because I was young when I went in, and 7 I didn't have too much trouble academically. 8 Q And what year did you graduate from the 9 Maine Maritime Academy? 10 A 1956. 11 Q Now, what made you want to attend the 12 Maine Maritime Academy? 13 A We had a long seafaring tradition in 14 our family. 15 Q And could you just tell us briefly what 16 that means? 17 A Well, my father went to sea, my brother 18 went to sea, my grandfather went to sea and 19 primarily on merchant ships, commercial ships. 20 Q Now, when you were at the Maritime 21 Academy, did you graduate?
Page 396 1 A Yes. 2 Q Now, you talked about the Maine 3 Maritime Academy. You are the first witness that 4 the jury has seen. Can you explain to them what the 5 Maine Maritime Academy is? 6 A It was to train officers for the 7 Merchant Marine primarily. Also, it gave us a lot 8 of Navy training and primarily dealt with ship 9 operation, ship maintenance, ship repair, ship 10 design. And we had some hands-on experience and a 11 lot of classroom training along the way. 12 Q And how old were you when you entered 13 the Marine Maritime Academy? Maine. I am sorry. 14 A I was 16 years old. 15 Q Now, the Marine Maritime Academy, is 16 that a college-level academy? 17 A Yes, sir. 18 Q It is kind of like the Naval Academy or 19 the Coast Guard Academy? 20 A On a good deal smaller scale, yes, sir. 21 Q Okay. How old were you when you	Page 398 1 A Yes, sir. 2 Q And what type of degree did you 3 graduate with? 4 A A bachelor in marine engineering, 5 bachelor of science. 6 Q And what is marine engineering? 7 A Oh, it is the art of operating ships, 8 maintaining ships, designing ships, building ships, 9 repairing. 10 Q Now, you mentioned the Merchant Marine. 11 What is the Merchant Marine? 12 A It is the commercial world of ships. 13 It is not the Navy and it is not the Coast Guard, 14 but it is the commercial world that carries the 15 world's products: Oil, general cargo, bulk cargo 16 like iron ore, issues like that. 17 So it is ships that sail the high seas, 18 big steam ships, certainly back in the '50s and 19 '60s, and plied in the world's trade primarily 20 bringing cargo to and from the United States. 21 Q Now, when you graduated from the Maine

Page 399 1 Maritime Academy with your marine engineering -- 2 your bachelor's in marine engineering, what did you 3 do immediately upon graduation? 4 A Two days later, I jumped on a -- jumped 5 on a Victory ship -- it is a 500 -- roughly 500-foot 6 steamship -- and went off to sea for about a year, 7 year and a half before I came home again. 8 Q Now, when you graduated from the Marine 9 Maritime Academy, when you graduated, did you 10 receive a commission of any type? 11 A Yes, sir. 12 Q Okay. Could you explain to the members 13 of the jury how you received the commission and what 14 you received a commission in? 15 I guess, what is a commission? 16 A Yes. I received a commission as an 17 ensign in the United States Naval Reserve. And the 18 basis for that was the studying of naval science for 19 three years, along with all of the marine 20 engineering training that I received at the academy. 21 Q Okay. So when you graduated from the	Page 401 1 Q And when you were sailing on these 2 ships, what were you doing? 3 A I was an engineer in charge of a watch. 4 And I, ultimately, worked my way up through the 5 examination process from third engineer to chief 6 engineer. And I sailed primarily as second and 7 first engineer in the Merchant Marine. 8 Q Now, what do engineers do on ships, I 9 guess? 10 A Pretty much -- pretty much everything. 11 A ship is like a city. And you have to make your 12 own electricity. And you have to make your own 13 water. 14 And you have to make sure that the 15 propeller is always turning and the boilers are 16 working properly. 17 And those -- and you have to -- 18 obviously, there is a lot of maintenance involved 19 with something like that. And that's where the 20 engineers come in to diagnose what maintenance is 21 needed. And in my case, back in the '50s, it would
Page 400 1 Maine Maritime Academy, you also received a 2 commission or you received a commission in the 3 United States Navy Reserve? 4 A Yes, you do. 5 Q Okay. And what you did was, you then 6 kind of had a parallel track because you continued 7 to serve in the Naval Reserve, but you also went on 8 merchant ships? 9 A That is correct. And the parallel 10 track started probably in 1962. 11 Q Now, when you graduated from the Maine 12 Maritime Academy, just tell us generally what you 13 did and what experience you had on ships. 14 A I sailed in the Merchant Marine from 15 1956 to 1962. And I would have sailed on freighters 16 that carried general cargo, ore carriers that 17 carried bulk ore, oil tankers that carried crude oil 18 or a finished oil product. 19 And that was -- primarily, those were 20 the three type of ships that I sailed on from 1956 21 to 1962.	Page 402 1 be hands-on more often than not. 2 Q And when you say hands-on, that means 3 that you were working with the equipment that's in 4 those engine spaces and things such as pumps, valves 5 and those types of things? 6 A That is right. If there was a boiler 7 problem, I would work on the boiler. If it was a 8 valve problem, I would work on a valve. Or if it 9 was a pump problem, I would work on a pump. 10 Q Now, I want to go back just briefly 11 to -- I don't think we talked fully about your naval 12 experience. 13 Can you hear me? 14 A Yes. Speak up a little bit. 15 Q Okay. I am trying. 16 A The acoustics are not good for me. 17 Q Yes. Well, just let me know. 18 A Okay. 19 Q I want to go back to your United States 20 Naval Reserve time. 21 A Yes.

Page 403 1 Q Could you kind of outline your career 2 in the U.S. Navy Reserves kind of what you did in 3 what years and those types of things? 4 A Yes. I started in the officer rank at 5 the bottom of the officer rank as an ensign. And I 6 became active in 1962 in the Naval Reserve. 7 And I was a repair officer for a number 8 of years. And we would take a team of people, 9 sailors down to Newport, Rhode Island, which is a 10 Navy yard, we would work on ships weekends, sometime 11 Friday nights, Saturdays and Sundays, so I did that. 12 I also held a couple of commands. I 13 had a command that was a detachment of the Norfolk 14 Naval Shipyard, and I had command of a detachment of 15 Portsmouth Naval Shipyard up in New Hampshire and 16 Maine. 17 At the same time, I would typically do 18 up to 30 days a year active duty. There were 19 actually a few years that I did more than 30 days a 20 year active duty. 21 And sometime -- because I had some	Page 405 1 being a captain of a ship? 2 A That is right, but it is also the exact 3 match-up to a full colonel in the Army. 4 Q Okay. Now, do you hold any licenses 5 relating to marine engineering? 6 A Yes, I do. I have an unlimited chief 7 engineer's license good for virtually any ship 8 afloat in any ports of call. 9 Q What is an unlimited chief engineer 10 license? 11 A It means I can sail as chief engineer 12 in anything afloat, that I've certainly got the 13 credentials to do it. 14 Q And what does a chief engineer do on 15 board ship? 16 A It is kind of where the buck stops. He 17 has to make sure that the ship -- in the Merchant 18 Marine, the ship is trading, the ship keeps 19 schedules, the ship doesn't suffer any particular 20 breakdowns, the ship is operated efficiently, 21 effectively, economically and repairs are made on a
Page 404 1 skills that the Navy could utilize, sometime the 2 Navy would call me and ask me if I could go on 3 active duty and look at something in particular. 4 Q And so the Navy, at times, would call 5 upon you to go on active duty and troubleshoot some 6 issues that they would have? 7 A That is correct, sir. 8 Q Now, how long did you serve in the 9 Naval Reserve? 10 A I retired in 19 -- June 30, 1987. And 11 I retired as a captain having rose through the 12 competitive ranks from ensign up to captain. 13 Q And I used to be in the Army and I was 14 a captain. There is a difference between a captain 15 in the Army and a captain in the Navy, right? 16 A Quite a lot. 17 Q So in Army terms, that would be like a 18 full colonel? 19 A That is right. 20 Q So in Navy terms, they are called 21 captains because that's kind of when you can start	Page 406 1 timely basis. And he administers the engineering 2 department to see that that gets done. 3 Q And how long have you held that 4 license? 5 A I had a chief engineer's license in 6 1964. 7 Q And is that license still active today? 8 A It is. 9 Q And is that license fairly difficult to 10 obtain? 11 A Yes. It is a long examination process. 12 It used to run about a one-week exam. And I had to 13 go through all four steps from third engineer to 14 second engineer to first engineer to chief engineer. 15 I did that in a period of eight years. 16 Q Okay. And you have talked about the 17 different steps of engineers. Is it kind of common 18 that as folks on ships that they would have kind of 19 different steps as they progress up the ladder? 20 A That is right. And as you went up the 21 ladder, your responsibility increased.

Page 407 1 Q Right. Now, how does that -- let's -- 2 well, I will come back to that in a minute. 3 After -- did you become involved in 4 shipbuilding at some point? 5 A Did I what, sir? 6 Q Did you become involved in 7 shipbuilding? 8 A Yes. In 1962, I joined a shipyard in 9 Bath, Maine called Bath Iron Works. 10 Q And how did you end up at Bath Iron 11 Works? 12 A My wife thought it was a good idea if I 13 came home once in a while. 14 (Laughter ensued.) 15 A And I started out at the bottom of the 16 supervisory positions, the first-line supervisor, 17 and I worked there for 33 years, 34 years. 18 Q And can you kind of give the members of 19 the jury an outline of those 34 years? I know it is 20 hard -- 34 years is hard to kind of crystallize, but 21 what were you doing out of the Bath Iron Works and	Page 409 1 became vice president of Bath Iron Works? 2 A The buck stopped. I certainly had 3 fiscal responsibility to try to see that we were a 4 profitable operation, that we could stay busy, we 5 could keep our people busy and employed. 6 And I actually would still continue to 7 ride sea trials as the sea trial chief engineer 8 because I had the license. 9 Q What is a sea trial chief engineer? 10 A After you finish a new ship and it is 11 groomed and tested and retested and retested, you 12 take it out to sea and put it through a very 13 torturous regimen. And you run full power and you 14 do quick reversals to stern to try to stop the ship 15 as quick as you can and do a lot of testing of the 16 steering gear. 17 If there happens to be any weapons 18 aboard, we actually would fire missiles. The 19 shipyard would fire the missiles, with help 20 obviously from the government end. 21 We might shoot guns, but primarily it
Page 408 1 kind of how did you progress? 2 A From 1962 to 1964, I was a First-line 3 supervisor spending virtually my entire time aboard 4 ships being built and ships being activated and 5 tested. 6 All ships have to go through a very 7 rigorous testing program before they can actually go 8 on the high seas. 9 In 1964, I became a second, like, 10 supervisor where I had some supervisors working for 11 me and really doing the same. 12 In 1968, I became chief operating 13 engineer. That's sort of where the buck stops. I 14 had a lot of dealings with customers, whoever we 15 were building or repairing ships with, and actually 16 a lot of dealings with manufacturers at that point. 17 And I stayed in that position until 18 summer of 1989 when I became vice president and 19 general manager of the Bath Iron Works Portland ship 20 repair Facility. 21 Q And what were your duties when you	Page 410 1 was to test the hull, the piping, the machinery to 2 see that the ship was in fact ready to go to sea on 3 a full-time basis. 4 Q Now, are you a member of any marine 5 engineering societies? 6 A Yes. 7 Q Which ones and what are they? 8 A I am currently a member of the Society 9 of Naval Architects and Marine Engineers. When I 10 was active, I was on the New England Executive 11 Committee. I formerly was a member of the Society 12 of Naval Engineers. 13 And there is an organization that 14 writes rules for building ships in the United States 15 called the American Bureau of Ships. 16 It used to be commercial ships, 17 although they do a lot of work for both the Navy and 18 the Coast Guard also testing and evaluations. 19 And I was on their engineering 20 committee, and we actually would write the rules for 21 shipbuilding in the United States.

Page 411 1 Q Now, this American Bureau of Ships 2 committee, how long did you serve on this committee? 3 A You serve -- you are nominated. It is 4 nothing that you lobby for. You wait until somebody 5 asks you to join. It is a rather a blue-ribbon 6 team. 7 Q Okay. 8 A And we would only meet two or three 9 times a year, but we would pass judgment and say, 10 this sounds like a reasonable change to regulations 11 or it doesn't. 12 Q Now, in your work at Bath Iron Works 13 for those 34 years, did you ever have any work with 14 the United States Coast Guard? 15 A Yes. 16 Q And could you explain to the members of 17 the jury what the United States Coast Guard is and 18 kind of where it fits into the Armed Services? 19 A Yes. The Coast Guard in peace times is 20 primarily a search-and-rescue group until we had 21 satellites.	Page 413 1 were under Treasury, but I am not sure of the years. 2 And I would believe now that they are 3 under Homeland Security, and maybe all of 4 Transportation is there. 5 Q Now, what kind of work did you do at 6 Bath Iron Works with the United States Coast Guard? 7 A Prior to my going to Portland, I took 8 the lead on a large four-ship contract. It actually 9 turned out to be a 300 million-dollar contract to 10 refurbish four of the Coast -- the largest ships 11 that the Coast Guard had, so-called Hamilton class. 12 And I worked on that project for 13 actually six years and worked very, very closely 14 with the Coast Guard's resident inspection team. 15 And in addition to that big 16 rehabilitation an reorganization program, we did a 17 little work on some of the so-called Campbell Ingham 18 class. 19 Some of the names escape me right now, 20 but it wasn't the Campbell and it wasn't the Ingham, 21 but there were a couple of them that we worked up at
Page 412 1 They did weather patrols to warn 2 shipping of pending storms, things of that nature. 3 They do aids to navigation. 4 They administer the safety aspect of 5 the Merchant Marine, so they are very much involved 6 in materials and issues like that. 7 In time of war, I have heard of some of 8 their larger ships that actually would go to Vietnam 9 and maybe even World War II, for all I know. 10 Korea, I believe there were some Coast 11 Guard ships active off the Korean coast. Whether 12 they were using them for interdiction, whether they 13 were using them for gunnery chutes. I am not 14 exactly sure, but that's my view of the Coast Guard. 15 Q And is the Coast Guard a separate 16 entity from the Navy, the Marines, the Air Force, 17 the Army and those folks? 18 A Oh, very much so. Coast Guard, most of 19 my career, has come under the Department of 20 Transportation. 21 I believe there was a period when they	Page 414 1 Bath in Portland. 2 Q Now, I guess that brings up a good 3 point, Captain Lowell. How many ships do you think 4 you have worked on over the years that you have -- 5 A Oh, probably a couple hundred, I had 6 some reason to be aboard or worked on or supervised 7 some construction. I would say I have been on a 8 couple hundred ships. 9 This would range all the way from the 10 Navy to Coast Guard to coastal geometric survey, 11 Corps of Engineers and different commercial 12 companies. 13 Q Now, based on your experience for that 14 six years of working with the United States Coast 15 Guard, are you familiar with the duties of a 16 machinist's mate on Coast Guard ships? 17 A Yes. I am familiar with machinist's 18 mates on Coast Guard ships. I have watched them. I 19 have worked with them. I have trained them. 20 Q Now -- and you understand this case is 21 about Mr. Blackmon?

Page 415 1 A Yes, sir. 2 Q And you understand that he was a 3 machinist's mate for most of his career on Coast 4 Guard vessels? 5 A Well, he was a machinist's mate 6 extraordinaire. He was a master chief. And there 7 are very few of those that are ever selected. 8 Q And could you explain that to the 9 members of the jury, what is a machinist's mate and 10 what is -- where was Mr. Blackmon on that hierarchy? 11 MR. PARROTT: Your Honor, I object. We 12 are now in qualifications. We have not crossed and 13 he has not been offered as an expert and I object to 14 getting into the substantive testimony until he is 15 qualified. 16 THE COURT: Do you want to offer him as 17 an expert? 18 MR. FROST: Your Honor, I would offer 19 Captain Lowell as an expert in marine engineering, 20 and this is probably -- I need -- yes. 21 MR. PARROTT: There is another issue I	Page 417 1 record and he can rely on anything. 2 THE COURT: What is it in any event? 3 MR. FROST: He is just go to say what a 4 machinist's mate does. That was his job. 5 MR. PARROTT: That's not the question. 6 The question was, what did Mr. Blackmon do. 7 THE COURT: That's fine. Stick to 8 that. Let's get this show on the road. 9 MR. FROST: Your Honor, I understand. 10 I want to make my point, which is just because it 11 was excluded doesn't mean that an expert can't rely 12 upon it. 13 THE COURT: Why is that true. 14 MR. PARROTT: You have to look at the 15 interplay of Rule 5-702 and 5-703. 16 THE COURT: Pass me that book. 17 MR. PARROTT: Under 5-702 -- I will let 18 you get to the page. 19 Under 5-702, an expert's opinion has to 20 have among other things a basis in fact. 21 Under 5-703, this Court has discretion
Page 416 1 would like to discuss if we can approach the bench. 2 THE COURT: Come up. 3 Bear with us. 4 (Discussion at the bench.) 5 THE COURT: You were going to ask me 6 how we would ever finish this trial if we take a 7 half hour to proffer every witness? 8 MR. PARROTT: I only have a couple 9 questions for him. And I may agree to it, but -- I 10 think he will qualify, but my objection, and I 11 forgot to raise it before the witness took the 12 stand, is we had some discussions about use of the 13 discovery deposition and whether an expert under 14 Rule 5-702 or 5-703 ought to be able to rely on 15 something that is not going to come into evidence. 16 At this point, I would ask that Your 17 Honor instruct counsel not to ask this witness 18 questions about the discovery deposition or at least 19 materials that could only be found in the discovery 20 deposition. 21 MR. FROST: They are in his service	Page 418 1 to allow an expert to rely on certain things that 2 may not be otherwise admissible. 3 The best example I can give is, when we 4 talk about DNA testimony in a criminal case, 5 certainly an expert is allowed to talk about the 6 development of DNA standards and that sort of 7 thing -- laboratory technique, that sort of thing, 8 but in this case, there is not going to be any 9 evidence as to Mr. Blackmon's work on a Goulds pump. 10 THE COURT: His what? 11 MR. PARROTT: There is not going to be 12 any evidence testimony from Mr. Blackmon that he 13 ever worked on a Goulds pump. 14 And if there is not going to be any 15 testimony as to what he specifically did on pumps in 16 his admissible, de-bene-esse testimony, they ought 17 not to be able to get it in through this expert. 18 THE COURT: Is he going to testify to 19 that or just explain what the man would have done in 20 this role? 21 MR. FROST: He will say what a

Page 419 1 machinist's mate would have done and these parts 2 were in his work area and, as a machinist's mate, he 3 would have worked on them. 4 He is not going to say that -- 5 MR. PARROTT: But the question 6 included, what did Mr. Blackmon do. And I am afraid 7 we are now going to start allowing him to read from 8 the discovery deposition, which I am trying to 9 prevent. 10 MR. FROST: I have instructed him not 11 to do that. 12 THE COURT: Do you have any voir dire 13 on his expertise? 14 MR. PARROTT: Just a couple questions. 15 THE COURT: Go ahead. 16 (In open court.) 17 THE COURT: You can question the 18 witness on his expert credentials for the defendant 19 voir dire. 20 VOIR DIRE EXAMINATION 21 BY MR. PARROTT:	Page 421 1 Q Okay. 2 A So that every single piece of every 3 pump, every compressor, every turbine is shown on 4 that arrangement drawing. 5 Q And the correspondence and things you 6 got mostly came from a Mr.~McCaffery; is that fair? 7 A That is correct, sir. 8 Q All right. You know Mr.~McCaffery, 9 sir, don't you? 10 A I know who he is. 11 Q Now, sometimes when you get involved in 12 these cases you go to the National Archives and do 13 independent research, correct? 14 MR. FROST: Your Honor. 15 A Sometimes, yes, sir. 16 MR. FROST: This has nothing to do -- 17 THE COURT: What does this have to do 18 with -- 19 MR. PARROTT: I am asking him if he is 20 qualified to give the opinion. 21 THE COURT: He has not offered an
Page 420 1 Q Captain Lowell. Good afternoon. My 2 name is Steve Parrott. We met once before, didn't 3 we? 4 A Yes, sir. 5 Q I am going to stand up so I am 6 projecting my voice to you. 7 A And you are doing a good job, sir. 8 Q Just so it is clear, Captain, you have 9 never been on an Owasco class cutter; is that right? 10 A That is correct. 11 Q And you have not seen a full set of 12 plans for a Owasco class cutter, have you? 13 A I have seen a lot of correspondence, a 14 ton of correspondence, and I have seen a few plans. 15 Q All right. You have not seen the 16 entire plans, have you? 17 A No, but I have seen an arrangement that 18 shows exactly where everything is. 19 Q Right. 20 A In all the machinery, I have looked at 21 arrangement plans.	Page 422 1 opinion yet. Go ahead. Finish the sentence. 2 BY MR. PARROTT: 3 Q Did you go to the National Archives in 4 connection with this case? 5 A My answer is no, but I want to qualify 6 that. 7 Q Okay. 8 A And I did work an Owasco case six, 9 seven years ago, and I do have and did have at the 10 deposition that we gave a list of all of the 11 equipment on the Owasco class ships. 12 Q Okay. 13 A Yes. 14 Q All right. We talked about that 15 earlier? 16 A Yes. 17 Q Now, a term that has been used in this 18 case already is industrial hygienist. You are not 19 an industrial hygienist? 20 A No, sir. 21 Q Okay. And currently you are

Page 423 1 semi-retired, correct? 2 A That is correct. 3 Q What you do nowadays, you do consulting 4 work in connection with litigation, correct? 5 A Yes, sir. 6 Q And your first case on behalf of 7 plaintiffs in an asbestos case was for the Waters & 8 Kraus firm; is that correct? 9 A I am not sure. I would say probably 10 not. I probably did one up in Maine, but close 11 enough. 12 Q All right. You were never a Coast 13 Guard inspector, correct? 14 A No, but I would work with Coast Guard 15 inspectors on a daily basis. 16 Q All right. And you have been doing 17 that -- you started doing that in 1953, correct? 18 A More in 1968, but, yes, I have seen the 19 Coast Guard at work as an inspection team. 20 Q Okay. And they have had resident 21 inspectors present at the Bath Shipyard when you	Page 425 1 speak up as best I can. 2 A Super. 3 Q We were talking about your experience 4 with the United States Coast Guard and, in 5 particular, machinist's mates such as Mr. Blackmon. 6 Do you remember that? 7 A Yes, sir. 8 Q Okay. Now, what does -- a machinist's 9 mate in the United States Coast Guard, what do they 10 do? 11 A Let me start by saying, primarily, the 12 keepers of machinery are two teams. 13 Q Well -- 14 A And one team would be the machinist's 15 mates. And I will tell you what it is that they 16 keep. 17 The other team would be the boiler 18 tenders, BTs, called. And the boiler tenders take 19 care of boilers and fuel oil and feed pumps and 20 forced draft blowers. 21 The machinist's mates take care of
Page 424 1 worked there, correct? 2 A Oh, yes. 3 Q And at the Bath Shipyard, you would 4 have occasion to see repair work done on not only 5 Coast Guard ships but Navy ships and commercial 6 ships, correct? 7 A That is right. 8 Q All right. 9 MR. PARROTT: All right, Your Honor. 10 Those are my questions for this witness. 11 THE COURT: All right. He will be 12 received as an expert in the areas recited. 13 What that means is, he can give 14 opinions within the area of his expertise. The 15 weight to be attached to those opinions is entirely 16 up to you. 17 You may proceed. 18 MR. FROST: Thank you, Your Honor. 19 DIRECT EXAMINATION RESUMED 20 BY MR. FROST: 21 Q Okay. Captain Lowell, I am going to	Page 426 1 everything else. 2 Q Okay. 3 A That would include all the saltwater 4 pumps, all of the pumps, except those few that I 5 just mentioned. 6 And they would have the responsibility 7 for the bulk of the steam lines, for the vast 8 majority of the pumps and for the turbines that 9 drive the propeller, for the turbine generators that 10 make electricity, for the distilling plant that 11 makes fresh water. 12 Q Now, since you are the first witness, 13 Captain Lowell, we have not had anybody kind of 14 explain what the inside of a ship I guess looks 15 like. 16 And there is different parts of a ship, 17 I guess. Let's start there, right? 18 A Yes, sir. 19 Q And how many different parts are there 20 on a ship? 21 A Well, there may be as many as 100

Page 427 1 compartments. Some may be berthing, some may be 2 cooking facility, some may be weapons oriented. 3 Q And the parts we are going to focus in 4 on this trial are the parts where machinist's mates 5 would be, correct? 6 A Yes, sir. 7 Q And how -- where is this area and how 8 big is this area that the machinist's mates are in 9 on a ship? 10 A Okay. On the ships that Master Chief 11 Blackmon sailed on was primarily the so-called 12 Owasco class. And the machinery space would go from 13 the very bottom of the ship and might run all the 14 way up to the main deck, but it would start right 15 down on the very bottom. 16 And the Owasco was a 255-foot ship, and 17 so the width of the machinery space would have been 18 about 43 feet. The length of the machinery space 19 was about 35 feet. And there would be an upper 20 level and a lower level. 21 And in that upper and lower level was a	Page 429 1 wide? 2 A Forty-three feet wide. 3 Q Okay. So kind of maybe if we half the 4 courtroom in half maybe? 5 A Your judgment on 43 feet is probably as 6 good as mine, but, yeah, I would say it is a little 7 bigger than that. 8 Q Okay. And then it is how many feet 9 across? 10 A About 43 foot across and about 35 feet 11 lengthwise. 12 Q Okay. 13 A Forward to aft. 14 Q And then it would just kind of divide 15 over and that would be kind of a square area? 16 A Rectangular area, close to a square. 17 Q Okay. 18 THE COURT: Just for reference, from 19 where he sits to the corner of the room is 33 feet. 20 MR. FROST: Okay. 21 THE COURT: According to this chart
Page 428 1 whole big pile of machinery. There would be pumps, 2 valves, turbines for driving the propeller, turbine 3 generators for making electricity. 4 We have to have as an example Baltimore 5 Water Company. We have to have a water company on a 6 ship that keeps pressure at the spigots and showers 7 at all times. 8 We have to be ready to fight a fire, so 9 we have to have fire pumps. So I think that is the 10 picture that I will leave you with. 11 Q Okay. So the machinery space that he 12 is in is basically two levels. It is like a 13 two-story? 14 A And the top level may even be as much 15 as a level and a half. It is entirely possible. 16 Q Okay. So it is sort of about as big as 17 this room, tall-wise, maybe even a little bigger? 18 A Yes. Counting the two levels, yeah, it 19 is going to be as tall as this room. I would say 20 close to it. 21 Q Okay. Then it is going to be 40 feet	Page 430 1 that I have. 2 BY MR. FROST: 3 Q Okay. But it is not a big area, I 4 guess, on a ship? 5 A Oh, it is very tight. 6 Q Okay. 7 A Very tight, filled with equipment. 8 Q And this area that is filled with 9 equipment, is this a machinist's mate's -- I guess 10 in the military, in the Army, we call it his duty 11 station? 12 A A machinist's mate is always a part of 13 the engineering department, always. 14 Q Okay. Could you explain what the 15 engineering department is? 16 A The engineering department has charge 17 of the engine room. And his workstation would be to 18 spend almost his entire time right down in the 19 machinery spaces when he was at work. 20 Q And these -- what would he be doing 21 down there? What does a machinist's mate do down

Page 431 1 there? 2 A Depending on the level that he was 3 at -- you know, he started at the bottom and he rose 4 to the top. 5 But as he climbed up, he stood watches. 6 He learned to do maintenance. He maintained valves. 7 He maintained pumps. He maintained pipes if they 8 needed maintenance. He would have worked on 9 turbines if there were problems with turbines. 10 And until he made master chief, he was 11 doing a lot of hands-on. That's the nature of the 12 Coast Guard. My experience with the Coast Guard is 13 that the enlisted people were very strong and had a 14 real can-do attitude. 15 Q Now, this day-to-day working with the 16 machinery in his engine space, is that -- what is a 17 machinist's mate looking for when he is down in that 18 engine space and checking on things? 19 A He is looking at -- he is looking at 20 performance. He is saying, are we going as fast as 21 we should be. Are we making as much electricity as	Page 433 1 Q Now, you have reviewed at my request 2 the documents in this case, correct? 3 A Yes, sir. 4 Q And you have reviewed some deposition 5 testimony and some military records and some other 6 things? 7 A Yes, sir. 8 Q Okay. Now, can you tell the members of 9 the jury what ships Mr. Blackmon would have served 10 on? 11 A Yes. There were, I believe, 13 of 12 these ships, all identical, cookie cutters. And he 13 served on Mendota, he served on the Androscoggin and 14 he served on the Winnebago. 15 And at some point, I believe that 16 Master Chief Blackmon said that he had 13 or 14 17 years service on those three ships, that class of 18 ship. 19 So the vast majority of his time in the 20 Coast Guard was spent on these so-called Owasco 21 class. That's the first of any class, but it was on
Page 432 1 we should be. 2 He is watching pump performance. If 3 pump pressures fall off, he has to make some kind of 4 decision, what am I going to do about this. The 5 pump is no longer serving the purpose it was 6 intended it serve. So he may have to maintain that, 7 pull it apart. 8 He is watching for external leaks, 9 steam leaks on flanges, steam leaks on turbine 10 joints, water leaks on flanges, water leaks on 11 pumps. He is watching all of that. 12 And he is going to eventually decide, 13 if he has a problem, what is it that he needs to do 14 to fix that problem and how urgent it is. And he, 15 along with maybe the chief engineer, are going to 16 make decisions like that. 17 Q And if a decision is made that a pump 18 or a valve or any of the machinery in an engine 19 space needs to be worked on, who are the folks that 20 are going to do that? 21 A Machinist's mates.	Page 434 1 the Mendota, Androscoggin and Winnebago. 2 Q And he also served on the Ingham and 3 the Violet besides that? 4 A In relatively short periods of time. 5 He was on the Ingham, which is a little bigger 6 steamship. And he indicated he was there a year or 7 less. 8 And he was on an old -- much older ship 9 that had a reciprocating steam engine. And that was 10 built way back in the '20s and didn't seem to have a 11 lot of documentation on that. 12 Q Now, you mentioned a couple times the 13 Owasco class of cutters. Could you explain what a 14 class of ship is? 15 A I will do that by using an analogy on 16 automobiles. And a Ford Mustang -- in any given 17 year, a lot of Ford Mustangs are built. 18 And while the color of the paint may 19 change, the basic chassis of that car is going to 20 stay exactly the same. 21 And that was true with these 13 ships.

Page 435 1 They used one set of plans. You would not develop a 2 complete set of plans for each of these ships. It 3 was one set of plans. 4 And 11 of these ships were built in a 5 commercial yard on the West Coast. Two of them were 6 built here at Curtis Bay at the Coast Guard yard, 7 but they all used the same plans, all had the same 8 basic equipment. 9 Q So these Owasco class cutters, the ones 10 that Mr. Blackmon spent the majority of his time on 11 for that 13 to 14 years, those were either built at 12 Coast Guard shipyards or other shipyards at Coast 13 Guard direction? 14 A There was one other shipyard in Los 15 Angeles, Western Pipe, that built the other 11. 16 Q Now, the Winnebago, the Androscoggin 17 and the Mendota, prior to their names, they have a 18 symbol that is -- it says, USCGC. 19 Are you familiar with that? 20 A Yes. Yes. 21 Q What is that?	Page 437 1 done over the years and have vast experience in 2 reading and reviewing those? 3 A Yes, particularly drawings and 4 technical manuals. 5 Q And why do you have that expertise? 6 A Well, if something goes wrong, that's 7 the first thing I turn to is a technical manual to 8 see if I could learn something from the manual. 9 In the manual would be pictures of the 10 equipment, piece numbers. And oftentimes there is a 11 section on troubleshooting. And it said, if that 12 happens, do this or replace this part if it gets 13 worn. 14 So it becomes a very, very handy tool 15 for the operator or the maintainer, the machinist's 16 mates to use aboard ship. 17 MR. FROST: Your Honor, we are now 18 going to put some things up that I have previously 19 shown to counsel on the screen. 20 THE WITNESS: Do you mind, sir, if I 21 stand up and look and then turn?
Page 436 1 A United States Coast Guard Cutter. 2 Q And what is the significance of that 3 designation, United States Coast Guard Cutter? 4 A Well, I think to do search and rescue 5 you eventually have to be a cutter of some 6 interdiction, although you could do interdiction 7 with smaller ships, but when you see the word 8 "cutter," you know it is one of the Coast Guard's 9 primary ships, one of their bigger ships. They have 10 a lot of small boats. 11 Q Now, in your review of the materials in 12 this case, have you been able to review documents 13 from the National Archives along with documents from 14 the manufacturers of equipment? 15 A Yes, I have. 16 Q All right. And throughout your career 17 as a shipbuilder, did you become familiar with the 18 various drawings and diagrams and things like that 19 that relate to ships? 20 A Sure. 21 Q And is that something that you have	Page 438 1 (Discussion off the record.) 2 MR. FROST: Captain Lowell you are 3 going to have to speak up because of the microphone. 4 THE COURT: The mike won't hear, but -- 5 THE WITNESS: My apologies. I asked if 6 it was all right if I stood up and faced the screen 7 and then turned around and then faced the jury. 8 THE COURT: Just keep your voice up 9 though. 10 THE WITNESS: Thank you, sir. 11 THE COURT: As we said, the acoustics 12 are not that outstanding. 13 THE WITNESS: What, sir? 14 THE COURT: The acoustics are not so 15 great in here. It is a big room. 16 BY MR. FROST: 17 Q Captain Lowell, I will kind of cut to 18 the chase now in regards to these Owasco class 19 cutters, and you and I are going to talk, when we 20 talk about Goulds Pumps, only about those Owasco 21 class cutters that Mr. Blackmon spent most of his

Page 439 1 time on, correct? 2 A Yes, sir. 3 Q And that's because we have no 4 documentation on those other two ships? 5 A That is correct. We do for those three 6 ships. 7 Q Okay. Now, in regards to Goulds Pumps, 8 you go to -- I have up on the screen the picture of 9 the Mendota, the Androscoggin and the -- 10 A Violet. 11 Q No, the Winnebago. 12 A All right. 13 Q Like the RV. And these are the types 14 of ships that we are talking about, correct? 15 A Yes, sir. 16 Q Okay. Now, I want to talk to you about 17 your review of the materials in this case. You 18 reviewed documents from the National Archives and 19 you have reviewed documents produced by the 20 defendants in this case and you have reviewed 21 Mr. Blackmon's deposition in formulating your	Page 441 1 Q Well, I do. It wasn't working well for 2 me, but I don't think you can see it. 3 (Discussion off the record.) 4 BY MR. FROST: 5 Q And this picture that I have up there 6 on the screen, is this a type of pump that we would 7 have been talking about that Mr. Blackmon would have 8 had on those Owasco class ships? 9 A Yes, it is. 10 Q And this type of pump, are these -- who 11 is responsible for the maintenance of these pumps on 12 a ship? 13 A In the case of the Goulds pumps that we 14 have identified, we know the service they were in, 15 and the machinist's mates were responsible for 16 virtually all 12 of them. 17 Q Okay. Now, the pump that we have up 18 there, could you just kind of generally explain how 19 that pump works and what it does? 20 A Yes, I can. 21 Q And --
Page 440 1 opinions in this case? 2 A I have. 3 Q And in review of those materials, did 4 you find Goulds Pumps as certain pumps that were on 5 those Owasco class ships? 6 A Yes, I did. 7 Q And when we say "on the Owasco class 8 ships" we are talking about all three of the ships 9 that Mr. Blackmon would have served on? 10 A That is right. All 13 of those ships 11 were the same -- same equipment. 12 Q Okay. Now, I have a picture that was 13 produced in discovery in this case of what is called 14 Close-Cupled Centrifugal Pumps by Goulds. 15 Do you see that? 16 A I sure do. 17 Q Now, would this picture enable you to 18 explain to the members of the jury kind of generally 19 what a pump is and how it works? 20 A Yes. If I had a -- you don't have an 21 electronic pointer?	Page 442 1 A This is motor right here. You see the 2 feet that bolts down to a foundation. There would 3 be four points that that motor would bolt down. 4 That is the shaft in there that is 5 coming out of the motor going through a packing 6 gland. That is the pump itself. All this is the 7 pump. 8 The pump is going to have a cable going 9 to it, obviously, to make the motor work. This is 10 going to be piped up. 11 This would be the suction of the pump 12 right here. There is going to be a mating flange 13 hooked onto that, and it is going to be -- if it is 14 a fire pump, it is going to take sea suction. 15 So there is going to be a line -- a 16 pipeline from that connection going down through the 17 hull of the ship so that it can get sea water, and 18 that would be as an example a fire pump. 19 The pump is going to spin around 20 centrifugally; hence, the word "centrifugal," 21 inferring that it is going to be spinning.

Page 443 1 And it is going to build pressure, and 2 it is going to come out that flange there. And that 3 flange is going to be hooked up to a pipe. 4 There will be a mating flange hooked 5 onto that, and it will bolt up. And that pipeline 6 is going to discharge into the fire main. 7 And as an example, you would use this 8 pump to fight a fire with if you needed large 9 volumes of water. 10 Q Okay. So, basically, what we have up 11 there is a piece of equipment that has pipes running 12 into it and pipes running out of it? 13 A Always going to have in and out. You 14 always have to have that. 15 Q And that in and out, when those pieces 16 of metal go up against each other, I am assuming the 17 piping is going to be some type of metal? 18 A Metal to metal with a gasket between. 19 Q That was my question. In between the 20 metal to metal, is that where the gaskets fit in? 21 A Metal to metal is not going to be	Page 445 1 bigger than the flange is. You can see that. It is 2 going to be a good deal bigger than the flange is. 3 Q Even though we are using this 4 particular pump, I want to talk generally about 5 these Goulds pumps that Mr. Blackmon -- were in 6 Mr. Blackmon's engine space. 7 The flanges, the flange areas, how big 8 were those areas where they hooked into the pipe? 9 A I would say the outside diameter of the 10 gasket would be six inches. 11 Q Okay. 12 A On the two flanges, which probably are 13 the same size or close to it. 14 Q And then that bigger area, how big 15 would that be? 16 A I looked at the fire pump, and I think 17 I got 11 and a half inches in outside diameter. 18 Q Okay. So the diameter of that gasket, 19 which is bigger than the ones going to the pipe, 20 that is about the size of maybe a medium pizza? 21 A Yes, a 12-inch pizza.
Page 444 1 tight, so you have to have something with a little 2 resiliency, so you would have a gasket there. 3 Q So on the two spots where the pipes go 4 in, there is going to be gaskets there? 5 A Yes. 6 Q And then are there other gaskets on 7 those types of pumps? 8 A Yes. 9 Q Where are they? 10 A You have to be able to take this pump 11 apart and inspect the rotating element inside and 12 maybe change some parts out if they wear. So in 13 order to get it apart -- and it is going to be 14 difficult, but there is a big bolted flange. That's 15 a bolthead right there. 16 And there is a bolt circle all around 17 that flange -- not the pipe flange, but the pump 18 flange. And that would have a gasket in there. 19 Q Okay. Now, that looks to be a bigger 20 area? 21 A Yes. It is certainly going to be	Page 446 1 Q Okay. And that's a cylindrical gasket? 2 A Yes, sir, circular. 3 Q Now, with regards to all of the pumps 4 that we are going to discuss in a minute, because we 5 are going to go through the different pumps with you 6 in regards to all of these Goulds pumps that were on 7 these Owasco class ships, would those pumps have 8 asbestos gaskets inside them? 9 A Yes. 10 Q Now, when we are talking about these 11 flanges where the pipes come in, who designs that 12 flange? 13 A It is part of the pump. 14 Q Okay. So who designs it? 15 A The pump manufacturer. 16 Q Okay. Now, once it is designed by the 17 pump manufacturer, what does that tell an individual 18 who is going to install that pump? 19 A Well, it is a flush-mounted -- it is a 20 flush-mounted flange, so it tells you it is going to 21 have a sheet asbestos gasket to seal it off.

Page 447 1 Q Now, besides those three gaskets that 2 we have just talked about, is there any other 3 asbestos inside the pump? 4 A Yes. 5 Q Where is that? 6 A It's pretty difficult to see, but there 7 is the shaft coming out of the motor and then the 8 shaft has to go into the pump housing. 9 This pump is going to be flooded with 10 sea water, and it is actually going to build up 11 pressure. 12 And, naturally, unless you had some 13 kind of seal, that water would come cascading out 14 where the shaft goes into the pump housing. 15 So in order to seal that, there is 16 packing, rings of packing in that gland that is 17 built into the forward end of the pump. 18 And it goes around the shaft and inside 19 like a stuffing tube, and that would be asbestos. 20 Q And was that true for all of the pumps 21 that we are going to talk about on these -- Goulds	Page 449 1 them, kind of tell them generally what it does. 2 A I will try to give you a little detail, 3 but not get too lengthy. 4 There is a main motor driving the 5 propeller. It actually is a turbine that drives a 6 generator that drives a motor and the motor has to 7 be cooled. 8 And there is a saltwater main-motor 9 air-cooling circ pump, saltwater, that is going to 10 help cool that motor. There would be one of those. 11 Distiller freshwater pump. We have to 12 make freshwater at sea, and we do it with a 13 distiller, sometime called an evaporator. And that 14 would be pumping fresh water. 15 This would be a small diesel fuel oil 16 hand pump which would be portable. And you would 17 move it from location to location if you wanted to 18 pump out a barrel or pump a barrel of something in. 19 There are three fire pumps on the ship. 20 All of these would be pretty large pumps. They are 21 there for just what the term implies, to fight fire.
Page 448 1 pumps on these Owasco class ships that would have 2 been in his machine space? 3 A Yes, sir. 4 Q Now, these pumps, how big can these 5 things be? 6 A I looked at the fire pump and it looked 7 like it weighed over 600 pounds. The other pumps 8 probably were smaller, but I did pick a number up of 9 620 on the fire pump. 10 Q Where did you pick that up from? 11 A Off a good plan. 12 Q Now, let's go, I guess, to specifically 13 what you found in reviewing the documents in this 14 case as to the actual Goulds pumps on these Owasco 15 class ships, the three that Mr. Blackmon served 16 upon. 17 Would you tell the members of the jury 18 what Goulds pumps were actually on those three 19 ships? 20 A Yes. 21 Q And could you just, as you are telling	Page 450 1 Q And those are the ones we were talking 2 about earlier that could be up to 600 pounds? 3 A Yes, sir. 4 Freshwater transfer pump, you have a 5 lot of small tanks on the ship and you have to 6 transfer fresh water from time to time, and that's 7 why you have those. 8 We need fresh water for drinking 9 purposes, and we need fresh, good, distilled water 10 for the boilers. 11 Freshwater pumps, just like I said, 12 Baltimore Water District, you have to have the same 13 thing aboard ship. 14 When you turn on the shower, you expect 15 to get fresh water and hopefully warm. And it is a 16 system that is totally and completely pressurized 17 and it is there to serve the needs of the sailor. 18 Sanitary pumps would be the pumps that 19 provided water to urinals and commodes. 20 There may have been some other uses, 21 maybe to flush out the garbage grinder, something

Page 451 1 along that line. I believe those sanitary pumps 2 were saltwater too. 3 Q Now, you mentioned that there are some 4 freshwater and some saltwater pumps. Why is that 5 important when you are evaluating pumps? 6 A Salt water is a fairly hostile 7 commodity. It is a lot easier to pump fresh water 8 over a period of time than to pump salt water 9 because salt water has -- by its very nature, it is 10 corrosive. 11 And saltwater pumps always have had a 12 propensity to need more maintenance than, say, 13 perhaps a freshwater pump. 14 Q And it looks like, according to my 15 count, that at least six of those pumps -- six of 16 the 12 are saltwater pumps; is that right? 17 A That is right. 18 Q So at least half of those are saltwater 19 pumps that would require more maintenance over time? 20 A More than your typical freshwater pump, 21 but they -- all pumps are designed to wear. There	Page 453 1 falling off, it is time to open the pump up. 2 Q Now, you mentioned labels. What kind 3 of labels are on these pumps? 4 A Well, that would be typically a 5 metallic label plate that may be rivetted to the 6 pump somewhere. 7 Q Okay. So they would actually have on 8 these pumps a metal plate rivetted to it that said 9 "Goulds Pumps" or whatever pump it was? 10 A That is right. It would give you the 11 name of the manufacturer and give you the details. 12 Very often, a pump like that, we looked at the 13 previous picture with the motor, and sometime I have 14 seen those labels right on the motor housing, but it 15 can vary. 16 Q Now, the maintenance on these pumps, 17 when you conduct this maintenance, what happens with 18 the gaskets and packing? 19 A Well, you always -- if you have a pump 20 apart, you always change -- you always replace the 21 gaskets.
Page 452 1 are actually pieces inside that are designed to wear 2 out so that you can change them without changing out 3 the whole pump. 4 Q And I guess since you have mentioned 5 that, let's go ahead and talk about that. What is 6 the normal maintenance on these types of pumps? 7 A There is probably no answer to that. 8 It depends on an awful lot of factors. You could 9 wind up packing a pump every month. That would not 10 surprise me. 11 If the pump is well balanced and the 12 bearings are good, you might go three months between 13 packings. But for me to say -- to give you any 14 normal number, I would be reluctant to do that. 15 And in opening them up, you open a pump 16 like that up when you see its performance is 17 deteriorating; in other words, the pump doesn't 18 build up the pressure that it was designed to do. 19 And you know, because there are labels 20 on these pumps, you know what basically the 21 discharge pressure should be. If you see that	Page 454 1 What you don't want to do is try to cut 2 corners and save a gasket and then put it back 3 together and have it leak. So it is a heck of a lot 4 less expensive to put new gaskets in. 5 And you always -- I can think of no 6 good reason that you would ever try to save a gasket 7 like that on a pump. You would replace it. And if 8 you got the pump apart, you would replace the 9 packing. 10 Q Now, so basically, anytime you open up 11 a pump, you are going to replace the gaskets? 12 A Yes, sir. 13 Q Okay. 14 A Not necessarily all, if you left it in 15 place. You would always replace the larger end 16 housing gasket, and you may replace the pipeline 17 gaskets if you were to take the pipe -- if you take 18 the pump out and put it in the machine shop or put 19 it on a bench, then you change all three gaskets. 20 Q Okay. So if you are doing kind of what 21 I guess I would call routine maintenance on the ship

Page 455 1 and you take the pump apart, you are going to 2 replace the two gaskets on the flanges; is that 3 right? 4 A That is right. 5 Q No matter what? 6 A Well, if you take the pump out and try 7 to put it on a workbench -- and that is typically 8 where you want to work on it, where you have 9 lighting and tools, a vice that holds pieces. 10 Q And these gaskets and the packing in a 11 pump, are those materials designed to wear out? 12 A Oh, sure. 13 Q Why is that? 14 A Sure. Packing is designed to wear. 15 You know, you have the shaft spinning around and you 16 have this packing gripping the shaft and it is going 17 to wear out. 18 Q And is that by design that it wears 19 out? 20 A It's certainly by design. 21 Q And who designs these pumps?	Page 457 1 A Yes. 2 Q What can you tell the jury to kind of 3 give them an idea of where these different pumps 4 are? Are they all in one area or where are they? 5 A No. They are throughout that machinery 6 space: Upper level, lower level, left-hand side of 7 the ship, right-hand side of the ship. 8 As an example, the sanitary pumps are 9 on the upper level. Fire pumps are on the lower 10 level. Main motor cooling is lower level. 11 Distiller freshwater, I believe, was lower level. 12 Diesel hand pumps, wherever you have it. And I 13 believe the freshwater pumps were on the upper 14 levels level. 15 So it had a good -- within that 16 machinery space, that 43-foot wide, 35-foot long 17 machinery space, you had Goulds pumps. Bottom of 18 the ship, upper level, left-hand side, right-hand 19 side. It was a geographic disbursement. 20 Q And as an expert in machine -- marine 21 engineering, what does that kind of tell you?
Page 456 1 A Well, it is the manufacturer who 2 designs the pumps. It is his drawings. 3 Q And so, in fact, in this case, the 4 manufacturer that would be Goulds Pumps? 5 A Yes. 6 Q Okay. Now, since we were talking about 7 packing, have you ever heard of metallic packing? 8 A I have heard of metallic, and I have 9 heard of plastic metallic in the same -- same 10 breath. 11 Q And based on your review of documents 12 and your training, background and experience, do you 13 believe metallic packing contains asbestos? 14 A Metallic packing, you have to 15 understand what it is. It is a thin film of lead on 16 the outside, very thin film of lead, but it has an 17 asbestos core. 18 Q Now, I want to go back to the list of 19 the pumps. We talked about the engine space and 20 that there is a lot of -- it is a small area, but 21 there is different things going on there, right?	Page 458 1 A It tells you, it is a very tight spot, 2 and anybody working in there certainly could -- 3 would in fact come in contact, in close proximity to 4 Goulds pumps. 5 Q Now, these Goulds pumps that the 6 machinist's mates -- they are the ones responsible 7 for these pumps? 8 A Every one of those pumps belong to the 9 machinist's mates. 10 Q And when you say "belong to," that 11 means what? 12 A They are responsible for the 13 maintenance. 14 Q So if something happens with those 15 particular pumps and they need to be fixed or 16 changed or anything that goes on with those pumps, 17 the machinist's mate is the person on the ship to 18 work on them? 19 A That is right. 20 Q Now, did you also review -- there are 21 other pumps in the machinery space other than Goulds

Page 459 1 pumps? 2 A That is right. 3 Q Because there is other pumps that do 4 other services? 5 A Sure. 6 Q Did you have an opportunity on these 7 Owasco class ships to look at the total number of 8 pumps in that engine space that Mr. Blackmon was in? 9 A Yes. 10 Q How many were there? 11 A That list -- that list that I got at 12 the Archives a few years back spells out the exact 13 number of pumps, and there were 40 pumps on the 14 Owasco class -- a total of 40. 15 (Siren interruption.) 16 MR. FROST: Hold it. 17 THE REPORTER: Hold it. 18 BY MR. FROST: 19 Q Okay. We will both get you. 20 A My apologies. 21 Q That's okay.	Page 461 1 interaction in that? 2 A I didn't see any interaction. I saw 3 the Coast Guard firmly in place, and they were the 4 ones approving the plans. 5 Q Now, when the machinist's mate is 6 looking at a pump and he has a pump that is not 7 working to whatever the specifications are, how does 8 he know what specifications they are and -- 9 A With any given pump, you are going to 10 have gauges so that you use gauges and thermometers 11 so that you can monitor the performance of the pump. 12 And, also, each pump is going to have 13 its own technical manual, and the data would be in 14 the technical manual. You would find it on the 15 plans or perhaps a data sheet within the manual. 16 Q Now, these pumps, there were a lot of 17 different folks that made pumps that were on ships? 18 A Yes. 19 Q Is it possible for a machinist's mate 20 to memorize every kind of pump on a ship? 21 MR. PARROTT: Object.
Page 460 1 A There would be lube oil and fuel oil 2 pumps and water pumps. And 12 out of the 40 were 3 supplied for each of those ships that he was on by 4 Goulds. 5 Q And is that a large number of one 6 manufacturer to be in one engine space? 7 A That's unusually large. Usually, there 8 is a whole lot of people that make pumps, but to 9 have 12 out of 40 would certainly not be a routine 10 and ordinary thing. 11 Q Now, in addition to the Goulds Pumps' 12 drawings and some of the things in the National 13 Archives, did you have an opportunity to also look 14 at the some of the correspondence between Goulds 15 Pumps and the folks building the ships? 16 A Yes, I did. 17 Q And was that correspondence between 18 Goulds and the folks building the ship? 19 A It was between Goulds and the Coast 20 Guard or Goulds and the shipyards. 21 Q Did the United States Navy have any	Page 462 1 THE COURT: That's common information. 2 You can answer based on your experience, but anyone 3 could answer that. 4 THE WITNESS: I am sorry? 5 THE COURT: You can answer. 6 THE WITNESS: If a guy had some kind of 7 photogenic mind, he maybe could. 8 BY MR. FROST: 9 Q Now -- 10 A I would rather go to a data sheet. 11 Q What is a manufacturer's tech manual? 12 A It is a manual that probably is in 13 three parts. It talks about the nature of the pump, 14 it talks how to maintain and troubleshoot it and it 15 will give you a listing of spare parts, give you a 16 picture of the pump and an exploded view of the -- 17 some of the pieces. 18 And it will give you a part number. If 19 you wanted to order a part, you could clearly go 20 back to the original manufacturer and order that 21 part.

Page 463 1 Q Now, if a pump contained asbestos when 2 it was shipped from the factory, how does a 3 machinist's mate -- if he is going to replace that 4 gasket, how does he know what to replace it with? 5 A Well, he has the plan. He has a plan 6 that shows it was an asbestos gasket. 7 Q And was it reasonable and normal for a 8 machinist's mate to look at those plans and then 9 replace the gaskets or any of the other parts in a 10 pump based on what the technical manuals would have 11 told him? 12 A Yes. 13 Q Now, these technical manuals, who 14 writes them? 15 A The company that makes the equipment 16 writes the technical manual. 17 Q And why do they do that? 18 A It is their drawings. And they are the 19 ones that know -- they are the ones that know the 20 troubleshooting. They are the ones that know the 21 part numbers, the piece numbers, the dimensions. A	Page 465 1 A Sure. 2 Q Have you ever removed a gasket from a 3 Goulds pump? 4 A Yeah, I believe I have in -- in the 5 Merchant Marine. 6 Q And during the removal of those 7 gaskets, was airborne asbestos created? 8 MR. PARROTT: Object. 9 THE COURT: Well, you can describe what 10 was created. I don't know if you know what it was. 11 THE WITNESS: I am sorry? 12 BY MR. FROST: 13 Q You can describe what you saw when you 14 would have worked on a Goulds pump. 15 A Yeah. Probably half the gasket came 16 off easy and half came off hard. And I would have 17 used a paint scraper. I have heard of people using 18 electric drills with wire brushes. 19 MR. PARROTT: Object, Your Honor. 20 THE COURT: Overruled. 21 THE WITNESS: For me to say -- for me
Page 464 1 lot of dimensions are spelled out on some of those 2 plans. And they are the folks that made it. 3 Q And to your knowledge, was the United 4 States Coast Guard in the business of making pumps? 5 A Please repeat, sir. 6 Q I am sorry. 7 To your knowledge, did the United 8 States Coast Guard make pumps? 9 A No, sir, not to my knowledge. 10 Q Did they rely upon the pump 11 manufacturers for technical issues regarding the 12 pumps? 13 A It would have been a part -- if you are 14 selling a pump, you have to have a manual with it. 15 Q Now, we talked about the maintenance 16 earlier of these pumps. Is the fact that these 17 pumps have to be regularly maintained and that they 18 have to be torn apart and that the gaskets and 19 packing would be replaced during that process, is 20 that something that is generally known in the marine 21 industry?	Page 466 1 to discuss the airborne particulate at that time, I 2 don't think I should do that. 3 BY MR. FROST: 4 Q Could you see anything? 5 A Yeah. I have seen some bits and pieces 6 flying off as you are scraping, sure. 7 Q Now, these pumps, when you are -- when 8 an individual is working on them, how many -- is 9 that normally something that is going on at sea or 10 is that something that is going on when they are in 11 port? 12 A Either place. You would prefer to work 13 it in port, but if you are at sea, if you are off 14 Vietnam or something like the Androscooggin was, I 15 would have no reservations about shutting down a 16 fire pump and working on it and having two. 17 You wouldn't shut down a fire pump if 18 you were loading fuel oil or doing something 19 dangerous, but I would have no reservation about 20 shutting one down. 21 Q Now, based upon your review of the

Page 467 1 materials in this case, your training, background 2 and experience, would Mr. Blackmon as a machinist's 3 mate in the Coast Guard have done maintenance on 4 these Goulds Pumps that would have resulted in the 5 changing of asbestos gaskets and packing? 6 MR. PARROTT: Object. 7 THE COURT: Go ahead answer the 8 question. 9 A It is my belief that he certainly would 10 have. 11 Q Do you have any doubt about that? 12 A Not any doubt, not when you consider 12 13 pumps in a small machinery space. 14 MR. PARROTT: Objection. 15 A And the fact he had 13 or 14 years on 16 those ships. 17 THE COURT: Overruled. 18 MR. FROST: Your Honor, what time did 19 you want to take the afternoon break? 20 THE COURT: Now would be fine. Where 21 are you?	Page 469 1 MR. FROST: Okay. 2 BY MR. FROST: 3 Q Okay. Captain Lowell, I want to kind 4 of summarize real quickly. Then we are going to 5 move on to Crane Co. 6 We are still dealing with Goulds and we 7 had talked about the 12 pumps in the engine space 8 that were Goulds, correct? 9 A Yes, sir. 10 Q And that was not just on one of the 11 ships, and I have all three of the ships up there. 12 That was 12 Goulds pumps in his machinery space on 13 all three of those ships? 14 A That is correct, sir. 15 Q Okay. And we were talking about work 16 with gaskets. And you have done some work with wire 17 brushing of gaskets? 18 A Sure. Hand wire brushes or paint 19 scraper, sure. 20 Q And during that process with the hand 21 wire brushing, would airborne particles be released
Page 468 1 MR. FROST: I am going to move on to 2 Crane Co. 3 THE COURT: I will excuse the jury for 4 a few minutes. 5 Take a brief break. We will be back in 6 about five minutes. 7 The witness can take relax while we at 8 a brief recess. Five minutes. 9 THE COURT CLERK: All rise. 10 (Jury dismissed.) 11 (Recess taken -- 3:16 p.m.) 12 (After recess -- 3:24 p.m.) 13 THE COURT CLERK: All rise. 14 THE COURT: You may be seated. 15 Why don't you go retrieve the jury? 16 (Discussion off the record.) 17 (Jury present.) 18 THE COURT: Have a seat. 19 (Discussion off the record.) 20 THE COURT: Okay. The witness remains 21 under oath. You may continue the examination.	Page 470 1 during the removal of those gaskets? 2 MR. PARROTT: Objection. We have been 3 through this, Your Honor. 4 THE COURT: Well, he can describe what 5 he would see. I mean, exactly what it was or what 6 it meant. 7 MR. FROST: That's why I asked, 8 airborne particles. 9 THE COURT: That's a technical sort of 10 term. 11 What do you see? 12 THE WITNESS: You see some particles 13 flying certainly using a wire brush. 14 BY MR. FROST: 15 Q Okay. Now, I want to move now on to 16 Cranite Sheet Packing, which I have up on the 17 screen. Are you familiar with Cranite Sheet 18 Packing? 19 A Yes. 20 Q What is Cranite Sheet Packing? 21 A It is an asbestos gasket that was used

Page 471 1 and often used in crane low-pressure steam valves, 2 low-pressure steam valves, and it was sold -- I have 3 seen it in Crane catalogs. Crane puts out a big 4 thick 200 or 300-page catalog. There would be 5 examples, and they actually would sell a Cranite 6 gasket material. 7 Q Now, the jury was shown during opening 8 statements some small gaskets that kind of had holes 9 in them. 10 A Yes. 11 Q Those are not what this Cranite sheet 12 gasket -- 13 MR. LOWERY: objection. Calls for 14 speculation. Lacks foundation. 15 THE COURT: Do you know the answer? 16 THE WITNESS: I do. 17 THE COURT: You can answer. 18 THE WITNESS: You could use Cranite for 19 that. It is going to take all sorts of sizes and 20 shapes depending on how you cut it out. 21 BY MR. FROST:	Page 473 1 want to. You might lay it on the edge of a flange 2 and use the peen on the end of a ball peen hammer to 3 hammer that gasket out very lightly. That would be 4 one approach. 5 Another approach would be to try to 6 mark it and cut it out with some shears. You can 7 hammer out the center, punch holes, or if you have a 8 punch and a block of wood, you could knock the holes 9 out with punches. So there are a lot of ways of 10 doing it. 11 Sometime you cut it with shears. 12 Sometime -- and you need -- you need a -- you need 13 pencil marks, in other words, circle pencil marks to 14 be sure that you cut it accurate. 15 And sometime I have seen sailors -- I 16 have seen the Coast Guard tap out gaskets, and some 17 guys got pretty good at it. 18 Q What do you mean by "tap out"? 19 A Lay the gasket on the face of the 20 flange and it would overlap the flange and use the 21 peen on the end of a ball peen hammer, tap the edge,
Page 472 1 Q Right. So could you kind of explain to 2 the jury what a Cranite sheet -- well, how big is a 3 Cranite sheet of gasket material and how do you turn 4 that Cranite sheet material into a gasket that you 5 put on a valve? 6 A Sure. Sure. The sheet gasket material 7 usually came in a four-by-eight or four-by-four 8 rectangle -- a four-by-four rectangle or a 9 four-by-eight sheet. 10 Q You mean four foot by eight foot? 11 A Four foot by eight foot. 12 Q Okay. 13 A And what you would do is, if you had a 14 six-inch flange that you wanted to make a gasket 15 for, such as -- you could even make the gasket for a 16 Goulds pump out of Cranite. 17 You would cut a rectangular section off 18 that four-foot-by-four-foot sheet maybe seven inches 19 by seven inches. 20 And then there is a lot of ways of 21 making that into the exact configuration that you	Page 474 1 that sharp edge. And that sharp edge would cut into 2 the gasket and the excess material would fall down 3 and you would wind up with a circle. 4 Q Okay. So this four-foot-by-four-foot 5 or maybe four-foot-by-eight-foot gasket sheet would 6 be basically just a large flat sheet of material? 7 A That is right. 8 Q And this Cranite material, did it 9 contain asbestos? 10 A Yes. 11 Q And what typical percentage of asbestos 12 was this? 13 MR. LOWERY: Objection. Calls for 14 speculation. Beyond the witness's expertise. 15 THE COURT: Do you know within your 16 expertise? 17 THE WITNESS: I believe the gaskets 18 were 80, 85-percent chrysotile asbestos, real high 19 asbestos content. 20 THE COURT: Why would you know that? 21 THE WITNESS: I believe -- I not only

Page 475 1 believe that, but I have read federal specs, I have 2 read government specs and I have seen analysis done 3 of those quantities -- 4 THE COURT: All right. Overruled. 5 THE WITNESS: -- 80, 85 percent. 6 BY MR. FROST: 7 Q Okay. Now, those are different -- 8 well, that big sheet is different than just that 9 small gasket, right? 10 A The small gasket can be made out of a 11 big sheet, that is right. 12 Q And this Cranite was sold by Crane Co.? 13 A Yes, sir. 14 Q Now, we have some valves up there, and 15 I have a valve, a smaller valve. 16 (Smaller valve displayed to jury.) 17 Q This valve, you have seen this before? 18 A Yes, I have. 19 Q Captain Lowell, would this valve 20 cutout, would it help you in describing to the jury 21 what a valve is and what it does?	Page 477 1 types of valves. There are a lot of types, but 2 there are, in essence, globe valves and gate valves. 3 That happens to be gate valve. Very common. 4 Q Now, would this valve that I have, this 5 cutout, would that help you explain to the members 6 of the jury where gaskets and packing are in a 7 valve? 8 A Sure. Sure. I could show that. 9 Q Now, before we get into that, this is 10 one size of a valve? 11 A That is right. 12 Q And these valves can be, I guess, 13 smaller and they can be bigger? 14 A Valves can range from quarter inch up 15 to 18 inches in diameter. Actually, they can be 16 bigger. There are a few saltwater valves that might 17 be 24 inches in diameter. 18 Q I have up on the screen a bigger Crane 19 valve. 20 A Yeah. 21 Q And are those the bigger type valves
Page 476 1 A A valve is something that you use to 2 isolate a piece of equipment or to -- you could 3 throttle that piece of equipment if that valve was 4 driving -- if that valve was a steam pump and it was 5 driving an auxiliary turbine, if you closed in on 6 the valve, it would cause the turbine to slow down. 7 If you opened up on the valve, it would cause the 8 turbine to speed up. 9 Likewise, you could put something out 10 on the discharge of a fire pump, and if you chose to 11 throttle it, you could do that. Or if you wanted to 12 work on the pump, you would use that valve to 13 isolate the fire main, I say, from the fire pump so 14 that we could go to work on the fire pump. 15 Q And -- 16 A If you were in port, you could take the 17 valve out if you wanted to, but if you are at sea, 18 it is isolation. 19 Q And this valve here, this is not the 20 way a valve looks? 21 A That one -- there are basically two	Page 478 1 that you are talking about? 2 A That's the exact type of that, only a 3 good deal bigger. Just looking at that valve, it 4 looks like it could well be a thousand-pound valve 5 in weight. 6 Q Okay. On board ships, there is 7 different size valves, including ones that were this 8 size all the way up to those bigger ones? 9 A That is right, sir. 10 Q Are you aware of whether Crane made 11 these smaller type valves all the way up to those 12 bigger ones for shipboard use? 13 A In my experience, I have found Crane 14 making all sizes and all types of gate and globe 15 valves. 16 Q And these gate and globe valves, are 17 these valves that are going to be in those machinery 18 spaces that we were talking about that Mr. Blackmon 19 would have been in? 20 A Many, many of them right in the 21 machinery spaces. That's where the vast majority is

Page 479 1 going to be. 2 MR. FROST: Your Honor, I -- could he 3 come down and -- 4 THE COURT: Yes. That's fine. You can 5 walk over there, please. 6 THE WITNESS: Thank you. 7 THE COURT: Don't fall over any wires 8 though. 9 (The witness left the witness stand.) 10 BY MR. FROST: 11 Q Now, Captain Lowell, would you explain 12 to the members of the jury where asbestos would be 13 on these -- on this valve? And maybe we can make it 14 so everybody can see. 15 Bring me that table. 16 Okay. And can you come to the side for 17 me -- 18 A Yes, I can. 19 Q -- so everybody on the jury can see. 20 A This other end would look exactly like 21 this end. This is a so-called valve flange that a	Page 481 1 little piece by little piece or it might not be that 2 hard. 3 It could vary. If the valve has been 4 in steam service, this packing gets very, very hard. 5 And one of the -- one of the things that sometime 6 can make working on a packing gland difficult is you 7 have to keep open passageways and aisles in a 8 machinery space so that you can walk. 9 And so the valves, more often than not, 10 are up in the overhead. So a valve like this would 11 be upside down, and you are standing on a step 12 ladder trying to dig out packing like that 13 (indicating). It can be a pretty dirty job. 14 Q Now, when it comes from the 15 manufacturer, where are the other parts that are 16 going to contain asbestos other than the packing? 17 A Okay. There would be a bonnet gasket. 18 And this is the so-called bonnet. And as you can 19 see, it would have -- if this was here, there would 20 be four bolts holding the bonnet on. 21 So if I wanted to work on this
Page 480 1 pipe is going to bolt to that, a corresponding pipe 2 and flange. 3 But looking at the valve itself, the 4 way the valves are shipped is, this would be 5 asbestos packing in here. 6 There typically would be three, four, 7 five -- as many as five rings of asbestos packing. 8 And the reason being is that the fluid, whatever 9 this is, steam, water, lube oil or fuel oil, flowing 10 through here out the other side, because the disk is 11 not all the way down, but that fluid would leak out 12 here and spray everywhere if we did not have a 13 resilient sealing product like a packing put in 14 here. 15 So if you wanted to repack that valve, 16 you would have to take these two nuts off right 17 here. You would lift this gland out of place and 18 you would have to try to dig that packing out with 19 hooks. 20 And it might come easy and it might 21 come terribly difficult. It might come out piece --	Page 482 1 precision- machined disk, and if I wanted to grind 2 it down in the machine shop, I would have to take 3 off the four nuts, lift this out, and then there 4 would be a gasket right on that surface. 5 This is depicted by this red piece 6 right here, this resilient. And that happens to be 7 rubber, but more often than not that is -- it was 8 always asbestos up until the '70s. At some point, 9 some substitutes started coming out. 10 Q Now, you -- 11 A Now, there would be a gasket there and 12 there would be packing there, but nothing would be 13 furnished with these two flanges that are here, but 14 the shipbuilder, as he installs this valve, he has 15 to have a mating flange and pipe. 16 Let's say this was steam pipe. So it 17 was maybe a steamed heat system, steam heating, so 18 we would have to have a steam heating line going in 19 and we would have to have a line come out going to 20 the system. 21 So I can use this valve for two

Page 483 1 purposes. I can throttle it, slow down the flow. I 2 can speed up the flow. Or if I had a leak, I could 3 isolate it by closing this valve and fix the leak. 4 So these valves are always going to 5 pipe up. And because this is a flat-face flange, it 6 would use a sheet asbestos gasket. 7 Q And if that was not a flat-faced 8 flange, what other types of gaskets could be used? 9 A It would use a spiral wound steel with 10 some asbestos in the center. And it would be spiral 11 wound. And the way you find spiral wound is on the 12 high-pressure steam systems, not the low-pressure, 13 but the high-pressure steam systems more often than 14 not are almost always going to have raised faces. 15 Q And the flange face here that you have 16 been showing the jury, whether it is a flat-faced 17 flange here or it is that raised flange that would 18 use those other types of gaskets, who determines 19 that? 20 A Well -- 21 MR. LOWERY: Objection. Calls for	Page 485 1 Q And what does that tell you as a marine 2 engineer? 3 A Probably steam, low-pressure steam. 4 Q And so those would have had these 5 compressed-type sheet gaskets? 6 A That's certainly my belief. 7 Q And are you aware of Crane ever 8 providing their valves with their Cranite asbestos 9 sheet gaskets incorporated? 10 A On the bonnet, yes. On the bonnet, I 11 have seen Crane valves with Cranite gaskets. 12 Q Now, this -- we talked about that size. 13 Now, there is -- besides that size of valve, there 14 are other sizes on the ship, right? 15 A Sure. 16 (Larger valve displayed to the jury.) 17 Q This is another size valve? 18 A Yes. 19 Q And it has a tag right there that says 20 Crane Co. on it? 21 A Yes, it does. This is called the yoke,
Page 484 1 speculation. 2 THE COURT: Slow down. 3 Does the witness actually know who 4 makes that decision? 5 THE WITNESS: The person making the 6 valve. 7 THE COURT: Overruled. 8 BY MR. FROST: 9 Q Now, these other spiral wound gaskets, 10 did those also contain asbestos? 11 A Some. 12 Q Now, you had an opportunity to review 13 the records in this case concerning the Owasco class 14 ships, correct? 15 A Yes, sir. 16 Q Were there Crane valves that contained 17 asbestos on those ships? 18 A Yes. 19 Q Any doubt about that? 20 A Not in my mind. It lists Crane as a 21 supplier of steel valves.	Page 486 1 rivetted on the yoke. 2 Q And what type of valve is this? 3 A It is a gate valve, rising-stem gate 4 valve. 5 Q And so even though this is a bigger 6 valve, these kind of have similar functions? 7 A Sure. It is for isolation. It might 8 be on the skin of the ship, but you open that valve 9 and flood the fire pump and the fire pump works. 10 But if you wanted to isolate the fire pump, you 11 close that valve. 12 Q And so what these valves allow to you 13 do on a ship is to be able to do repairs on other 14 things? 15 A Isolate and do repairs, but also to do 16 a certain amount of -- to make people controlling 17 too. Sometime I don't want the full flow of 18 whatever it is flowing through that valve, so I can 19 throttle down on it, what flows in. 20 And this valve, again, would have -- 21 instead of having that packing that we see there,

Page 487 1 this is a larger valve of packing inside, bigger 2 packing. And there probably could be as many as a 3 half dozen rings in there of asbestos packing. 4 Q Okay. And that half a dozen rings of 5 asbestos packing, is this another type of valve that 6 could be overhead or not? 7 A This probably is not, but there are an 8 awful lot of valves that are overhead. 9 Q Okay. 10 A It could be. 11 Q Now, this area right here that I am 12 referring to where it has the nuts on it, is that 13 where the bonnet is? 14 A That is the bonnet right here. And if 15 you took off -- I think there is eight of those 16 bolts, eight or ten. If you took them all off, you 17 would have a sheet gasket between the body of the 18 valve and the bonnet to keep -- if that was flowing 19 water, which it probably was, to keep water from 20 leaking out, but it could be controlling fuel oil, 21 for all I know.	Page 489 1 waiver? 2 MR. FROST: I hope my firm has comp. 3 THE WITNESS: We have some helpers 4 here. 5 MR. FROST: That's okay. We will put 6 it down for a second. 7 THE WITNESS: Thank you. 8 MR. FROST: I think, Captain, we can 9 get you to go back to your seat. 10 (The witness resumed the witness 11 stand.) 12 BY MR. FROST: 13 Q Now, these valves that we have been 14 talking about, particularly the Crane valves, who 15 designs those valves? 16 A Well, they come from the company that 17 makes them. All valves come from the company that 18 makes them. 19 Q And to your knowledge, did the Coast 20 Guard or the government make valves? 21 A Not that I know of.
Page 488 1 Q And when this thing is shipped from the 2 manufacturer, does it contain at least the Crane 3 valves that were shipped to the Owasco for placement 4 on the Owasco, would those Crane valves have 5 contained asbestos on that bonnet gasket? 6 A It is certainly my belief that it did. 7 That's not a -- not going to be a ground joint where 8 you would have metal to metal, so my belief there 9 were sheet asbestos gaskets. 10 Q Then when it is put into the steam 11 system, there will be pipes running out here and a 12 pipe running here, and there is going to be gaskets 13 there too? 14 A There is going to be a gasket there, 15 going to be a gasket there as it is piped into the 16 system. 17 Q Okay. Okay. I think -- 18 THE COURT: We are not paying if you 19 hurt yourself. 20 (Laughter ensued.) 21 THE COURT: Do you want to sign a	Page 490 1 Q Now, we talked about maintenance on 2 pumps. When it comes to a valve, if you have to 3 open up a valve, what is the maintenance on a valve 4 if you are going to do that? 5 A You worry about two things. You worry 6 about external leaks. The first would be with a 7 look around the valve stem where the packing was. 8 And what you can do is, you can keep 9 tightening that down, but eventually you get to the 10 point where you can't tighten it anymore and it 11 still leaks, in which case you wind up changing the 12 packing. 13 You worry about external leaks such as 14 on the bonnet gasket or on the two flange gaskets. 15 You can have an external leak. 16 And even just as important you, can 17 have internals, a very unpleasant surprise if you 18 want to work on something downstream of that valve 19 that's sitting there. 20 And we close the valve, and found we 21 still had pressure, be it fuel oil or lube oil or

Page 491 1 steam, we have a problem. 2 And we have to take -- we have to 3 figure out a way to get that valve apart and see if 4 we can clean up the internal surfaces, maybe hand 5 machine them, clean them up to the point where the 6 valve will hold pressure. 7 Q And when you are doing those type 8 processes and you are going to put that valve back 9 together, are you going to replace the bonnet 10 gaskets? 11 A Yes. If you have opened that valve up, 12 you are always going to replace the bonnet gasket 13 and you are going to replace the flange gaskets too. 14 Q So whenever a valve is opened up, it is 15 standard practice and procedure in the marine 16 industry to replace the bonnet gasket and the flange 17 gaskets? 18 A Yes, particularly if the valve comes 19 out and goes up to a workbench. And that is 20 typically where you are going to work on it is a 21 bench with good lighting and compressed air maybe.	Page 493 1 want to valve that is good for 150 pounds of steam, 2 and 400 degrees would be one example. 3 A customer -- these particular ships 4 that we are talking about, there were some 5 high-pressure valves that called for a six -- to 6 have a pressure rating of 600 pounds per square inch 7 and 750 degrees steam. 8 So the customer has to dictate to the 9 manufacturer what it is that he wants relative to 10 temperature and pressure. 11 Q And once he said, listen, I want a 12 valve that is going to work at this temperature and 13 at this pressure, does the customer really care what 14 the valve looks like and what it all consisted of? 15 A No. He has a Crane catalog, so he is 16 going to know what it looks like. He is actually 17 picking it out of those catalogs. 18 Q Now, these valves we are talking about, 19 these Crane valves, based on your review of all the 20 documents that you've reviewed in the past and your 21 experience in the marine industry over the years,
Page 492 1 It is possible that you could open the 2 valve up in place, in which case you would only 3 replace the bonnet gasket. But more often than not, 4 the valve is going to be taken up to a workbench and 5 worked on there. 6 Q And is that kind of work machinist's 7 mates would do? 8 A Absolutely. 9 Q And in regards to these flanges and 10 these flange gaskets, are those flange gaskets 11 necessary for this valve to operate in the steam 12 system? 13 A Yeah. It would leak like heck if you 14 didn't have gaskets on either end. 15 Q And when these valves are designed, are 16 they designed to work at certain temperatures? 17 A Yes. Yes. Certain valves are designed 18 for certain temperatures. 19 Q And who designs them to meet those 20 temperature specifications? 21 A Well, the customer is going to say, I	Page 494 1 was Crane a common supplier of marine valves? 2 A Very much so. 3 Q Now, based on your review of all the 4 materials in this case, do you have an opinion as to 5 whether Mr. Blackmon would have worked on Crane 6 valves and performed repairs and maintenance, 7 including changing of gaskets and packing? 8 A Yes, I have an opinion. And my opinion 9 is that he would have. And if a valve like that was 10 in a steam system, the valve would have a portable 11 blanket around it for insulation purposes. You 12 wouldn't -- 13 MR. LOWERY: Objection. Move to 14 strike. Beyond the scope of the question. 15 THE COURT: Ask another question. 16 Sustained. 17 MR. FROST: All right. 18 BY MR. FROST: 19 Q Now, these -- these Crane valves, you 20 have worked on Crane valves? 21 A Lots of times.

Page 495 1 Q And you have done that over the years, 2 I guess? 3 A In the last 20 years, I didn't have 4 much hands-on. 5 Q Okay. Now, in regards to these valves, 6 were there drawings that were associated with these 7 valves? 8 A Yes, drawings, yes, sir. 9 Q And why are drawings associated with 10 these valves? 11 A You have drawings for practically every 12 piece of gear on the ship. And you would want a 13 drawing that would show you the -- that would show 14 you the model. 15 It might give you the piece numbers. 16 If you wanted to order a new valve stem or something 17 like that, you could do that without ordering the 18 whole valve, so you would have valve drawings. 19 Q And these valve drawings, well, I guess 20 there is other drawings on shipboard too, right? 21 A Yes.	Page 497 1 Q And there are some other pieces of 2 machinery in Mr. Blackmon's engine space that we 3 have not talked about? 4 A That is right. 5 Q And some of those machine spaces may 6 have contained asbestos, and they may not have? 7 A Would have, sure. 8 Q And so even though you and I have not 9 talked about those, you have given opinions about 10 which types of equipment may have contained asbestos 11 other than Goulds pumps and these Crane valves? 12 A Yes. 13 Q Okay. And are you also familiar with 14 the crew's quarters on these Owasco class ships? 15 A I am familiar with the specifications 16 of insulated crew's quarters. 17 Q And what insulation was used on the 18 crew's quarters for these Owasco ships? 19 A Fiberglass. 20 Q And why was fiberglass used for 21 insulation in the crew's quarters?
Page 496 1 Q But the drawings for the valves 2 themselves, who makes those? 3 A Oh, the drawing is going to be made by 4 Crane. The drawings on the ship are going to be 5 maintained in the engineering so-called log room 6 where the drawings are stored. 7 Q And why are the drawings stored in the 8 engineering log room? 9 A I didn't hear the first part, sir. 10 Q I am sorry. I keep turning my head. 11 Why are the drawings held in the engineering log 12 room and what is the purpose of those drawings for 13 valves and things? 14 A For reference. If you have trouble 15 with a valve, it gives you a reference point. You 16 can go back to Crane and order a new valve or you 17 can go back to Crane and order a piece number. 18 Q Now, you reviewed -- and you have 19 reviewed a lot of different materials in this case 20 concerning these Owasco class ships, correct? 21 A Yes, sir.	Page 498 1 A It is one quarter the weight of 2 asbestos, and it is easier to put up. And it 3 obviously poses no hazard, but fiberglass was used 4 when the Owasco was built in the quarters and the 5 ceiling, in the bulkheads, particularly those 6 bulkheads that the other side of it was to the 7 weather. 8 So that, one, it became insulation and, 9 two, it helped with the acoustics, kept the noise 10 down and it kept the sweat down. 11 And further, the ventilation on Owasco 12 was a combination heat and air conditioning. And 13 all that ventilation was fiberglassed also. 14 Q And so if there was any disturbance of 15 that fiberglass material, that could possibly have 16 gotten on folks? 17 A That's entirely possible. 18 Q Does the fiberglass material sometimes 19 look dusty like asbestos? 20 A Well, it can leach out, sure. 21 Q Now, we have heard a lot of discussion

Page 499 1 during opening statements about pipe covering. You 2 are familiar with pipe covering on ships? 3 A Yes, sir. 4 Q And pipe covering on ships, 5 traditionally, is that material just kind of hanging 6 around or is there something applied to it onboard 7 ship? 8 A Well, you have -- you have the 9 half-round pipes on and then you have cloth over 10 that. You will always have cloth over that. 11 And some of the half-rounds you will 12 seal off with a cement on the joints. 13 Q And after these half-rounds have cloth 14 put over them and they have some cement put on them, 15 are they then painted? 16 A They are painted numerous times over 17 the life of a ship. 18 Q And why are these pipes painted? 19 A One, sailors seem to like to paint. 20 And, two, everybody likes to keep the 21 place clean. So that if some of that paint began to	Page 501 1 isn't one today. It is whosever's around to patch 2 something. 3 And most of the work done is patching 4 with cement. A small ship like that, 255-foot ship, 5 you have multiple different sizes of thicknesses. 6 You probably didn't even carry spare pipe covering, 7 but you would carry cement cloth. 8 Q And if you didn't carry that spare pipe 9 covering, if major pipe covering had to be done, who 10 would do that. When would it be done? 11 A Whoever was working the job, unless you 12 happened to be in a shipyard. 13 Q And would that be the traditional type 14 of things that would happen in shipyards? 15 A Yes. 16 Q Now, was working with pipe covering 17 ever the primary duty or responsibility of a 18 machinist's mate? 19 A No, no. 20 Q What was their principal responsibility 21 on ships?
Page 500 1 get dirty with age and an inspection was coming up, 2 presto, you paint it. 3 Q And so you are familiar with pads too. 4 Were those painted? 5 A Yes. Portable insulating pads, I am 6 familiar with those. 7 Q And are those painted on ships? 8 A Yes. You don't paint the inside. 9 Q Right. 10 A But you paint the outside. 11 Q Now, this pipe covering, particularly 12 on Coast Guard cutters, was that the type of work 13 that on a daily basis a machinist's mate would do? 14 A No. I wouldn't say it was certainly on 15 a daily basis; not so. 16 Q And in fact, whose responsibility -- if 17 there was some major pipe covering that needed to be 18 done, who traditionally would do that? 19 A There is no such thing as a pipe 20 coverer rating in either the United States Navy or 21 the Coast Guard. There never has been and there	Page 502 1 A Standing watch and monitoring equipment 2 and seeing that the equipment performed properly 3 and, if it didn't, maintaining it, whatever it was 4 that wasn't performing properly. 5 Q Now, I want to switch gears a little 6 bit to your time at Bath Iron Works, the shipyard. 7 In the 1960s timeframe, did Bath become aware of the 8 dangers associated with asbestos? 9 A We knew there were problems in the mid 10 to late '60s because a Harvard medical study was 11 done on scene. 12 Q Now, because of those studies that were 13 being done at Bath, did Bath make recommendations as 14 to removal of asbestos and thermal insulation? 15 A Not really removal. It made 16 recommendations to seek out alternate materials and 17 better installation procedures and policies. 18 Q And this seeking of substitute 19 materials for asbestos pipe covering, that was 20 before the 1970s, right? 21 A That is right. In the late '60s, we

Page 503 1 were substituting in a lot of cases. 2 Q So it wouldn't be fair to say that the 3 entire time that Mr. Blackmon was in the Coast 4 Guard, Bath did not take precautions against 5 asbestos pipe covering, correct? 6 A That would be essentially true. He got 7 out of the Coast Guard, I believe, in 1972 maybe. 8 Q But prior to that, was Bath already 9 saying, "We need to take asbestos out of the pipe 10 covering and substitute that"? When I say -- I mean 11 substitute, not take out. 12 A This was an evolutionary thing. 13 Q Right. 14 A And we got our first shipment of 15 non-asbestos molded pipe covering in in the fall of 16 1973. 17 Q Now, in regards to gaskets and packing, 18 when did you start seeing warnings on gaskets and 19 packing? 20 A That would have been in the mid '70s 21 that I began to see that. Perhaps there was some	Page 505 1 A That is right, until such time as a 2 complete substitution had been accomplished. 3 Q Now, Captain Lowell, I guess until you 4 knew asbestos was dangerous, you didn't warn anybody 5 about it, I guess? 6 A No, I did not. I was more concerned 7 about fiberglass probably than asbestos. 8 Q But once you learned that asbestos was 9 dangerous, did you take precautions and help folks 10 and make sure that they did something to protect 11 themselves? 12 A We did. But, again, it was 13 evolutionary. It isn't something that happened 14 overnight. 15 Q Now, after you retired, did you start 16 to become involved in testifying in litigation? 17 A Yes. 18 Q And how did that begin? 19 A Phone calls. 20 Q From who? 21 A Foster Wheeler, GE, Travelers,
Page 504 1 safety data sheets out into the 1972, '73 timeframe, 2 but as I best remember the warnings took the form of 3 safety data sheets. 4 Q And once you saw these warnings and 5 safety data sheets on gaskets and packing, what 6 types of procedures did you implement in regards to 7 gaskets and packing? 8 A We started paying a lot more attention 9 to it and treated it as a real asbestos hazard, 10 certainly, in the late '70s. 11 And in many cases, we wouldn't know 12 whether something was asbestos or not until we took 13 it out, but we would treat it as an asbestos event 14 and people would dress up in suits in the late '70s 15 and an industrial hygienist probably was on scene 16 and air monitoring, testing was going on. 17 And again, I repeat, this is an 18 evolutionary thing, but probably the late '70s is my 19 best estimate for that. 20 Q And that's the way that gaskets and 21 packing were handled, not pipe covering?	Page 506 1 insurance companies, plaintiffs' firm in Thomsom. I 2 did the shipyard's workers' comp cases that related 3 to asbestos. 4 And then it has spread. And probably 5 the last four years, I have been doing quite a lot 6 of plaintiff work, but it was mostly defense work up 7 until then. 8 Q When you very first were approached to 9 testify in cases like this concerning asbestos 10 litigation, you were basically approached by 11 companies that were involved in the litigation? 12 A That is right. 13 Q And you have testified, I guess, over 14 the years. And how long have you been testifying? 15 A Repeat. 16 Q I am sorry. How long have you been -- 17 (Siren interruption.) 18 Q It is hard for me to think with that. 19 They are getting closer, not farther away. 20 Okay. How long have you been 21 testifying in asbestos cases?

Page 507 1 A About 13 years. 2 Q Now, can you just tell the members of 3 the jury how many cases you have probably testified 4 in? 5 A In court a dozen or more, and in 6 deposition something over 50. 7 Q And how does that kind of break down? 8 You said you now testify for both sides? 9 A Yeah. 10 Q The defendants, and people like me that 11 represent the folks hurt by asbestos? 12 A The thing I can tell you is that 13 certainly the last two cases I have worked were both 14 Los Angeles cases and one was for a plaintiff and 15 one was for a defendant. 16 But what I would say, I have tipped the 17 scale and I have done more plaintiff court cases 18 than I have defendant court cases. 19 And I believe that I have done more 20 depositions for defendants than I have plaintiffs, 21 if you looked at the sum total.	Page 509 1 Q When you are testifying in these cases, 2 Captain Lowell, are you sometimes -- what generally 3 do you do? 4 MR. PARROTT: Well, I object. It is 5 this case. 6 THE COURT: What in general do you do? 7 Well, go ahead, if you think that is going to help 8 the case. 9 Tell us what you do. 10 THE WITNESS: I try to look at the 11 ship, what the ship's machinery space would look 12 like, what the propulsion plant looked like, was it 13 diesel, was it steam turbine, was it a reciprocating 14 steam engine or was it a gas turbine or even 15 nuclear, and I have worked all. 16 And I try to determine who had what 17 equipment on that ship, whether that equipment had 18 insulation, whether that equipment would be 19 maintained on a periodic basis, whether the 20 equipment was insulated or not insulated. 21 And so there is a lot of commonality,
Page 508 1 Q Now, when you are doing this work on 2 these cases, whether you are doing it for the 3 defendant or you are doing it for folks like me who 4 represent the folks hurt by asbestos, are you giving 5 the same general type testimony? 6 A Yes, sir. I try to be consistent. 7 Q I mean, you are -- basically, what you 8 do is, you explain what -- where asbestos is on 9 these things and whether they contain asbestos? 10 MR. PARROTT: I object. 11 THE COURT: Sustained. Leading. 12 THE WITNESS: Yes, sir. 13 BY MR. FROST: 14 Q Is there any change in your testimony 15 between when you testify for defendants or 16 plaintiffs? 17 MR. PARROTT: Object. 18 THE WITNESS: Sure. 19 THE COURT: Sustained. It is not a 20 helpful question in any event. 21 BY MR. FROST:	Page 510 1 whether I am sitting on the defense side or on the 2 plaintiff side. 3 BY MR. FROST: 4 Q And it doesn't matter which side, your 5 testimony is going to be what it is? 6 MR. PARROTT: Objection. 7 THE COURT: Overruled. 8 THE WITNESS: I like to think it is 9 consistent. I am sorry. 10 BY MR. FROST: 11 Q Go ahead. You can answer. 12 THE COURT: You like to be consistent? 13 A I am trying to be consistent. 14 Q Okay. Now, since you began testifying 15 in litigation and when you began consulting in 16 litigation for defendants 13 years ago, have you 17 discovered any new information as you went along and 18 visited the National Archives and looked at other 19 sources? 20 MR. PARROTT: Object. 21 THE COURT: That's just entirely too

Page 511 1 vague. New information? You get new information 2 every day. Sustained. 3 BY MR. FROST: 4 Q Captain Lowell, since you have been in 5 this -- being a consulting witness in this -- in 6 these type cases, has your knowledge developed over 7 time? 8 A Certainly. 9 Q Okay. And your opinions, as you gained 10 more knowledge, have those opinions sometimes 11 changed? 12 A Certainly. 13 MR. PARROTT: Object. 14 THE COURT: Overruled. 15 Q And in regards to these opinions, have 16 you at times been asked by lawyers on both sides to 17 sign affidavits in court cases? 18 A Yes. 19 MR. PARROTT: Objection. 20 THE COURT: Overruled. 21 BY MR. FROST:	Page 513 1 THE COURT: Sustained. 2 BY MR. FROST: 3 Q Now, in regards to this particular 4 case, based on your review of all of the documents 5 and the evidence in this case, have you seen any 6 indication that there were any warnings about the 7 dangers of asbestos in either any of the technical 8 manuals or on any of the Goulds pumps? 9 MR. PARROTT: I object, Your Honor. He 10 never went to the Archives to even look for that 11 information. 12 THE COURT: Well -- 13 MR. PARROTT: How would he know? 14 THE COURT: How would he know? Did you 15 actually look at the pumps that were relevant to 16 this case? 17 THE WITNESS: I have looked at some of 18 the catalogs certainly and drawings. I have the 19 pump drawings. 20 THE COURT: All right. If the pump 21 drawings enable you to answer the question, you can
Page 512 1 Q And in regards to these affidavits, 2 have you sometimes had to say, "You know what, I had 3 that opinion before, and now I have a different 4 opinion based on this additional research"? 5 MR. PARROTT: Same objection. 6 THE WITNESS: Yes. 7 THE COURT: What's the point of this? 8 MR. FROST: Your Honor, I am almost 9 done. I think it is -- I will ask one more 10 question. 11 BY MR. FROST: 12 Q Captain Lowell, you understand the 13 reason I am asking you this is because, usually, 14 when you testify, folks bring up that you have 15 changed some of your opinions? 16 A That is right. 17 Q And is that anything new? I mean, it 18 is kind of old news you changed some of your 19 opinions? 20 MR. PARROTT: Objection. 21 THE WITNESS: Yes.	Page 514 1 answer it insofar as the drawings indicate whether 2 there is warnings. 3 BY MR. FROST: 4 Q Do the drawings indicate there are any 5 warnings on these Goulds pumps? 6 A No, sir. 7 Q Have you also reviewed drawings in 8 regards to the Crane valves? 9 A No, I have not -- I have reviewed a lot 10 of Crane drawings, but not specifically Crane valves 11 for the Owasco, I don't have any. 12 Q But we do have indications from the 13 Archives that those Crane valves were actually on 14 those ships? 15 A Oh, we are certain that Crane valves 16 were bought for the Owasco class. 17 (Discussion off the record.) 18 MR. FROST: Thank you, Captain Lowell. 19 That's all the questions I have. 20 THE WITNESS: You are welcome, sir. 21 THE COURT: Who wants cross first?

Page 515 1 MR. PARROTT: I will start, Your Honor. 2 THE COURT: Proceed. 3 CROSS EXAMINATION 4 BY MR. PARROTT: 5 Q Hello, again, Captain Lowell. 6 A Hello. 7 Q How are you? 8 A Fine, sir. 9 Q We met once before with regard to your 10 deposition. It was November 4th, wasn't it? 11 A If you say so. 12 Q All right. I have the deposition and 13 the exhibits here in case we want to refer to them. 14 MR. LOWERY: Well, Your Honor, may I 15 turn this off? 16 THE COURT: What is it? 17 MR. LOWERY: It was on during 18 Mr. Frost's direct, unless you need it. 19 THE COURT: Oh, that thing. Yes. 20 MR. FROST: I don't know. They are 21 probably warmer than we are over here.	Page 517 1 worked with the Board of Inspection and Survey, 2 correct? 3 A That is right. 4 Q And what you did with them is, you went 5 to certain contract naval shipyards and you 6 inspected ships? 7 A And not just naval shipyards; 8 commercial shipyards too. 9 Q Okay. And at those shipyards, they 10 work on commercial ships and Navy ships and Coast 11 Guard ships? 12 A In some cases, that could be true. 13 Q All right. And this Board of 14 Inspection and Survey was made up of senior 15 experienced naval engineers, correct? 16 A That is right. 17 Q And they took you along with them? 18 A Yes. 19 Q And you would go into these shipyards 20 and you would report to the Navy what you found 21 wrong with certain things in the Navy, correct?
Page 516 1 MR. LOWERY: Mr.~Cottle is being 2 blinded over here. 3 MR. PARROTT: All right. 4 THE COURT: Go ahead. 5 MR. PARROTT: May I proceed? 6 THE COURT: Please. 7 BY MR. PARROTT: 8 Q You mentioned you are doing litigation- 9 related consulting nowadays. You are not doing work 10 for the Navy nowadays, are you? 11 A No. Not for the Navy, per se, no, sir. 12 Q I think you told me at your deposition 13 that -- and you have told us here today that you 14 spent 30 years in the Naval Reserves, '56 to '87, 15 correct? 16 A That is right. 17 Q A lot of things have changed over those 18 years with regard to technology, correct? 19 A Sure. 20 Q All right. And one of the things that 21 you told me you did in the Navy Reserve was you	Page 518 1 A Well -- and most often it would be at 2 sea. We would also go to sea. 3 Q And I think you told me at your 4 deposition, when you reported to the Navy you saw 5 something wrong, you didn't sugarcoat it, correct? 6 A That is right. 7 Q And in all the years that you worked 8 with that Board of Inspection and Survey, you never 9 once reported to the Navy that there was a problem 10 with asbestos-containing gaskets and packings, 11 correct? 12 A No, I never did. 13 Q All right. And you never reported a 14 problem with the Goulds pumps while you were working 15 with those senior engineers, correct? 16 A Let me go back and just talk about just 17 for a minute -- 18 Q Can you answer my question? 19 A -- about the asbestos. From 19 -- 20 Q Can you answer the question I put to 21 you?

Page 519 1 A Please ask the question again. Reask 2 the question. 3 Q Did you ever report a problem with the 4 Goulds pumps when you were working for the Board of 5 Inspection and Survey? 6 A No. I didn't see many Goulds Pumps. 7 Q Okay. 8 (Discussion off the record.) 9 MR. PARROTT: I can use that pad, 10 couldn't I? 11 THE COURT: Sure. 12 MR. PARROTT: All right. 13 BY MR. PARROTT: 14 Q And when you were in the Naval Reserve, 15 you told us that you had a parallel career with Bath 16 Iron Works, correct? 17 A That is right. 18 Q And you worked your way up from a 19 first-line supervisor up to -- you were vice 20 president and the general manager of the ship repair 21 facility, correct?	Page 521 1 thousand. 2 Q Okay. But when you found out about it, 3 the knowledge that you had was that asbestos was a 4 hazard for insulators, not to everybody else. And, 5 hence, you didn't wear a respirator yourself; isn't 6 that correct? 7 A That is right. I did not wear a 8 respirator. 9 Q Okay. Now, you were aware, were you 10 not, when you got to Bath Shipyard, that insulators 11 had been receiving premium or hazardous duty pay, 12 extra pay for working with insulation, correct? 13 A No. 14 Q Did there come a time when you found 15 out? 16 A Yes, there came a time. 17 Q And they were receiving this extra 18 hazardous duty pay because of the hazards of the 19 pipe covering, correct? 20 A Hazardous duty pay from any dusty 21 process, and it was for sandblasting, grinding, pipe
Page 520 1 A That is right. 2 Q And when you worked for Bath Iron 3 Works, you got there in 1962, correct? 4 A Yes, sir. 5 Q And you knew in the mid 1960s that 6 there was a problem with health hazards associated 7 with asbestos-containing pipe covering? 8 A That is right. 9 Q All right. And at the time, sometime 10 thereafter, you told us about this article from the 11 Harvard School of Public Health? 12 A Yes. It was published. 13 Q Sometime thereafter, the shipyard 14 started saying, "Look, insulators should start 15 wearing respirators," correct? 16 A As I have stated here today, it was an 17 evolutionary process, yes, sir. 18 Q All right. And initially when you 19 found out about the problems, you, the guy at the 20 shipyard -- 21 A Well, let me speak. I was one of a few	Page 522 1 covering. 2 Q Okay. And after this article came out, 3 the Harvard School of Public Health article, certain 4 changes were made regarding how pipe coverers did 5 their work at Bath. 6 For example, you started using tables 7 that had downdrafts, correct? 8 A That is right. 9 Q So when they cut this pipe covering, 10 there would be a suction that would suck the dust 11 out, correct? 12 A That is right. 13 Q And you would bring at some point the 14 insulators in on the night shift so they wouldn't be 15 around other people creating this dust, correct? 16 A Yes. And they worked more efficiently 17 at night. 18 Q Okay. And respirators was something 19 that was used by these insulators, correct? 20 A It evolved. 21 Q And it wasn't until the mid 1970s that

Page 523 1 the people at Bath Iron Works said, "Hey, this 2 hazard might be harmful to people other than 3 insulators," correct? 4 A I wouldn't say that's totally correct, 5 no. 6 Q All right. Well, let me -- and the 7 reason I bring it up, I took your deposition in this 8 case, but I was reading in 2007 -- you remember that 9 you gave a deposition in a case that involved all 10 Maine asbestos cases? Remember that? 11 A No. 12 MR. FROST: Counsel, do you have a copy 13 for us? 14 MR. PARROTT: I don't have a copy for 15 you, but it is your witness. You can come up and 16 look at it. 17 MR. FROST: I would just ask if he 18 could show it to me before he approached the 19 witness. 20 THE COURT: Go ahead. Go look at it. 21 MR. PARROTT: Come and look.	Page 525 1 THE WITNESS: I remember it. 2 MR. PARROTT: All right. Let's give 3 counsel a minute. Then I will ask you a question. 4 MR. FROST: I do object, Your Honor. 5 It doesn't impeach. It is the exact same thing that 6 he said before, but if he wants to read it -- 7 THE COURT: It is cross. Overruled. 8 MR. PARROTT: Right. 9 BY MR. PARROTT: 10 Q And the question you were asked -- by 11 the way, it wasn't me asking it, was it? 12 A No. 13 Q All right. Okay. And nobody in 14 management at Bath Iron Works that you met with ever 15 said anything to you to lead you to believe that 16 this asbestos was a danger other than to the pipe 17 coverers at least until the mid 1970s. 18 Your answer was, early to mid '70s? 19 A Early to mid '70s. You posed the 20 question mid -- you posed the question mid '70s. 21 Early to '70s.
Page 524 1 BY MR. PARROTT: 2 Q I am reading Page 139. Let me read it. 3 A Yes. 4 Q And then -- 5 MR. FROST: Your Honor, may I -- can he 6 at least give me the -- point out where it is and 7 let me see it. 8 THE COURT: Yes. This is a case -- 9 while he is looking at that, just for the record, 10 can you state what the case was -- 11 MR. PARROTT: Sure. 12 THE COURT: -- so it is clear on the 13 record what you are showing the witness. 14 MR. FROST: Your Honor, it is the 15 Deposition, State of Maine, In Re: All Maine 16 Asbestos Litigation. It appears to be 10-24-2007. 17 THE WITNESS: I do remember. 18 THE COURT: It is the witness's 19 deposition. 20 MR. PARROTT: I was going to show you 21 that.	Page 526 1 Q All right. Well, then, the questioner 2 said early to mid, and you said, just pull that back 3 to early to mid '70s, and that would be a true 4 statement. 5 A Yeah, early. That is right. '70, '71. 6 '72. That's right. 7 Q Well -- 8 A Yes. 9 Q All right. You stand by that, right? 10 A I stand by my early to mid. I stand by 11 my early '70s. 12 Q Now, gaskets and packings -- well, let 13 me strike that. I will come back to those. 14 Let's talk about pipe covering. As a 15 supervisor at Bath, you felt you were responsible 16 for any hazards that you were aware of in the 17 workplace, correct? 18 A Generally speaking, yes. 19 Q Okay. And you probably did the best 20 you could if you saw a hazard to communicate it to 21 everybody; is that correct?

Page 527 1 A That is right. 2 Q Now, part of some of the work you did 3 was to detail and outline certain work that had to 4 be -- repair work that had to be done on certain 5 ships at Bath Iron Works, correct? 6 A That's part of it. Most of our work 7 was new construction, but we did -- 8 Q Well, when you were head of the repair 9 facility, by definition, you were doing repair work 10 at that facility, correct? 11 A And adding to building new ships too. 12 Q Okay. 13 A So there is a combination. 14 Q All right. Fair enough. And those 15 ships would have included commercial, naval and 16 Coast Guard vessels? 17 A That is right. 18 Q Okay. And in the work that you 19 detailed to be done that you approved, it was common 20 for you in the '60s and '70s to detail that work and 21 authorize the use of asbestos-containing gaskets,	Page 529 1 repair work, but we did a little. Most of our 2 repair work was Coast Guard and Navy. 3 Q All right. 4 A So the bureau would have zero 5 involvement in that. 6 Q Well, the bureau did have input into 7 some of the repair work you did at Bath, correct? 8 A Only when it was a piece of commercial 9 work. 10 Q Right. 11 A Repair work. 12 Q Right. They were involved? 13 A But very little. 14 Q Okay. 15 A 98 percent of their time was new 16 construction. 17 Q Right. So more of the work that you 18 did at the repair facility when you were the GM 19 there was Navy and Coast Guard? 20 A That is right. 21 Q All right. And it is correct, is it
Page 528 1 correct? 2 A In the -- up to the -- up to the early 3 to mid '70s, that would be true. 4 Q Okay. Now, I wanted to -- you were 5 doing some work at the shipyard for the American 6 Bureau of Ships, right? 7 A Well, they were -- they kept an office 8 in our facility and they oversaw some of the 9 commercial work. 10 Q All right. And the American Bureau of 11 Ships, I don't want to get into too much detail, but 12 they were an organization that would give 13 classifications to certain ships, correct? 14 A That is right. 15 Q And ships would have to meet certain 16 standards, wouldn't they? 17 A That is right. 18 Q And they would be at the shipyard and, 19 when Bath did repair work, it would have to meet 20 American Bureau of Ship standards, wouldn't it? 21 A Yes. We did not do a lot of commercial	Page 530 1 not, that Bath didn't stop using asbestos-containing 2 gaskets and packings until the early 1980s? 3 A Well, you have to put that in context. 4 We started substituting -- and we did not come up 5 with a complete list of substitutes until 1980 or 6 the early '80s, but this was -- again, this was an 7 evolutionary issue. 8 Q As was a lot of the knowledge dealing 9 with hazards around the shipyard, correct? 10 A Well, when you say -- whose knowledge? 11 Q Well, let's start with the shipyard's 12 knowledge. 13 A Well, yes. But there is -- you know, 14 there is -- shipyards is big group too. 15 Q Well, one of the things at bath, I 16 asked you I think earlier whether you were a Coast 17 Guard inspector, but you said you were there -- you 18 were not an inspector, but you have been working 19 with them since 1953, correct? 20 A Yes. 21 Q And at the Bath facility, we not only

Page 531 1 had Bath people there, but the Coast Guard had a 2 presence there. They had a resident inspection team 3 of, I think you told me, 15 to 20 key people? 4 A The 15 to 20 people would have been in 5 Portland, a resident inspection team for the major 6 300 million-dollar overhaul we did of the four Coast 7 Guard ships. 8 Q And would Coast Guard inspectors also 9 be around for commercial ships when repair work was 10 done at Bath? 11 A Most -- again, they were there for the 12 new construction. There would be two or three 13 resident inspectors there for new construction. 14 Q Naval engineers? 15 A Coast Guard engineers. 16 Q Well -- 17 A You could say naval. They are Coast 18 Guard, sure. 19 Q All right. Coast Guard engineers. And 20 the Navy had a presence there when you were doing 21 work on Navy ships, correct?	Page 533 1 ship Violet. Do I have that right? 2 A No. I think he went on the Mendota 3 first, but he went on the Violet eventually. 4 Q I don't mean the first one he was on. 5 A Okay. 6 Q Actually, I was taking it from first 7 one in terms of when it was built. 8 A Okay. 9 Q We call it a United States Coast Guard 10 ship rather than a cutter because it was a buoy 11 tender, right? 12 A That is right. 13 Q And that was the Violet, correct? 14 A Yes. 15 Q And that was built in 1929? 16 A Something like that. 17 Q And in connection with your undertaking 18 in this case, you cannot focus on the Violet because 19 it was an old ship? 20 A No. I am convinced that I wouldn't 21 have found anything if I had focused either.
Page 532 1 A That is right. 2 Q Before I move to the ships in this 3 case, you mentioned that you hold a license as a 4 chief -- I wrote down chief engineer. Is that 5 correct? 6 A That is right. 7 Q All right. And that was a pretty hard 8 certification to get, as you told us? 9 A You had to work for it. 10 Q You are going to let yours lapse 11 because you don't really use it in connection with 12 your consulting work nowadays? 13 A No, I do not. 14 Q And it is quite frankly too much hassle 15 for what it would be worth to you right now? 16 A That is correct. 17 Q Now, the ships involved in this 18 particular case, you were aware that there were five 19 ships involved, correct? 20 A Yes. 21 Q The first one was the U.S. Coast Guard	Page 534 1 Q All right. And the documents that you 2 reviewed in this case that Mr. McCaffery provided, 3 there were not a whole lot of documents for the 4 Violet, were there? 5 A There were not. 6 Q All right. And you can't say that 7 there was ever a Goulds pump or a Crane valve on the 8 Violet? 9 A Limited equipment identification on the 10 Violet. Main engine and the boilers, and that's all 11 that I know. 12 Q All right. I am going to write it over 13 here in case we forget. Violet. I will write it. 14 It was built in approximately 1929? 15 A Yes. 16 Q And you can't tell us anything about a 17 Goulds pump or a Crane valve on it, right? 18 A No, I cannot. I can't tell you 19 anything about it, period. 20 Q So I wrote it down, and I have crossed 21 it off. So let's move to another ship that is

Page 535 1 involved in this case, the Ingham? 2 A Yes. 3 Q That was a Coast Guard -- 4 A It would help maybe if you put down the 5 length of time that he spent on those ships. Would 6 you agree to do that? 7 Q Well, maybe we can fill it in. I don't 8 have it right at my fingertips. 9 A I do if you want some help. 10 Q All right. Well, if you want to, maybe 11 between now and tomorrow we could write those dates 12 in. But for my purposes, I want to know what you 13 know about a Goulds on that ship. 14 A I know nothing about Violet's pumps or 15 valves. 16 Q All right. And whenever Mr. Blackmon 17 would have been on this ship, he would have come 18 into contact with asbestos-containing pipe covering 19 and high-temperature cement, correct? 20 A He may have. 21 Q All right. And he would have come into	Page 537 1 Q And the documents you looked at 2 indicated there were no Goulds Pumps on the Ingham? 3 A There was no indication of Goulds Pumps 4 on the Ingham. 5 Q I am going to scratch that off. You 6 did tell me, didn't you, that likely on the Ingham 7 there would have been asbestos-containing pipe 8 covering, correct? 9 A Oh, I believe it was, sure. 10 Q Asbestos-containing, high-temperature 11 cement, correct? 12 A I believe so. 13 Q In fact, let's get more accurate 14 because I asked you at your deposition, didn't I, I 15 said to you -- I showed you a 2007 report from 16 Mr. McCaffery, didn't I? 17 A I don't know whether I saw it or not. 18 Q Well, let me show it to you. You can 19 tell me. I can get the deposition if you want. 20 A What do you want me to look at? 21 Q Well, I asked you, in connection with
Page 536 1 contact with a product we called an amosite felt? 2 A Oh, I don't believe there was any 3 amosite on the Violet. 4 Q What makes you say that? 5 A In 1929? 6 Q You don't think they used it then? 7 A Amosite wasn't even around. 8 Q When did they start using amosite? 9 A World War II. 10 Q Okay. All right. Now, the next ship 11 that we had is the Ingham, correct? 12 A Yes. 13 Q And this was a cutter, right? 14 A That is right. 15 Q And that was built in what, the mid 16 '30s? 17 A That is right. 18 Q And you did look at some documents that 19 were provided by Mr. McCaffery for the Ingham, 20 correct? 21 A Yes.	Page 538 1 this report, Mr. McCaffery went on and said -- 2 MR. FROST: Your Honor, I do have to 3 object to any statements that Mr. McCaffery may have 4 said. It is hearsay. 5 MR. PARROTT: Let me rephrase it. I 6 don't think it is hearsay, but let me try and avoid 7 that objection. 8 THE COURT: All right. 9 BY MR. PARROTT: 10 Q In this report, Mr. McCaffery listed 11 what he felt the documents showed were the asbestos- 12 containing insulation products that would have been 13 on the Ingham. 14 Do you see that? 15 A Yes. 16 Q And I said, did you agree with it. And 17 you said, I don't disagree with it. Do you remember 18 telling me that? 19 A I don't disagree. This could have been 20 some amosite felt, but it was basically an 21 85-percent magnesia ship.

Page 539 1 Q Let's go through it. Did the Ingham 2 have in your view 85-percent magnesia pipe covering? 3 A Probably. 4 Q And that is 15 percent asbestos? 5 A That is right. 6 Q And it had 85-percent magnesia 7 insulation block? 8 A Probably in the inside of the boilers, 9 yeah. 10 Q And amosite asbestos felt? 11 A I don't know that. I have not seen 12 anything to indicate that. 13 Q All right. 14 A So I don't know. 15 Q All right. You said you didn't agree 16 with the fact that there was high-temperature 17 insulation cement, correct? 18 A Well, there could be. 19 Q All right. And the Ingham likely had 20 asbestos cloth? 21 A Sure, sure.	Page 541 1 ones that Mr. Frost asked you about. They were the 2 Owasco class ships. And they were -- somebody 3 referred to them as a 200-some foot cutter in 4 opening. They are actually 255 feet, correct? 5 A That is right. 6 Q And there were about 12 Owasco class 7 cutters; is that fair? 8 A Twelve or 13, yes, sir. 9 Q All right. One of them was the Owasco, 10 but that's not at issue in this case, right? I 11 mean, it was Owasco class that was one of the ships? 12 A That was the first ship, so it is 13 called the class. 14 Q Right. 15 A The class ship. 16 Q And there were three of them -- there 17 were three of them that you were told Mr. Blackmon 18 served on, right? 19 A Yes. 20 Q The Androscoggin, correct? 21 A That is right.
Page 540 1 Q Okay. And just while I am here, I had 2 asked you about the Violet, and Mr. McCaffery listed 3 what insulation -- asbestos-containing insulation he 4 thought was on the Violet. You said you didn't 5 disagree with that? 6 A I didn't disagree, and I don't agree. 7 I don't see any documentation from McCaffery that 8 talked about what was on the Violet. I saw zero. 9 Q All right. You told me a minute ago 10 you thought there was asbestos-containing pipe 11 covering. 12 A Probably. 13 Q Okay. 14 A Probably. 15 Q And the cement, correct? 16 A Yeah. I would concede that, sure. 17 Q And cloth probably? 18 A Maybe yes. Maybe no. Maybe no, 19 possibly. 20 Q All right. Fair enough. 21 Then the other ships at issue were the	Page 542 1 Q That's one. And that's the one that we 2 know went to Vietnam? 3 A That is right. 4 Q The Mendota, right? 5 A That is correct. He was on Mendota and 6 Androscoggin at least a couple times. As I said 7 earlier today, he said he had 13 or 14 years on 8 those three ships. 9 Q Okay. And he was in the Coast Guard 20 10 years and six months? 11 A Yes. And he had shore duty several 12 occasions. 13 Q Right. 14 A So I can enlighten you on the Violet 15 and the Ingham whenever you would like. 16 Q Okay. All right. 17 A On what he said. 18 Q We will do that. Maybe overnight we 19 will put those dates up here on it. And the other 20 one is the Winnebago, correct? 21 A That is right.

Page 543 1 Q And these are Indian names, right? 2 A I believe that to be rivers, Indian 3 rivers perhaps. 4 Q I mean, they didn't have Winnebago RVs 5 back when these were built, did they? 6 A I don't think so. 7 Q And these cutters were built and you 8 have a list of them, but between -- these three at 9 issue, 1943 and 1944, correct? 10 A '45, I believe, but close enough. 11 Q Maybe we can -- I think somewhere we 12 can figure that out, but is it fair if I say between 13 '43 and '45? 14 A That looks accurate. 15 Q And that was during World War II, 16 correct? 17 A Correct. 18 Q And the Goulds pumps that you say were 19 on those vessels would have been put on when the 20 ships were built, correct? 21 A That is right.	Page 545 1 "Coast Guard." Have you ever seen that? I am 2 referring mostly to Section Three down there that 3 references that, in the time of war, the Coast Guard 4 is under the control of the Navy. 5 A Yeah. This is 1949. Was that the case 6 in World War II? I certainly don't know from this. 7 Q Okay. All right. You told me at your 8 deposition you were not sure; is that correct? 9 A Oh, yeah. I don't know. 10 Q Okay. You mentioned that, as part of 11 your review in this case, you looked at some 12 correspondence that Mr. McCaffery got from the 13 Archives and relating to Goulds Pump, correct? 14 A Correct. 15 Q We marked those. Remember I marked all 16 of them as Exhibit 18 to your deposition? 17 A I believe that to be the case. 18 Q I will come around and show you. Watch 19 out. I will put these up there. 20 A Okay. 21 Q Remember these? It was about an inch
Page 544 1 Q All right. Let me -- 2 A Let me just make a qualification on 3 that if I may. You know, could the Goulds pumps 4 have been a new one put on if an old one wore out, 5 entirely possible. 6 Q We don't know that. We are only going 7 by documents that Mr. McCaffery got from the 8 Archives and a document you had from a prior case, 9 correct? 10 A That is right. 11 Q You were asked some questions about 12 whether the Coast Guard was part of the Navy or 13 whether it was a separate entity. 14 You are aware that, during time of war, 15 the Coast Guard came under the control of the Navy, 16 correct? 17 A I am not aware, not familiar with that. 18 Q Well, let me show you something maybe 19 that will jog that. 20 A Sure. 21 Q Title 14, United States Code, it says,	Page 546 1 thick worth of correspondence. 2 A Sure. 3 Q I mean, you can flip through them. I 4 had a couple of questions about the correspondence. 5 Take a look at this one. It is 20 November 1943. 6 A Yes. 7 MR. FROST: Your Honor, before we start 8 referring to things, I think we need to mark them as 9 exhibits. 10 MR. PARROTT: I don't have a problem 11 with marking it. 12 THE COURT: If they are going to refer 13 to things or show them to the witness, they probably 14 should be marked. Otherwise, the record will be 15 devoid of any evidence as to what he was looking at. 16 MR. FROST: Correct. 17 Thank you, Your Honor. 18 MR. PARROTT: I have some stickers in a 19 bag or, if your Clerk has some, I will put a sticker 20 on it and mark it. 21 THE COURT: Let me ask you this.

Page 547 1 Thinking about time, we are not going to finish this 2 witness today? 3 MR. PARROTT: I will skip to something 4 else. We will come back to this tomorrow. 5 THE COURT: I was shooting for trying 6 like to stop at quarter of, if that works for you. 7 That's a good time. I always like to get a witness 8 out of here I can if get him out of town, but that's 9 not going to happen today I guess. 10 MR. PARROTT: Someone else has 11 questions. 12 MR. LOWERY: No, Your Honor, it is not. 13 MR. FROST: Wishful thinking. 14 THE COURT: Oh, well. I am trying to 15 help everybody out. Shoot for quarter of five, and 16 then we will quit. 17 MR. PARROTT: All right. I will come 18 back to these. 19 MR. MacDONALD: Your Honor, we brought 20 a little bit of Maine down here. 21 THE COURT: Well, I don't think this	Page 549 1 case? 2 A Well, not particularly, but I do 3 have -- I do have some drawings and I did have some 4 archived docs that I got from a previous case in 5 Curtis Bay. 6 Q One of those was Exhibit 19, wasn't it? 7 And we will get back to that because 8 the Court wants me to pre-mark them. I will 9 pre-mark them. But just to give it context before 10 we break for the day, Exhibit 19 was a document 11 that -- or least a draft of a document. You have it 12 sitting right on top. 13 A That is right. 14 Q And that kind of listed some of the 15 equipment on these Owasco class vessels? 16 A Yes. 17 Q All right. We are going to mark that 18 and get back to that tomorrow. 19 You were given certain Goulds drawings, 20 correct? 21 A From the McCaffery documents in these
Page 548 1 qualifies as Maine. 2 (Laughter ensued.) 3 THE COURT: In Baltimore, it is always 4 balmy. 5 BY MR. PARROTT: 6 Q All right. Now, in connection with 7 this case -- and as I said, we will get back to 8 these correspondence between Goulds and the Coast 9 Guard when I pre-mark them. I will ask you about 10 them tomorrow. 11 But in this case, you were contacted in 12 May of 2008, correct? 13 A I thought it was May. It was last 14 spring. 15 Q You were initially sent some materials, 16 but you got -- you looked at the McCaffery documents 17 and I think you told me there were two boxes of 18 them. You got those in October of this year? 19 A Yeah, late in the game. Very late. 20 Q All right. And before that, you had 21 not gone to the Archives to do any research on this	Page 550 1 two boxes that showed up in late October. 2 Q Okay. In connection with the McCaffery 3 report that I showed you, Mr. McCaffery listed eight 4 types of Goulds pumps that he found were on the 5 Owasco class, but in closer review, you corrected 6 him and said there were only really seven different 7 types. 8 A I believe that's the case. 9 MR. PARROTT: Okay. Any chance you can 10 get that list of Goulds Pumps back on the thing? 11 MR. FROST: Yeah. It may take a while 12 to power up. 13 BY MR. PARROTT: 14 Q Well, while it is powering up, why 15 don't I ask you some questions. There it is. 16 MR. FROST: There you go. 17 BY MR. PARROTT:: 18 Q How do you shift that over? 19 MR. FROST: I had to shift it the other 20 way the first time. 21 BY MR. PARROTT:

Page 551 1 Q All right. You don't have a hammer 2 with you, Captain, do you? 3 A A hammer? 4 Q I was going to fix it. 5 A No, I don't. 6 MR. LOWERY: The old-fashioned way. 7 Q All right. The first pump up there, I 8 will read what is missing. 9 A Yes. 10 Q Well, before we go, let's see if we can 11 make some general assumptions about the pumps. All 12 of these pumps that you found to be on the Owasco 13 class, none of them carried steam, correct? 14 A That is correct. 15 Q All either carried ambient fluids or 16 fluids that were -- whose temperature was a slightly 17 elevated but not hot? 18 A That is right. 19 Q All right. So in other words, you have 20 freshwater, saltwater and diesel fuel pumps. All of 21 them were -- let's call them cool pumps; is that	Page 553 1 insulation, but that doesn't mean that some couldn't 2 have been put on later. 3 Q All right. The Coast Guard could have 4 thrown insulation on them later, correct? 5 A It is entirely possible. 6 Q You wouldn't -- 7 A I have no record of that, no, sir. 8 Q You mentioned that you doubted the 9 manufacturer of these pumps, meaning Goulds, 10 specified insulation, correct? 11 A I don't think so. On insulation, that 12 is right. 13 Q All right. And none of these 14 insulation -- none of these pumps would have been 15 insulated when those Owasco vessels were built, 16 correct? 17 A That's my opinion. 18 Q Okay. And when these pumps would have 19 been supplied in this particular case, these were 20 what we called government-supplied pumps, correct? 21 A United States government bought the
Page 552 1 fair? 2 A You can. 3 Q Well, would you? I mean, is that a 4 fair -- 5 A I would just say they were pumps that 6 don't have anything unusual heat. 7 Q None of them were hooked in directly to 8 a steam system? 9 A That is right. 10 Q Now, you mentioned that some were -- 11 these pumps were in the machine spaces, but the 12 diesel fuel oil pump, for example, was a portable 13 pump? 14 A That is right. 15 Q They could wheel that anywhere on the 16 ship, right? 17 A That is right. 18 Q All right. And you told me in the 19 deposition that, in your view, none of these pumps 20 would have required insulation, correct? 21 A I believe they were all built without	Page 554 1 pumps to -- evidently, to get the volume to place 2 the order. And I am sure there were hundreds 3 ordered. 4 Q All right. So that the jury 5 understands, we have the western -- the West Coast 6 shipyard that built some of these, and Curtis Bay 7 that built some of these ships. 8 Goulds didn't sell these pumps to 9 either shipyard. They sold them to the federal 10 government who then allocated them to the shipyards 11 for installation on the Owasco class, correct? 12 A I believe that's the case. 13 Q And I think you said that the 14 government was the allocator, correct? 15 A Yes, sir. 16 Q We have heard about the decider, but 17 now we have the allocator, correct? 18 A In this particular case. 19 Q Okay. And you told me that you can't 20 say how often in any one of these particular pumps 21 the gaskets would have been changed?

Page 555 1 A No. I gave an opinion today though 2 that, particularly on packing, could it be every 3 month or could it be every three months. I think 4 either answer may be right. An awful lot depends on 5 the condition of the pumps, the age, alignment 6 piping strains, a lot of factors. 7 Q Remember when you told me in the 8 deposition when I asked you how often a machinist's 9 mate would have had to maintain any particular pump, 10 you told me you couldn't because it would be pure 11 speculation? 12 A Well, that is right. I can't give you 13 a specific answer. I can tell you that those pumps 14 are maintained, certainly, but for me to say every 15 73 days, I certainly can't do that. 16 Q All right. And we know that if these 17 ships were built in '43 to '45, based on your 18 understanding, any original gasket or packing that 19 would have been shipped with the pump from Goulds to 20 the government to the shipyard likely would not 21 still be on that pump?	Page 557 1 A No. I have seen some indication of 2 some John Packing, but I can't tell you whether that 3 was a constant or whether it was a one-time thing. 4 Q And just to be fair, John Crane is not 5 related to Crane Co., is it? 6 A That is right. 7 Q I just want to clarify that. Now, 8 this, some people showed that in opening. Let me 9 show it to you. 10 (Precut gasket displayed to jury.) 11 A Are you guaranteeing it is not 12 asbestos, sir? 13 Q Do you want me to get you a respirator? 14 It is not an asbestos gasket. 15 A Okay. 16 Q That's what is gasket -- a pre-cut 17 gasket looks like, right? 18 A That's one of many different sizes, 19 that is right. 20 Q All right. Do you know if this size 21 would have been used in the machine rooms?
Page 556 1 A That would be my opinion. 2 Q And when the pumps were shipped, as I 3 understand it, the pumps themselves would have had 4 one gasket and that was for the -- what did you call 5 it, the faceplate on the end plate? 6 A End plate. 7 Q And the gaskets that would have hooked 8 these pumps up to whatever the Navy or Coast Guard 9 hooked them up to, they would have been supplied by 10 the shipyard, correct? 11 A I find no indication of Goulds 12 providing the flange piping connection gaskets. 13 Q And I think you told me at your 14 deposition, you don't know who the Coast Guard 15 purchased replacement gaskets or packings from? 16 A I think you need to clarify that 17 question. 18 Q Do you know what company the Coast 19 Guard would have purchased replacement gaskets and 20 packings that would have been used on any of the 21 Owasco class cutters?	Page 558 1 A Could that size -- looks like two-inch 2 pipe. 3 Q And sometimes you could buy gaskets 4 that came pre-cut that would fit onto things, 5 correct? 6 A Sometime you could buy that, but more 7 often in the shipyard. And at sea, it was more 8 often hand cut. 9 Q So they would bring out a sheet of 10 gasket material and this would be made from it? 11 A That is right. 12 Q Are you able to tell whether this came 13 from a sheet or whether it was pre-cut in the 14 factory? 15 A It was a sheet, but somebody had a die. 16 Somebody had a die to cut that. 17 Q And a die is, you have circular things 18 and you can put this on a bench and hit it and punch 19 out the holes? 20 A It would be a machine to mass produce 21 those.

Page 559 1 Q If it were bought pre-cut? 2 A If it were bought pre-cut. 3 Q Have you ever seen a gasket cutter? 4 A Sure, sure. 5 Q I have one at the office. If I think 6 of it, I will bring it tomorrow and we will take a 7 look. 8 THE COURT: Is that a lot? 9 (Laughter ensued.) 10 THE COURT: We are going to take a 11 break on that ridiculous note. 12 MR. PARROTT: Yes. That would be good. 13 THE COURT: Okay. I am always going to 14 tell you this. Just remember, don't talk to anybody 15 about the case. Don't talk among yourselves about 16 the case. Don't research any of the things you have 17 heard discussed regarding this case. 18 I am going to give you a break 19 overnight and ask you to be back here so that you 20 are ready to go at 9:30. All right. Then we will 21 get going tomorrow with the second day of this case.	Page 561 1 MR. RADCLIFFE: We have quite a few 2 objections to go over the designated testimony. 3 THE COURT: Okay. Let me get my law 4 clerk to come out here. 5 MR. FROST: There is no hope of 6 bartering or -- I mean -- 7 MR. RADCLIFFE: I don't know. 8 THE COURT: You all can have a seat. 9 After 4:45, this door here locks. So if you want to 10 tell the jury to go out Lexington Street. 11 (Discussion off the record.) 12 THE COURT: What are your issues? 13 MR. RADCLIFFE: Well, I have -- I am 14 ready to discuss Mr. Blackmon and Mr.~Conner. 15 Mr.~Conner is a representative from Goulds. So we 16 can go through the designations for those. 17 I understand some of these may have 18 been cleaned up because some of them seem to have 19 been typographic. 20 THE COURT: Are we assuming they are 21 going to be played tomorrow?
Page 560 1 I will see you tomorrow. Have a good 2 evening. 3 Oh, one thing I should warn you. I 4 gave you my phone number. I know this little snow 5 flurry means nothing, but you know how Baltimore is. 6 I will always warn you throughout this case in the 7 event it comes to this. 8 If there is really bad weather, listen 9 to WBAL. And this is the Circuit Court for 10 Baltimore City. If they announce it is closed, 11 well, I guess we are not going to be trying the case 12 that day. Show up the next day when it is not 13 closed. Okay. And that's the way it generally 14 works. 15 You are excused for the night. Thank 16 you. 17 (Jury excused -- 4:45 p.m.) 18 THE COURT: Anything else, Gentlemen? 19 MR. RADCLIFFE: Yes. Plaintiffs want 20 to play some video tomorrow. 21 THE COURT: All right.	Page 562 1 MR. FROST: They need to be played 2 tomorrow because I don't have another live witness 3 until the following day. 4 Now, I have informed them, I guess, of 5 everyone for this week that I know of. My only 6 question is, this seems to be an ineffective process 7 because I don't think we have met and conferred and 8 talked about these things. We might be able to 9 resolve these issues. 10 THE COURT: Have you all talked about 11 any of this? 12 MR. RADCLIFFE: No. We got their 13 designations on Sunday night and Monday morning. I 14 was up late last night trying to get through these. 15 I just haven't had time. 16 THE COURT: Is it worth taking the time 17 to talk? 18 MR. RADCLIFFE: I am happy to talk, but 19 if we can't get through it -- 20 THE COURT: How long do you think this 21 discussion with will take?

Page 563 1 MR. RADCLIFFE: Rad I don't know. 2 MR. FROST: We can go ahead. 3 MR. RADCLIFFE: It is their evidence. 4 If we don't finish it tonight, we don't have 5 anything to do tomorrow. 6 THE COURT: All right. Go ahead. 7 MR. TANKARD: We also have 8 Mr. Bradshaw. 9 MR. RADCLIFFE: I have not had time to 10 get that yet. 11 THE COURT: Who is he? 12 MR. TANKARD: He is also a corporate 13 representative of Goulds. 14 THE COURT: He is your guy. 15 MR. RADCLIFFE: That might be a little 16 bit too familiar, but -- 17 (Laughter ensued.) 18 THE COURT: He represents your client? 19 MR. RADCLIFFE: He is a former employee 20 of Goulds, yes. 21 THE COURT: All right. So what	Page 565 1 MR. RADCLIFFE: This is Mr. Iola asking 2 questions of the Goulds witness. And the objection 3 here is that he is asking him questions about 4 information and testimony from the discovery 5 deposition which won't be admitted into evidence. 6 THE COURT: Have you ever had an 7 opportunity to discuss what the Goulds lawyers -- 8 the questions that they particularly ask 9 Mr. Blackmon about -- so he says he has not 10 discussed it. 11 MR. RADCLIFFE: Right. But the 12 question will be asked and it will be represented to 13 the jury that Goulds' lawyers asked questions about 14 his use, his work in and around Goulds pumps while 15 he was in the United States Coast Guard. 16 MR. ZACHAROPOULOS: Your Honor, I can 17 read that two ways. He doesn't ask him specifically 18 if he has had a chance to ask or talk to Goulds 19 counsel regarding the testimony he gave on the 20 discovery deposition. 21 He gave generic pump testimony during
Page 564 1 questions do you want to object to? 2 MR. RADCLIFFE: Some of these were 3 typos so I will try to -- 4 THE COURT: Well, the witness, you are 5 excused. The witness can leave. Just don't talk to 6 counsel about your testimony. 7 (Discussion off the record.) 8 THE COURT: Yes. What is wrong? 9 What's wrong? 10 (Discussion off the record.) 11 THE COURT: Do you have a copy? 12 MR. TANKARD: Yes. 13 MR. RADCLIFFE: I understand some of 14 these typos were corrected with the filing this 15 morning that I have not seen. 16 (Discussion off the record.) 17 MR. RADCLIFFE: So it appears as though 18 the first one is on Page 32, Line 15, Judge. It 19 starts at Line 15 on 32 and goes through Line 11 on 20 33. 21 THE COURT: Who is asking the question?	Page 566 1 his de bene esse. So, you know, that question 2 really goes to -- 3 THE COURT: These questions, aren't 4 they sort of no consequence one way or the other? 5 MR. ZACHAROPOULOS: According to 6 Goulds' counsel, they are afraid -- 7 THE COURT: The jury will infer -- 8 MR. ZACHAROPOULOS: Infer that he used 9 Goulds. 10 THE COURT: These questions are 11 meaningless in any event. They don't mean much. 12 MR. RADCLIFFE: The second question is 13 a little bit more problematic. The first one is, 14 they have not talked, but this is the lawyer 15 testifying -- 16 THE COURT: Right. 17 MR. RADCLIFFE: -- that the plaintiff 18 did something, and there is not going to be any 19 evidence in the case that that happened. 20 MR. ZACHAROPOULOS: There is already 21 evidence in the case.

Page 567 1 THE COURT: Well, there is evidence by 2 this other witness here about -- that he would 3 normally have worked around them because they were 4 in the ship. 5 MR. ZACHAROPOULOS: Absolutely. 6 MR. RADCLIFFE: Opinion testimony. 7 There is no factual statement. 8 THE COURT: All right. I don't 9 understand what good these questions are to you. 10 MR. TANKARD: Your Honor, it is 11 basically -- 12 THE COURT: Who cares what his lawyer 13 is talking about? 14 MR. TANKARD: It is because he is 15 expressing -- it is a corporate representative who 16 is saying things on behalf of the company. 17 It is basically laying the foundation 18 for why he is able to say or not say certain things 19 on behalf of the company. So it is for that. 20 THE COURT: What is that? What is the 21 point of these? Eventually, where do we go with	Page 569 1 types of questions beginning on Line 5 through 40, 2 Line 7. 3 THE COURT: The answer is he doesn't 4 know. The witness doesn't really answer the 5 question. 6 MR. RADCLIFFE: But again, it is the 7 problem that the lawyer is stating his fact over and 8 over again three times. Here is what -- 9 THE COURT: All right. Leave it out. 10 It is pointless. It doesn't help. It just creates 11 an inference that is not proper, so it is out. 12 What is next? 13 MR. ZACHAROPOULOS: What was that? 14 MR. RADCLIFFE: That was 39, Line 5, 15 through 40, Line 7. 16 (Discussion off the record.) 17 MR. RADCLIFFE: Going to page 132. 18 THE COURT: I am sorry. What page? 19 MR. RADCLIFFE: 132. We actually filed 20 a motion on this. There is a long series of 21 questions about requests for admissions to which
Page 568 1 this? 2 MR. TANKARD: The point is where we go 3 with these is that certain documents do or do not, 4 depending on this witness's interpretation of them, 5 place specific Goulds pumps on the three Owasco 6 vessels. 7 THE COURT: I don't think these 8 questions are worth -- they don't add anything. 9 They are meaningless. I don't even know why you 10 asked these questions. 11 MR. RADCLIFFE: It wasn't Mr. Tankard. 12 THE COURT: I believe you. 13 MR. RADCLIFFE: Okay. 14 THE COURT: They are just likely to 15 confuse the jury as much as help them. It is more 16 likely to confuse them. 17 MR. ZACHAROPOULOS: Say that again. 18 MR. RADCLIFFE: 32:15 through 33:11. 19 THE COURT: You start with 12. 20 All right. What else? 21 MR. RADCLIFFE: Next is Page 39. Same	Page 570 1 Goulds objected and then denied based on the 2 information. 3 Iola started to show him the request 4 for admissions which are not -- a denial is not 5 admissible for any purpose. 6 Plaintiffs are now trying to admit the 7 denial through cross examination. 8 THE COURT: So Goulds denied these 9 things? 10 MR. RADCLIFFE: We objected to the 11 requests for several reasons. There has never been 12 any request for a ruling on our objections. 13 THE COURT: Did you deny it or did you 14 object to it? 15 MR. TANKARD: Both. 16 MR. RADCLIFFE: We objected and then 17 denied. 18 THE COURT: Nothing ever happened with 19 them after that? 20 MR. RADCLIFFE: Nothing ever happened 21 with them until this deposition.

Page 571 1 THE COURT: What are you trying to do 2 with those exactly? 3 MR. FROST: Your Honor, if it is a 4 denial of a fact, then that is relevant because the 5 facts were things such as, did these Goulds pumps 6 contain asbestos, and they denied it. And the 7 corporate representative says the exact opposite. 8 So there is sworn answers under oath that are 9 inconsistent with their testimony of the deponent. 10 THE COURT: Okay. 11 MR. RADCLIFFE: Requests for admissions 12 in Maryland are not sworn answers under oath. And 13 under the rules a, denial is not admissible. 14 THE COURT: I don't think it is 15 admissible. I understand the theory, but I don't 16 think it is admissible, so take them out. 17 MR. RADCLIFFE: Okay. 18 (Discussion off the record.) 19 MR. RADCLIFFE: I will try to get 20 Mr. Bradshaw done tonight, but I have not started 21 that yet.	Page 573 1 there are three designations of the same guy. 2 Pantaleoni, who is the corporate represent of Crane 3 Co., not very long. The two of them are not very 4 long. Other cases. And he was also deposed in this 5 case, which is probably the longest designation. 6 THE COURT: You are going to play 7 those? 8 MR. ZACHAROPOULOS: That's our 9 intention. 10 THE COURT: Play them or read them. 11 MR. ZACHAROPOULOS: Play them. They 12 are on video. 13 THE COURT: How long do they last? 14 MR. ZACHAROPOULOS: The two will -- 15 probably combined, maybe 20 minutes. The other one, 16 I don't know the time, the one taken in this case. 17 THE COURT: What else do you have? 18 Goulds' corporate designee. 19 Who else do you have tomorrow? 20 MR. FROST: We have the son, Your 21 Honor.
Page 572 1 MR. TANKARD: I don't think that will 2 be real late. 3 THE COURT: Where are we on 4 Mr. Blackmon? 5 MR. RADCLIFFE: We will talk about 6 Mr. Blackmon. I guess they don't plan on showing 7 him tomorrow. I guess it won't be death by video. 8 (Laughter ensued.) 9 THE COURT: Okay. Do you have enough 10 to cover the day? 11 MR. FROST: We should probably do it if 12 we can. I mean -- 13 MR. ZACHAROPOULOS: Here is the 14 problem, Judge. We filed our designations for 15 Pantaleoni on Saturday, early Sunday morning. I am 16 waiting for Crane Co.'s counsel to get me either 17 counter designations and/or objections to those. I 18 just haven't gotten them yet. 19 MR. COTTLE: I told him he would get 20 them to him tonight. 21 MR. ZACHAROPOULOS: So you know, Judge,	Page 574 1 THE COURT: How long does he last? 2 MR. FROST: Not very long. 3 THE COURT: What else do you have? 4 MR. FROST: These depositions. That's 5 why I said we will probably have to do Mr. Blackmon. 6 THE COURT: How long is Mr. Blackmon's 7 tape? 8 MR. FROST: I don't know what they 9 are -- 10 MR. ZACHAROPOULOS: Fifty-four minutes. 11 MR. FROST: That's just our portion 12 though. Trust me. 13 MR. ZACHAROPOULOS: I just found out 14 from Crane's counsel that they have added stuff. 15 THE COURT: They have added stuff. 16 MR. COTTLE: The counter designations 17 are not a lot. 18 THE COURT: All right. So are we going 19 to play Blackmon tomorrow or not? Sounds like -- 20 MR. ZACHAROPOULOS: If we get it ironed 21 out.

Page 575 1 THE COURT: Sounds like we have to. So 2 you are going to go through with them your other 3 issues on Mr. Blackmon? 4 MR. FROST: Correct. 5 MR. ZACHAROPOULOS: Yes. 6 Discussion off the record.) 7 THE COURT: When are you going to do 8 that? 9 MR. FROST: Are you guys talking about 10 Mr. Blackmon right now? 11 MR. TANKARD: Not yet. 12 MR. FROST: Are you going to? 13 MR. RADCLIFFE: We can. 14 MR. FROST: Are there a lot of 15 objections from you guys? 16 MR. RADCLIFFE: We filed a number of 17 objections. 18 THE COURT: Well, I am just trying to 19 figure out -- 20 MR. FROST: Here is my suggestion, Your 21 Honor. If we talk tonight, and we could deal with	Page 577 1 myself, Judge. 2 MR. RADCLIFFE: It is a disease, Judge. 3 It is a disease, Judge. 4 MR. FROST: I am simple. 5 THE COURT: I realize. I saw a great 6 article many, many years ago written by some famous 7 director which I think applies to being a lawyer, 8 too, since as a lawyer you are kind of an actor as 9 well as the director of the show, right? 10 And he said, "When you direct a show, 11 it is not possible to go too fast, because the 12 listener, who has no other engagement other than 13 listening, every dead space, they are sitting there, 14 I was on a jury once. God save us." 15 Every dead space is like, "What the 16 hell is going on here?" Every space that didn't 17 keep the case moving, they are sitting there saying, 18 "Why are we sitting here?" You know, so you have to 19 go as fast as you can consistent with not screwing 20 the case up. 21 MR. FROST: You know --
Page 576 1 Mr. Blackmon's objections first thing in the morning 2 -- 3 THE COURT: Because I will be here. 4 MR. FROST: -- we can cut them. Maybe 5 I would suggest that, if the Court is agreeable, 6 that maybe we have someone come here at 8:30 and we 7 could deal with them. 8 MR. RADCLIFFE: I really don't think 9 that there is going to be a lot with Mr. Blackmon 10 from my perspective. 11 THE COURT: You want to say 9 o'clock, 12 the relevant people be here at nine? 13 MR. RADCLIFFE: That's fine. 14 THE COURT: We can roll through them on 15 the record and have it cut as we are doing other 16 things. I like to keep things moving. 17 MR. FROST: I think, Your Honor, after 18 that, I have wall-to-wall witnesses, so we are -- 19 THE COURT: Stop asking people the same 20 questions three times. 21 MR. FROST: You know, I am simple	Page 578 1 THE COURT: Which is not always easy. 2 MR. FROST: As I am sure the Court is 3 aware, today was a lot of record building for other 4 issues. 5 MR. RADCLIFFE: Judge, can I take you 6 to Florida and have you teach a class on that to 7 judges and lawyers? 8 (Discussion off the record.) 9 THE COURT: All right. 9 o'clock. 10 (Discussion off the record.) 11 THE COURT: Thank you, Guys. Have a 12 good evening. 13 (The trial was adjourned at 5:15 p.m.) 14 15 16 17 18 19 20 21

Page 579 1 State of Maryland 2 Harford County 3 I, Denise M. Thomas, a Notary Public of the 4 State of Maryland, Harford County, do hereby 5 certify that the MORNING SESSION of the 6 above-captioned proceeding took place before me at 7 the time and place herein set 8 out. 9 I further certify that the proceeding was 10 recorded stenographically by me and this transcript 11 is a true record of the proceedings. 12 I further certify that I am not of counsel 13 to any of the parties, nor an employee of counsel, 14 nor related to any of the parties, nor in any way 15 interested in the outcome of the action. 16 As witness my hand and seal this 18th day 17 November, 2008. 18 19 _____ 20 Denise M. Thomas 21 My Commission Expires 7-21-10	Page 581 1 INDEX 2 November 18, 2008 3 Trial Before Judge Glynn 4 5 OPENING STATEMENTS PAGE 6 By Mr. Frost 229 7 By Mr. Radcliffe 279 8 By Mr. Cottle 358 9 10 WITNESS: CAPTAIN WM. A. LOWELL 11 Direct Exam. by Mr. Frost 394 12 Voir Dire Exam by Mr. Parrott 419 13 Direct Exam. Resumed 424 14 Cross Exam. by Mr. Parrott 515 15 16 EXHIBIT DESCRIPTION PAGE 17 (No exhibits marked.) 18 (This transcript consists of pages 211 through 581.) 19 20 21
Page 580 1 State of Maryland 2 City of Baltimore 3 I, Barbara J. Evans, a Notary Public of 4 the State of Maryland, City of Baltimore, do hereby 5 certify that the above-captioned proceedings took 6 place before at the time and place herein set out. 7 I further certify that the examination was recorded 8 stenographically by me, and that this transcript is 9 a true record of the proceedings. 10 I further certify that I am not of counsel 11 to any of the parties, nor an employee of counsel, 12 nor related to any of the parties, nor in any way 13 interested in the outcome of the action. 14 As witness my hand and seal this 18th day 15 of November, 2008. 16 17 18 _____ 19 Barbara J. Evans 20 My Commission Expires 8-8-11 21	