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Ed Smith
CLERK OF THE SUPREME COURT
STATE OF MONTANA

Case Number: AC 17-0694

Exhibit C

IN THE MONTANA ASBESTOS CLAIMS COURT

IN RE ASBESTOS LITIGATION, Cause No. AC-17-0694
Consolidated Cases. THIS DOCUMENT RELATES TO
Ralph Hutt v. Maryland Casualty
Company, et al., Eighth Judicial
District Court,
Cause No. DDV-18-0175

DEPOSITION OF JULIE F. HART, PH.D.

Taken at:

Nordhagen Court Reporting
1734 Harrison Avenue
Butte, Montana
November 19, 2018
9:30 a.m.

1 APPEARING TELEPHONICALLY:

2
3 FOR BNSF RAILWAY:

4 CHAD M. KNIGHT
5 Attorney at Law
6 929 Pearl Street, Suite 350
7 Boulder, Montana 80302
8

9 JAMES E. ROBERTS
10 Senior General Attorney
11 2650 Lou Menk Drive
12 Fort Worth, Texas 76131
13

14 JOSHUA A. LEGGETT
15 Attorney at Law
16 210 East Capitol Street, Suite 2200
17 Jackson, Mississippi 39201
18

19 KATHERINE A. MATIC
20 Attorney at Law
21 Moore, Cockrell, Goicoechea & Johnson, P.C.
22 145 Commons Loop, Suite 200
23 Kalispell, Montana 59901
24
25

1 APPEARANCES OF COUNSEL:

2
3 FOR THE PLAINTIFF RALPH HUTT:

4 DUSTIN LEFRIDGE
5 Attorney at Law
6 McGARVEY HEBERLING SULLIVAN & LACEY
7 345 First Avenue East
8 Kalispell, Montana 59901
9

10
11 FOR THE DEFENDANT MARYLAND CASUALTY COMPANY:

12 MARK A. JOHNSTON
13 Attorney at Law
14 ECKERT SEAMANS CHERIN & MERLOTTO, LLC
15 1717 Pennsylvania Avenue, NW
16 12th Floor
17 Washington, D.C. 20006
18

19
20 JOE SEIFERT
21 (Telephonically)
22 Attorney at Law
23 KELLER LAW FIRM, P.C.
24 P.O. Box 598
25 Helena, Montana 59624-0598

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EXHIBITS

11
12 NO. PAGE DESCRIPTION
13 1 14 Notice of Deposition
14 2 19 9/7/18 Hart Expert Witness Report (unsigned)
15 3 19 Curriculum Vitae
16 4 41 Documents relied on for Sec 2.3 of report
17 5 50 9/17/18 Hart Expert Witness Report (signed)
18 6 Hart flash drive to be provided post
19 deposition
20
21
22
23
24
25

Page 5

1 JULIE F. HART, PH.D.
 2 MONDAY; NOVEMBER 2, 2018; BUTTE, MONTANA
 3 ---
 4 BE IT REMEMBERED THAT, pursuant to Notice, the
 5 Deposition of Julie F. Hart, Ph.D., was taken at the time
 6 and place and with the appearances of counsel hereinbefore
 7 noted before Candice L. Nordhagen, Court Reporter - Notary
 8 Public for the State of Montana.
 9 It was further stipulated and agreed by and between
 10 counsel for the respective parties that this deposition
 11 was taken pursuant to the Montana Rules of Civil
 12 Procedure.
 13
 14 The following proceedings were had:
 15
 16 JULIE F. HART, Ph.D.,
 17 having been called as a witness by the
 18 Defendant, being first duly sworn, was
 19 examined and testified as follows:
 20
 21 EXAMINATION
 22 BY MR. JOHNSTON:
 23 Q. Good morning, Dr. Hart. We met prior to the
 24 beginning of your deposition this morning.
 25 My name, again, is Mark Johnston. I represent

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1 Maryland Casualty Company.
 2 We're here today in the matter of Hutt v. Maryland
 3 Casualty company.
 4 MR. JOHNSTON: Just for the record so the
 5 court reporter has the appearances, again, my name is Mark
 6 Johnston on behalf of Maryland Casualty Company.
 7 Maybe the other attorneys on the phone one by
 8 one could identify themselves for the record.
 9 MR. KNIGHT: Good morning. This is Chad
 10 Knight, on behalf of BNSF Railway Company and John Swing.
 11 MR. ROBERTS: Good morning. This is James
 12 Roberts, on behalf of BNSF Railway.
 13 MR. SEIFERT: Joe Seifert, here for Maryland
 14 Casualty.
 15 MR. LEGGETT: Josh Leggett, International
 16 Paper Company.
 17 MS. MATIC: Katie Matic, for the State of
 18 Montana.
 19 Q. (By Mr. Johnston) Could you state your full
 20 name for the record, Dr. Hart.
 21 A. Julie Faroni Hart.
 22 Q. And what is your business address?
 23 A. 3490 Parkway Street; Butte, Montana.
 24 Q. Dr. Hart, have you been deposed before?
 25 A. Yes.

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1 Q. And on how many occasions?
 2 A. Two.
 3 Q. What were the matters in which you were
 4 deposed before?
 5 A. State of Montana and BNSF, both involving
 6 Libby cases.
 7 Q. Do you remember when those depositions
 8 occurred?
 9 A. BNSF was about -- I don't. I'm thinking it
 10 was about a year ago. And the State was probably 2016.
 11 That's just a guess.
 12 Q. Have you ever testified at trial before?
 13 A. I have not.
 14 Q. Just a couple of ground rules of the
 15 deposition here today, a refresher since you've been
 16 deposed before. We're going to be giving questions and
 17 answers, and it's important that we're not speaking at the
 18 same time so that the court reporter can get everything
 19 down.
 20 I'll make sure that I wait until you've finished
 21 with your response before I ask the next question, and I'd
 22 ask that before you start to answer my question, you just
 23 let me finish so that it's nice and neat for the court
 24 reporter.
 25 All of your responses have to be verbal. Nods of

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1 the head or "um-hmm" or "uh-huh" are difficult for the
 2 court reporter to take down, so I might ask you for a
 3 verbal response even if you've given me a response already
 4 in a nonverbal way.
 5 If you don't understand my question, please let me
 6 know; otherwise, I will presume that you understood the
 7 question as it was given to you.
 8 If you'd like me to rephrase a question, again,
 9 please let me know at the time I ask the question;
 10 otherwise, I'll presume that you understood it is as
 11 stated. Is that fair enough?
 12 A. Yes.
 13 Q. Okay. If at any point in time you'd like to
 14 take a break, let me know. For whatever reason, we'll go
 15 off the record, take a short five- to ten-minute break.
 16 If you have any questions throughout the deposition
 17 of me if you didn't understand something, please let me
 18 know.
 19 Do you have any questions at this point before we
 20 begin?
 21 A. No.
 22 Q. Okay. What did you do to prepare for your
 23 deposit today?
 24 A. I reviewed my report and the cited materials
 25 within my report. I reviewed Dr. Spear's report, Dr.

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1 Redlich's report, my interview with Mr. Hutt, Mr. Hutt's
 2 deposition.
 3 Q. Did you review Dr. Spear's deposition?
 4 A. Yes.
 5 Q. Are there any other materials that you
 6 reviewed in preparation for your deposition?
 7 A. Dr. Redlich's deposition as well.
 8 Q. In reviewing these materials in preparation
 9 for your deposition today, have your opinions changed in
 10 any way since issuing your September 7, 2018 report?
 11 A. No.
 12 Q. Did you speak with Dr. Spear following his
 13 deposition?
 14 A. Well, Dr. Spear is a colleague, so I spoke
 15 with him about not so much context, but it was a long
 16 duration deposition that he noted. He really didn't
 17 provide context.
 18 Q. What, specifically, did you discuss about that
 19 deposition?
 20 A. Pretty much the duration. I didn't really
 21 review context with him, and I reviewed the deposition
 22 over the weekend.
 23 Q. In preparing for your deposition today, did
 24 you meet with Counsel?
 25 A. I did. I met with Dustin, and we talked about

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1 my report.
 2 Q. When did you meet with Dustin?
 3 A. Last evening.
 4 Q. How long did you meet for?
 5 A. An hour and a half, maybe two hours.
 6 Q. Were there any specific areas of your report
 7 that you discussed?
 8 A. He basically was asking if I had any specific
 9 questions before I went to my deposition. I had a couple
 10 of questions related to documents that I was relying on
 11 for my opinion, and then he told me to tell the truth.
 12 Q. Okay. Which documents did you have questions
 13 on?
 14 A. I was missing a couple of exhibits that I
 15 added, and I had Exhibit 56 and 130.4 already in my
 16 report. And although I'm not finding them right now -- 12
 17 and 13 is what I had questions on and added to my report.
 18 I had reviewed all of this previously, but I didn't have
 19 note of it in my initial report.
 20 Q. And you're referring to Exhibit 12 there?
 21 A. Exhibit 12 and Exhibit 13.
 22 Q. And those are the common exhibit numbers; is
 23 that correct?
 24 A. Yes, yes.
 25 Q. May I take a look at those?

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1 A. Sure. May I grab my glasses?
 2 Q. Sure, certainly. With respect to Exhibit
 3 No. 12, what question did you have?
 4 A. I had a question to Dustin that I saw where
 5 there were health reports of workers, and I remember
 6 reading in the materials previously where it was received
 7 by or sent to individuals from Maryland Casualty. And I
 8 couldn't recall which ones those were, so I asked him a
 9 question regarding that.
 10 Q. Okay. And could you just describe for the
 11 record what Exhibit 12 is?
 12 A. So Exhibit 12 is a letter sent to Mr. Kelly by
 13 Dr. Nelson in terms of uncovering a potential health
 14 problem at the Libby Mine and Mill. And he makes
 15 reference of I think we should - I don't know what that
 16 next word is - "this letter onto our insurance carrier for
 17 them to pursue and communicate with Dr. Nelson."
 18 Q. Okay. And what is the date of that document?
 19 A. August 31, 1964.
 20 Q. And what did Mr. Leftridge tell you about that
 21 particular document?
 22 A. He really didn't tell me anything about it, it
 23 was me that was seeking it. I had remembered seeing it in
 24 the main document lists and I couldn't remember which
 25 number it was.

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1 Q. Oh, I see. So it wasn't the content of the
 2 document, it was simply which document it was?
 3 A. Right.
 4 Q. Okay. And with respect to Exhibit 13, if you
 5 could just identify that for the record.
 6 A. So this is a letter that is - I'm looking for
 7 a date but I don't see a date - but it is from Mr. Rupp to
 8 Dr. Nelson. And it is saying:
 9 Thank you for your interest and study of our
 10 employees. I discussed your work and recommendations with
 11 Maryland Casualty Company, our insurance carriers. And
 12 Dr. Chenoweth, M.D., of the Maryland Casualty Company, and
 13 there's an address provided, is interested in this
 14 problem. I'm forwarding a copy of your letter and report
 15 to Dr. Chenoweth. And the Zonolite Division is
 16 interested, definitely interested in the welfare of its
 17 employees. Maryland Casualty Company is formulating a
 18 program for control and prevention in relation to the dust
 19 problem.
 20 And then there's some closing comments.
 21 Q. What was your question with respect to Exhibit
 22 13?
 23 A. The same question as 12.
 24 Q. Okay. Just where it was located in the
 25 document?

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1 A. Exactly.
 2 Q. Okay.
 3 A. That I remember seeing it.
 4 Q. Have you reviewed any of the motions or briefs
 5 filed by the parties in the Hutt matter?
 6 A. I'm not sure I know what you mean by that.
 7 Q. Sure. There's been briefs on summary judgment
 8 motions that have been submitted to the Court. Have you
 9 reviewed any of those?
 10 A. I believe so. Yeah, I've reviewed, briefly
 11 reviewed this document, if that's what we're talking
 12 about.
 13 Q. Okay. And, for the record, this is
 14 Plaintiff's Statement of Uncontroverted Facts in the Hutt
 15 case, as well as some other documents here.
 16 MR. LEFRIDGE: Just to be clear, that is
 17 MCE-188 in its entirety. The accompanying documents are
 18 part of that MCE-188.
 19 MR. JOHNSTON: All right, thank you.
 20 Q. (By Mr. Johnston) Are there any other briefs
 21 that were given to you to review in this case?
 22 A. No.
 23 Q. Did you review any submission by Maryland
 24 Casualty to the Court?
 25 A. No.

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1 Q. Okay. Did you review the deposition of any of
 2 Maryland Casualty corporate representative in this case?
 3 A. No.
 4 Q. Did you review any other depositions than the
 5 ones you've already identified?
 6 (Document marked Deposition
 7 Exhibit No. 1 for identification.)
 8 BY MR. JOHNSTON:
 9 Q. I'm going to show you what we've marked as
 10 Exhibit 1, Dr. Hart, and ask you if you've seen this
 11 document before.
 12 A. I believe this document was emailed to me,
 13 yes.
 14 Q. And for the record, that's the Notice of
 15 Deposition for today, correct?
 16 A. Yes.
 17 Q. And the notice asked you to bring certain
 18 materials with you to today's deposition. And you have
 19 materials that you brought with you today, correct?
 20 A. Correct.
 21 Q. And what is it that you've brought to the
 22 deposition today?
 23 A. I brought a file. And the primary document in
 24 my file is my report, and my CV is at the end of my
 25 report. And the other material is Dr. Redlich's report,

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1 Dr. Spear's report, and exhibits that I reference in my
 2 report. The other materials are cited references from
 3 epidemiology studies to toxicology, the RFC, and asbestos
 4 disease history.
 5 Q. And in addition to those documents, you have a
 6 manila folder here with MCE-188, which is the Plaintiff's
 7 Statement of Uncontroverted Facts, correct?
 8 A. Correct.
 9 Q. And between this manila folder and the binder
 10 you have in front of you, is that your entire file for
 11 this matter?
 12 A. Yes.
 13 Q. You have a number of documents within your
 14 file that you've cited to in your report, correct?
 15 A. Correct.
 16 Q. Did you review any additional documents in
 17 this case in the process of generating your report?
 18 A. Not that I can think of, not that would not be
 19 in this file.
 20 Q. Okay. How was it that you came in possession
 21 of the documents that you reviewed in order to generate
 22 your report?
 23 A. The literature is a literature search that I
 24 conducted. A lot of the early literature on epidemiology
 25 and asbestos history I generated when I was writing my

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1 Ph.D., which involves Libby. And I update that literature
 2 base as new materials, new studies are published. I'm on
 3 research gates and other avenues where I can gather latest
 4 information on topics, and so I utilize that to update my
 5 reference lists.
 6 And, of course, that doesn't include everything, but
 7 specific information on Libby amphibole, not so much
 8 asbestos in general, but Libby amphibole.
 9 Q. And focusing on the documents, the common
 10 exhibits, you have a couple of them in your folder,
 11 correct?
 12 A. Yes.
 13 Q. How is it that you came to review those
 14 documents? Were they sent to you by Counsel?
 15 A. Yes.
 16 Q. Okay. Did you get the entire set of common
 17 exhibits to review in preparation of your report or were
 18 they selected exhibits?
 19 A. I received the entire set, but my focus was
 20 primarily on the toxicological aspects, the health
 21 aspects. And so I didn't, I didn't cite them all, of
 22 course, in my report.
 23 Q. So you have additional documents that you
 24 haven't brought to the deposition today; is that fair?
 25 A. I don't believe so. Other than this common

1 exhibit, I don't believe I have anything in addition to
 2 that.
 3 Q. So after you reviewed ones that you didn't
 4 deem relevant to your report, you discarded them?
 5 A. No. I have an electronic version of them.
 6 Q. And how were they transmitted to you? Were
 7 they by email?
 8 A. I can't remember. It could have been, I
 9 believe it was a thumb drive, but I'm not positive.
 10 Q. Do you have correspondence with plaintiff's
 11 counsel regarding the time you spent on this case?
 12 A. I don't yet. I haven't billed for the time
 13 that I've spent on this case yet.
 14 Q. Can you estimate how much time you have spent
 15 on this case to date?
 16 A. I would estimate it as probably 25 to 30
 17 hours.
 18 Q. What is your hourly rate for that time?
 19 A. Three hundred dollars per hour.
 20 Q. What is your rate for deposition testimony?
 21 A. Four hundred dollars per hour.
 22 Q. What is your rate for trial testimony?
 23 A. Five hundred dollars per hour.
 24 Q. How much time have you spent in the matter
 25 involving the State of Montana?

1 Heberling in any other cases?
 2 A. Would you repeat that question, please? I
 3 want to make sure I have it correct.
 4 Q. Sure. Other than the two cases you've been
 5 deposited in already --
 6 A. Okay.
 7 Q. -- as well as the Hutt matter for which we're
 8 here today, have you been retained by the McGarvey
 9 Heberling firm in any other cases?
 10 A. I have an additional BNSF case.
 11 Q. Do you know the caption or name of that case?
 12 A. Barnes, Broughton, and Flores.
 13 Q. So a total of four cases in which you've been
 14 retained by the McGarvey Heberling firm, correct?
 15 A. Yes.
 16 (Document marked Deposition
 17 Exhibits No. 2 and No. 3 for identification.)
 18 BY MR. JOHNSTON:
 19 Q. I'm going to show you what we've marked as
 20 Exhibit 3. This is a copy of your curriculum vitae that
 21 was attached to your expert report in the Hutt matter.
 22 Dr. Hart, I'd ask that you just take a moment to
 23 look over this version of your CV and let me know if
 24 there's been any changes in your CV since the submittal of
 25 your report back in September.

1 A. I'm not sure what State of Montana we're
 2 talking about. Are you referring to a particular case?
 3 Q. Sure. Earlier today, you indicated you've
 4 been deposed in two matters, one involving the State of
 5 Montana and one involving BNSF.
 6 Just with regard to the matter you were deposed in
 7 with the State of Montana, how many hours did you spend in
 8 that case?
 9 A. I don't recall. I'd have to review my
 10 records.
 11 Q. With respect to the BNSF case you identified,
 12 how many hours did you spend in that case?
 13 A. Again, I don't recall, but I certainly have
 14 those records.
 15 Q. Are you currently working on any other cases
 16 involving Maryland Casualty?
 17 A. No.
 18 Q. The State of Montana case, was the plaintiff's
 19 law firm in that matter McGarvey Heberling as well?
 20 A. Yes.
 21 Q. And the BNSF case, was the Plaintiff's firm
 22 McGarvey Heberling as well?
 23 A. Yes.
 24 Q. Other than the three cases, those two cases
 25 and the Hutt case, have you been retained by McGarvey

1 A. There has been one change. It's not terribly
 2 relevant to this case, but the publication that was an
 3 anticipated publication is now an official publication,
 4 the October 2018.
 5 Q. I'm sorry, which page are you on?
 6 A. I'm on page 29.
 7 Q. Okay. And which publication is that?
 8 A. Hart, Autenrieth, Cauda, Chubb, Spear, Wock,
 9 Rosenthal.
 10 Q. Okay. That's the first one under "Principle
 11 Publications"?
 12 A. Yes.
 13 Q. Thank you. Briefly, could you describe for me
 14 your education?
 15 A. Yes. I have a bachelor's degree in
 16 occupational, safety and health; a master's in industrial
 17 hygiene; and a Ph.D. in toxicology.
 18 Q. Your Ph.D. in toxicology, what was the subject
 19 of your dissertation?
 20 A. Libby Amphibole Exposure Assessment. We
 21 discovered, our research team discovered Libby amphibole
 22 asbestos on the surface of tree bark in forested areas
 23 near the former vermiculite mine. Our aim of several
 24 research projects that were combined into a single
 25 dissertation was to determine or to evaluate the impact to

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1 human health associated with that new media source for
 2 Libby amphibole asbestos.
 3 Q. Who were the other members of the research
 4 team?
 5 A. Dr. Ward at the University of Montana was my
 6 chair; Dr. Andre Hoellien, University of Montana;
 7 Dr. Curtis Noonan; Dr. Terry Spear; and for a short period
 8 of time -- well, I won't even count that next member. It
 9 was a professor at U of M who left U of M, so she left my
 10 dissertation committee. It was Maria Mirandi.
 11 Q. So you just referenced a dissertation
 12 committee. Is that the same as the research team or is
 13 that a different group?
 14 A. Well, it ended up being a very, very cohesive
 15 group in that I elected to utilize my work in Libby as my
 16 components of my dissertation. So while my research team
 17 was active and is on many of the publications with me,
 18 they also guided me through the dissertation process.
 19 Q. And part of that process, did you have to
 20 defend your dissertation to a committee?
 21 A. Yes.
 22 Q. And who was on that committee that you
 23 defended your dissertation to?
 24 A. Dr. Tony Ward; Dr. Curtis Noonan; Dr. Andre
 25 Hoellien, then Dr. Howard Buell was an additional member

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1 that wasn't directly involved in the research, but was on
 2 the committee; and Dr. Spear was on the committee as well.
 3 I was allowed to have one outside member from another
 4 university other than U of M, and so Dr. Spear was on
 5 there as well.
 6 Q. Okay. And you successfully defended your
 7 dissertation, then?
 8 A. Yes.
 9 Q. And you obtained your Ph.D. in 2013; is that
 10 correct?
 11 A. Yes.
 12 Q. What professional registration or licenses do
 13 you currently hold?
 14 A. I don't have any registration or licenses. I
 15 am a certified industrial hygienist, but that really isn't
 16 a license. It's a professional certification.
 17 Q. How do you obtain a CIH? Is that how it's
 18 typically referred?
 19 A. Yes. You have to demonstrate adequate
 20 education and work experience as an industrial hygienist,
 21 and then you sit for an exam. And then you have an
 22 obligation to obtain so many continuing education credits
 23 every five years, and you must resubmit the information to
 24 the American Board of Industrial Hygiene. Upon their
 25 review, then your certification is renewed for an

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1 additional five years.
 2 Q. Your CV indicates that you became a CIH in
 3 1998; is that correct?
 4 A. Yes.
 5 Q. So you've gone through this recertification
 6 process three or four times?
 7 A. I've gone through it. I believe, I'd have to
 8 do the math, I know I'm due again in February to go
 9 through that process again.
 10 Q. Okay.
 11 A. I've gone through it at least once.
 12 Q. You indicated one of the criteria was
 13 demonstrating adequate work experience.
 14 A. Um-hmm [affirmative].
 15 Q. What does that entail?
 16 A. The American Board of Industrial Hygiene
 17 requires that applicants submit work experience
 18 documentation to verify that they meet the criteria for a
 19 practicing industrial hygienist. You can't just simply
 20 meet that criteria with education.
 21 If you had a degree, for example, in industrial
 22 hygiene but worked at Safeway for five years, you would
 23 not be able to sit for the exam, so it's work experience
 24 plus the education. And then employers have to verify
 25 that you've met that experience as well.

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1 Q. Does the recertification process require
 2 demonstration of ongoing work experience?
 3 A. It does.
 4 Q. Okay.
 5 A. You can obtain points for experience, for
 6 publications, for presentations. There are several
 7 criteria in which you can obtain points, or you could
 8 elect to just simply take the exam every five or six
 9 years.
 10 Q. In lieu of work experience?
 11 A. In lieu of submitting all of the
 12 documentation. You would still need the work experience.
 13 Q. Okay. So if you were strictly in academia and
 14 you were teaching but not practicing, you would not be
 15 qualified to be a CIH; is that fair?
 16 A. I don't know if that's fair because teaching
 17 industrial hygiene is considered industrial hygiene work
 18 experience per criteria. I don't recall how many points,
 19 but there are some points associated with being a faculty
 20 within that discipline for publishing papers, for
 21 contributing to the science by perhaps submitting
 22 questions for the ABIH exam. So there's several means by
 23 which someone who is teaching as an industrial hygienist
 24 could demonstrate competencies and work experience in
 25 industrial hygiene.

1 Q. Okay. And what does the exam entail?
 2 A. The exam entails several rubrics that CIHs
 3 should master. Those rubrics include toxicology,
 4 radiological health and safety, physical hazards such as
 5 noise and vibration, environmental-related rubrics. I
 6 think there are 12 or 13 different Rubrics that the exam
 7 questions are based on.
 8 Q. And is there an exam component to
 9 recertification?
 10 A. There is not, but you can elect to take that
 11 avenue if you don't want to submit your documentation of
 12 ways that you've obtained the recertification points.
 13 I've known of people that have done that, that say,
 14 "Instead of gathering all those points for the five years,
 15 I'll just sit for the exam," and that's their prerogative
 16 to do that.
 17 Q. Okay. Could you briefly describe for me your
 18 work experience as an industrial hygienist?
 19 A. Sure. I graduated from Montana Tech in 1989
 20 with my bachelor's degree, and then I served an internship
 21 at what was Thunder Basin Coal Company. I went back,
 22 then, I was hired full-time upon completion of my master's
 23 degree, and I served as a safety advisor and a senior
 24 safety advisor with Thunder Basin Coal Company.
 25 So part of that safety advisor role and senior

1 a safety advisor for Thunder Basin Coal Company?
 2 A. My initial responsibilities were initially I
 3 worked along with another health and safety person for the
 4 first few months, and we developed safety programs, we
 5 developed a respiratory protection program, we performed
 6 exposure monitoring, we were responsible for annual
 7 refresher training.
 8 Eventually, as my duties expanded, I became
 9 responsible for their nuclear safety program, the confined
 10 space program. So I had different responsibilities as I
 11 developed. And we typically had responsibility for
 12 different areas of the mine site as well, so I served some
 13 time, for example, in pit operations and another couple of
 14 years in plant operations.
 15 Q. Where were you located with Thunder Basin?
 16 A. It's in Wright, Wyoming.
 17 Q. Is that W-R-I-G-H-T?
 18 A. Yes.
 19 Q. And could you describe for me their operations
 20 or their facility?
 21 A. Yes. It was a surface coal operation.
 22 Q. You mentioned a nuclear safety program. What
 23 was the nuclear aspect of it?
 24 A. They utilized nuclear density gauges to
 25 determine the levels within various silos and tanks. That

1 safety advisor role was industrial hygiene. We, at that
 2 particular company, didn't distinguish between industrial
 3 hygienists and safety engineers. We had the same titles
 4 regardless of your background. I worked with one other
 5 industrial hygienist and two other safety engineers. We
 6 had the same titles; our responsibilities were a little
 7 different, though.
 8 Q. Could you explain to me the difference between
 9 a safety engineer and an industrial hygienist?
 10 A. A safety engineer typically has a background
 11 in worker safety and programs to manage worker safety. A
 12 key component of worker safety is industrial hygiene, and
 13 so safety engineers usually have some skill sets in
 14 exposure monitoring, exposure evaluation and controls, but
 15 industrial hygienists typically are more -- are further
 16 qualified within those areas of exposure assessment as
 17 well as exposure controls.
 18 Q. You don't hold yourself out as a safety
 19 engineer, do you?
 20 A. I don't.
 21 Q. Okay.
 22 A. Although with a degree in occupational safety
 23 and health, I certainly could. I just didn't practice in
 24 that area.
 25 Q. So what were your responsibilities starting as

1 required an NRC license to manage those, and the NRC
 2 license requires an RSO, radiation safety officer.
 3 Q. Okay. Was there any asbestos located at the
 4 Thunder Basin Coal Mine?
 5 A. There was. I do recall they had a lab on site
 6 in which there was an asbestos abatement project during my
 7 tenure there. I wasn't directly responsible for it
 8 because I wasn't part of the plant operations then, but I
 9 remember another co-worker identifying out some lab tables
 10 as containing asbestos, and the condition of them was
 11 determined to be potentially friable. So as a result,
 12 they did a pretty major abatement within that laboratory
 13 facility.
 14 Q. So was that in the ore or was that in the
 15 structure of the building?
 16 A. Oh, I'm sorry. Were you referring to the ore?
 17 Q. Well, I was unartful, but let's start with the
 18 ore. Was there any asbestos within the ore at the mine?
 19 A. I'm not aware of any asbestos in the ore at
 20 the mine.
 21 Q. And the asbestos you were describing, was that
 22 an abatement in one of the buildings or the piping?
 23 A. Yes, that was an asbestos containing material
 24 abatement.
 25 Q. Okay. Could you describe for me the safety

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1 program that you developed at Thunder Basin?
 2 A. A safety program, there were many programs,
 3 but the one that I was most involved with was a
 4 respiratory protection program for our plant operations
 5 personnel.
 6 Q. What did that program entail?
 7 A. It entailed, first of all, identifying where
 8 respirators should be worn, which was based on exposure
 9 assessments; then determining what type of respirators we
 10 would offer; it consisted of annual medical evaluation in
 11 terms of pulmonary function, and also fit testing.
 12 Q. Anything else?
 13 A. Those were the major parameters.
 14 Q. Did the program include any requirements
 15 regarding signage?
 16 A. It did in terms of reminding employees where
 17 respiratory protection was required. We had similar
 18 signage for noise exposures and hearing protection.
 19 Q. What did you look to in order to determine the
 20 standard for a respiratory program?
 21 Were there any rules or regulations that you
 22 followed?
 23 A. This was governed or this was -- the mines are
 24 regulated by Mine Safety and Health Administration, and
 25 MSHA really didn't have guidance on respiratory protection

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1 programs so much. So we used literature, we used some
 2 OSHA guidance in respiratory selection at the time.
 3 Respirators were approved by a couple of different groups,
 4 one of them being NIOSH.
 5 Q. When did OSHA come into existence?
 6 A. The OSHA Act was 1970. OSHA soon followed,
 7 '71.
 8 Q. And how about NIOSH?
 9 A. I believe NIOSH was a similar time frame, but
 10 I'm not positive on that one.
 11 Q. Both postdated Mr. Hutt's tenure at the Grace
 12 facility, correct?
 13 A. Well, they did, but OSHA, the Occupational
 14 Safety and Health Administration, is one aspect of a
 15 health and safety program. I would hope that there -- or
 16 I'm aware of health and safety provisions that existed
 17 before OSHA, such as the Bureau of Mines or the State of
 18 Montana.
 19 Q. But as to my question, OSHA and NIOSH both
 20 came after Mr. Hutt left the Libby plant, correct?
 21 A. Yes.
 22 Q. As a senior safety advisor for Thunder Basin,
 23 did you take on any additional responsibilities?
 24 A. That's when I took on more with the radiation
 25 safety, more with training requirements. I developed a

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1 confined-space entry program, so it was a little bit more
 2 of a leadership role when I was promoted to senior safety
 3 advisor.
 4 Q. Next you worked for Montana Power Company?
 5 A. Yes.
 6 Q. Where did you work for them?
 7 A. In Butte, Montana.
 8 Q. And what type of facility were you located at?
 9 A. Montana Power Company is now NorthWestern
 10 Energy or NorthWestern Energy has purchased them. My
 11 primary role was to serve as a health and safety auditor.
 12 I audited facilities to evaluate potential risks, health
 13 and safety risks, and to provide guidance to the Board of
 14 Directors on different properties that Montana Power
 15 owned. I traveled with environmental auditors, and so we
 16 typically evaluated from a health and safety, and an
 17 environmental.
 18 Q. In that position, did you have any exposure to
 19 hazards related to asbestos?
 20 A. I don't believe so.
 21 Q. Did you have exposure to any respiratory
 22 issues or hazards for workers?
 23 A. I did.
 24 Q. What was the nature of those hazards?
 25 A. There was one site that I was auditing that

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1 had a spray-painting operation. And part of the auditing
 2 procedure was to, first of all, evaluate what tasks they
 3 performed, and then to identify if appropriate controls
 4 were in place for worker health and safety.
 5 And so there was a site where a spray-painting
 6 operation was being conducted. And I, in my report, I
 7 noted several deficiencies in terms of they had an
 8 inadequate written respiratory protection program.
 9 The employee was -- when I interviewed the employee,
 10 he was not well trained on the type of respirator that he
 11 should be using for that task. And there were several, I
 12 wouldn't call them "citations," but several issues noted
 13 in that particular audit regarding respiratory protection
 14 and the adequacy of their program.
 15 Q. But those weren't dust-related issues, were
 16 they?
 17 A. Well, spray-painting has particulate as well
 18 as vapor, and so it did include particulate. Montana
 19 Power owned several mines as well, so I reviewed one in
 20 Texas. That was more of a management system audit,
 21 though. They had a respiratory protection program, but
 22 that wasn't part of my scope.
 23 Q. You've never worked for an insurance company,
 24 have you?
 25 A. No.

1 Q. Have you ever worked with an insurance company
 2 in any of these positions as an industrial hygienist?
 3 A. I have. At Thunder Basin Coal Company, we
 4 frequently had people from the insurance company test our
 5 fire protection systems, and I would accompany them on
 6 those visits. I would get reports regarding the visits,
 7 and if any deficiencies were noted, we would develop a
 8 system to repair within a timely fashion.
 9 Q. So you would follow the recommendations of the
 10 insurance company in those situations?
 11 A. Yes.
 12 Q. And you would see to it that the
 13 recommendations were corrected or at least addressed,
 14 correct?
 15 A. Yes.
 16 Q. You don't have any experience as a risk
 17 engineer for an insurance company, correct?
 18 A. No.
 19 Q. Nor do you have any experience as a loss
 20 prevention specialist for an insurance company, correct?
 21 A. No, but several of my students that I've
 22 trained go on to become loss control individuals. You
 23 know, there are many students with bachelor's degrees in
 24 occupational safety and health that transition into that
 25 field. So it's not -- I would call it part of the

1 occupational safety and health.
 2 Q. But you've never done an inspection for an
 3 insurance company before, correct?
 4 A. No.
 5 Q. Okay. On your CV, you have a number of
 6 publications. Are you relying upon any of these
 7 specifically for your opinions in this case?
 8 I'm looking at page 29 and 30 on your CV.
 9 A. No, not in this particular case.
 10 Q. Other than the four cases we've discussed
 11 where you're serving as an expert related to Libby
 12 litigation for the McGarvey Heberling firm, have you
 13 served as an expert in any other matters that are in
 14 litigation?
 15 A. For a brief period of time, I was serving on a
 16 case in Wyoming, but I never wrote a report. It settled
 17 before I had a deposition.
 18 Q. And what was that case regarding?
 19 A. Water well contamination associated with a
 20 fracking site.
 21 Q. Have you ever been disqualified as an expert
 22 in any case?
 23 A. No.
 24 Q. Have you ever been precluded from testifying
 25 in any case before?

1 A. No.
 2 Q. I'm going to show you what we've marked as
 3 Exhibit 2, Dr. Hart. This is your September 7, 2018
 4 report in the Hutt case.
 5 A. Okay.
 6 Q. If you could turn to page 21, Dr. Hart, which
 7 is the last page of the report itself. I notice this
 8 report is not signed. Is this your final report or was
 9 there another report that you had signed?
 10 A. September 7th, I believe, was the date of my
 11 signed report. I'm just making sure with my copy. Yes, I
 12 have a signed report September 7th of 2018. So I believe
 13 they're the same, they appear to be in terms of -- they
 14 appear to be identical reports.
 15 Q. When we take our first break, I'll just go
 16 ahead and we'll make a copy of the one you brought here
 17 with you today, and we'll mark that as Exhibit 5, if
 18 that's all right.
 19 Could you explain to me how it was that you prepared
 20 this report, Dr. Hart?
 21 A. I initially interviewed Mr. Hutt.
 22 Q. Where did you interview Mr. Hutt?
 23 A. July 13, 2018.
 24 Q. Did you do that together with Dr. Spear?
 25 A. Yes.

1 Q. How did you conduct the interview? Was it
 2 over the phone? In person?
 3 A. It was over phone on speaker.
 4 Q. How long did the interview last?
 5 A. I don't have the form right in front of me,
 6 but I record the time. I believe it was a little over an
 7 hour.
 8 Q. Did you take any notes during the interview?
 9 A. I took notes. And I always transcribe my
 10 notes, then, into a summary and I use that summary, then,
 11 to put into my report in terms of his exposure history,
 12 both working and living in Libby or outside of Libby.
 13 Q. So is that transcribed summary within your
 14 report?
 15 A. It is.
 16 Q. Is that the entire transcribed summary, or did
 17 you select certain portions of the summary of your
 18 interview to include in your report?
 19 A. I may have changed a few words here and there
 20 from Mr. Hutt's rendition of his work history, but for the
 21 most part, I believe it correlates quite well with the
 22 transcribed notes.
 23 Q. Do you still have the transcribed notes?
 24 A. I believe so.
 25 Q. And do you have the handwritten notes from the

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1 interview?
 2 A. I believe so.
 3 Q. I'd ask that you provide them to your counsel.
 4 MR. JOHNSTON: And, Dustin, we'd like to make
 5 a request on the record for the copies of those summaries
 6 and the notes themselves.
 7 MR. LEFTRIDGE: Yes.
 8 Q. (By Mr. Johnston) Did you share your summary
 9 with Dr. Spear?
 10 A. I did not. We each took notes. And he used
 11 or he incorporated those notes into his report and I
 12 incorporated them into mine.
 13 Q. So in terms of his work history, which is
 14 summarized in both your report and Dr. Spear's report,
 15 each of you have independently wrote those work history
 16 summaries; is that correct?
 17 A. Yes.
 18 Q. In terms of drafting the report, then, how did
 19 you go about doing that?
 20 A. I knew my role was to assess Mr. Hutt's
 21 working history and also the potential for asbestos
 22 related disease, then put it into major sections in terms
 23 of what we know about Libby amphibole asbestos, what we
 24 know about the toxicity, what epidemiology studies have
 25 illustrated, what the history is in terms of asbestos in

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1 general, and the applicable exposure limits, and exposure
 2 history that may have been from other sources such as the
 3 Bureau of Mines' report.
 4 Q. You mentioned your role. How is it that you
 5 came to understand what your role was in the Hutt case?
 6 A. When I agreed to work on this case, I was
 7 asked if I could provide an opinion regarding Mr. Hutt's
 8 exposure histories and potential for disease.
 9 Q. Will your opinions at trial be limited to
 10 those two areas?
 11 A. Well, I also include in my report the history
 12 of Libby amphibole in general, the history of asbestos and
 13 disease, the relevant epidemiology or toxicology studies
 14 being relevant, documents related to medical surveys of
 15 workers, exposure limits. And so all of those would come
 16 into play along with notes from his interview.
 17 Q. Okay. But you will not be offering opinions
 18 with respect to either standard of care or state of the
 19 art for a worker safety program. Is that fair?
 20 MR. LEFTRIDGE: Objection; form.
 21 THE WITNESS: Well, I rely on Dr. Spear for
 22 the primary information related to industrial hygiene
 23 standard of care, but I also performed a cursory review of
 24 the information of his report of the relevant documents,
 25 and so that comes into play somewhat with offering an

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1 opinion on exposures, but I would say Dr. Spear has the
 2 primary role there.
 3 Q. (By Mr. Johnston) Okay. But what I'm trying
 4 to figure out is: What opinions, if any, will you be
 5 giving regarding the safety program in this matter?
 6 A. I believe I'll be relying on Dr. Spear for the
 7 safety program component.
 8 Q. Okay. With respect to the respirators or the
 9 respiratory program in this matter, will you be giving any
 10 opinions regarding respirator use or any related issues?
 11 A. Since it's not in my report, I would say
 12 that's primarily Dr. Spear's as well.
 13 Q. Will you be giving any opinions with respect
 14 to signage or warnings in this matter?
 15 A. Yes, in that I do have a comment in my report
 16 about warnings, and I believe it relates to Mr. Hutt's
 17 exposure; and that there were medical tests that were
 18 provided, but according to Mr. Hutt, he was not warned, he
 19 was not aware of the hazards of the dust containing
 20 asbestos. In fact, he was basically told that it's a
 21 nuisance dust and not to be concerned with it.
 22 Q. Okay. We'll get to that in a little bit. In
 23 terms of drafting the report, did you start this report
 24 from a blank slate with respect to Mr. Hutt, or did you
 25 incorporate any prior reports in other matters?

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1 A. I incorporated not only prior reports, but
 2 part of my dissertation, part of my literature search that
 3 I've been conducting on Libby amphibole or asbestos for
 4 several years because many of those are still relevant
 5 today.
 6 Q. But they weren't specific to Mr. Hutt in any
 7 unique way; is that fair?
 8 A. Well, they're specific to Mr. Hutt's disease
 9 and important to provide context in terms of the potential
 10 for asbestos-related disease.
 11 Q. If you could for me, which sections of your
 12 report are from your thesis?
 13 A. So many of the epidemiology studies that I
 14 cite are from my dissertation. There's -- oh, I'm sorry.
 15 Q. I'm sorry, I don't mean to interrupt you. But
 16 that's Section 1.1 of your report?
 17 A. That is Section 1.1. Of course, there are
 18 updates. Since my dissertation was published, for
 19 example, on page 6, there is a community study published
 20 by Naik, et al., in 2017. So where updates occur, I
 21 update my epidemiology section.
 22 When my dissertation was published, the RFC was in
 23 draft form, so while I have mention of the RFC Section 1.2
 24 in draft form in my dissertation, I expanded it with the
 25 publication of that document of the EPA IRIS 2014. The

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<p>1 inhalation exposure factors is a little bit newer. Some 2 of the material there is post dissertation, so that would 3 be newer material. 4 Q. And that's Section 1.3? 5 A. Right. Section 2.1, "Asbestos Contamination 6 in the Rainy Creek Complex," a lot of that comes directly 7 from my dissertation. 8 Q. What is the Rainy Creek complex? 9 A. Rainy Creek complex describes the geology of 10 the area in which the vermiculite mine was located. So 11 when I review geological publications, it's commonly 12 referred to as the "Rainy Creek complex." 13 Since my dissertation did not focus on asbestos in 14 general but was more Libby amphibole, Section 2.2 is not 15 from my dissertation. 16 Q. Is Section 2, then, a review or summary of 17 your review of the literature? 18 A. Right. 19 Q. And Section 2.3, what is the source of the 20 information there? 21 A. Section 2.3, it was derived from documents 22 that I reviewed, exhibit documents. 23 (Document marked Deposition 24 Exhibit No. 4 for identification.) 25 BY MR. JOHNSTON:</p>	<p>1 you see that? 2 A. Yes. 3 Q. You state (quoted as read): "Of the 45 with 4 lung disease, there was a marked increase, 45 percent, in 5 existing or suspected lung disease beginning with the 11th 6 year of service." 7 Do you see that? 8 A. Yes. 9 Q. Did that study come to any conclusions about 10 workers with less than two years of service? 11 A. I don't recall. May I look at that study, 12 please? 13 Q. Of course. 14 A. So the way that this information appears to be 15 presented according to the Exhibit 130.4 is from one to 16 five years work experience 70 -- 17, excuse me, percent of 17 the employees fell into that group. That was four of the 18 forty-five who had lung disease. So your question 19 pertained to two years. I would reference the one to five 20 as being with that two-year -- or two years being part of 21 that range. 22 Q. This study was simply looking for existing or 23 suspected lung disease, correct? 24 A. That's my understanding. There isn't a great 25 deal of information provided. It's labeled personal and</p>
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<p>1 Q. I'm going to show you what we have marketed as 2 Exhibit 4, which is a number of documents that were 3 produced in conjunction with your report. Are these the 4 documents that you are relying upon produced in the 5 litigation for Section 2.3 of your report? 6 A. Yes. 7 Q. And how did you identify these specific 8 documents? 9 A. These were given to me for review by Counsel. 10 Q. Were these documents flagged or identified 11 specifically for you? 12 A. No so much. They were part of a larger group 13 of documents. 14 Q. But these were the documents that you chiefly 15 rely upon, correct? 16 A. Yes. 17 Q. Page 16 of your report, you reference a study 18 in 1969 of workers, and I believe you're referencing CE 19 130.4. 20 A. Did you mean page 20? 21 Q. I'm on page 16 of your report, or at least the 22 draft report that was produced to us on the top of the 23 page, 16. 24 A. Oh, okay. 25 Q. You reference an internal study in 1969. Do</p>	<p>1 confidential study to determine relationship between years 2 of employment, age, smoking, and chest x-rays. So in 3 terms of the intent, I don't know. 4 Q. The lung disease detected could have 5 preexisted their time at the plant, correct? 6 A. I don't know that. Did they have 7 pre-employment x-rays? At one point in time, I remember 8 reading that, but I don't know with this particular group. 9 Q. But the study doesn't indicate that they're 10 comparing preemployment x-rays to the subsequent x-rays to 11 determine only changes post employment, does it? 12 MR. LEFRIDGE: Objection; form, foundation. 13 THE WITNESS: Could you, please, repeat the 14 question? 15 MR. JOHNSTON: Sure. If the court reporter 16 could read that back. 17 (The record was read by the court reporter as 18 follows: 19 "QUESTION: But the study doesn't indicate 20 that they're comparing preemployment x-rays to the 21 subsequent x-rays to determine only changes post 22 employment, does it?") 23 THE WITNESS: Well, there is a note at the 24 bottom of the third page of this document that states: 25 "It would be well to take a good look at our</p>

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1 preemployment chest x-ray program to make sure applicants
 2 with lung conditions are not hired."
 3 So that suggests that there is some type of
 4 preemployment assessment from the data provided. I really
 5 can't answer that question.
 6 Q. (By Mr. Johnston) Right, because the document
 7 doesn't state that they were comparing --
 8 A. Correct.
 9 Q. -- preemployment versus whatever is reflected
 10 here, correct?
 11 A. Yeah. This is a snapshot in time of workers.
 12 I don't know if a comparison was made to preemployment.
 13 Q. Okay. This document was not shared with
 14 Maryland Casualty, was it?
 15 A. Well, it's my understanding that the health
 16 studies were shared with Maryland Casualty.
 17 Q. But, specifically, this study which is 130.4,
 18 there's a cc list on the first page of it, correct?
 19 A. There is.
 20 Q. And the three individuals identified are not
 21 Maryland Casualty personnel, are they?
 22 A. I don't know who -- Lovick, I recognize, and
 23 Culbert. I'm not sure of Brown. When we initiated our
 24 conversation today, I had made note of Exhibit 12 and 13
 25 in terms of sharing health reports with Maryland Casualty.

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1 Q. Exhibits 12 and 13 don't reference Exhibit
 2 130.4, correct?
 3 A. Well, it's not stated exactly which health
 4 study they're referring to. The Exhibit 12, it discusses:
 5 I believe I've uncovered a potential health
 6 problem at the Libby Mine and Mill, and it should be, the
 7 letter, passed on to our insurance carrier.
 8 And, you know, again, Exhibit 13 is from Dr. Nelson
 9 to Dr. Chenoweth with Maryland Casualty.
 10 Q. If I could take a look at that report.
 11 A. Sure.
 12 Q. So the Exhibit 12 and 13 were not in the
 13 packet of documents that we've marked as Exhibit 4,
 14 correct?
 15 A. They were not in my -- yes, they were not
 16 cited in my original report.
 17 Q. Exhibit 12 is dated August 31, 1964, correct?
 18 A. Correct.
 19 Q. And the report numbered Exhibit 130.4 is from
 20 1969, correct?
 21 A. Correct.
 22 Q. So Exhibit 12 couldn't possibly be talking
 23 about a report that came five years later, correct?
 24 A. But in my report, I also discuss -- so there
 25 were a couple of different health assessments. And just

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1 to make sure I have the right information here, so the
 2 initial health assessment that I referenced is July 1959,
 3 and in a 1964 follow-up survey -- so abnormalities were
 4 noted in the 1959 survey. Then there was a follow-up
 5 survey that was summarized in 1964 from Dr. Nelson to
 6 Joseph Kelly that demonstrated an increased incidence of
 7 chronic respiratory diseases with employees with prolonged
 8 exposure to dust.
 9 So the letters, the sharing of the information with
 10 Maryland Casualty in that case, it would most likely be
 11 this 1964, since Dr. Nelson is the author of the 1964
 12 letter. And the Documents 12 and 13 are discussing
 13 forwarding that information to Maryland Casualty
 14 physician.
 15 Q. There's no evidence that Maryland Casualty was
 16 given the copy of the 1969 report, which is 130.4,
 17 correct?
 18 MR. LEFTRIDGE: Objection; form, foundation.
 19 THE WITNESS: The 1969 report, yeah, I don't
 20 know if that was shared. I'm assuming it was shared with
 21 Maryland Casualty, but I can't provide a specific document
 22 to support that.
 23 Q. (By Mr. Johnston) When did Maryland Casualty
 24 first become an insurer of the Libby plant?
 25 A. 1964.

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1 Q. The report you just referenced a moment ago of
 2 July 20, 1959, would not have been sent to Maryland
 3 Casualty at the time, correct?
 4 MR. LEFTRIDGE: Objection; form, foundation.
 5 THE WITNESS: Well, it's referenced in the
 6 1964 follow-up survey, and so I'm not sure of that. It
 7 very well could have been.
 8 Q. (By Mr. Johnston) Well, let's look at Exhibit
 9 56, which is dated August 25, 1964. This is a letter from
 10 Dr. Nelson to Joseph Kelly of Zonolite Division. Do you
 11 see that?
 12 A. Yes.
 13 Q. Is there any cc's on this particular letter?
 14 A. I don't see a cc on that particular letter,
 15 but six days later, Exhibit 12, I'm attaching a letter
 16 sent to Mr. Kelly by Dr. Nelson. I believe he may have
 17 uncovered a potential health problem at the Libby Mine and
 18 Mill. And that we should - again, I don't know what that
 19 word is - this letter onto our insurance carrier for them
 20 to pursue and communicate with Dr. Nelson.
 21 Q. And who is Exhibit 12 sent to?
 22 A. Exhibit 12 was from Mr. Rupp to Mr. Paul -- I
 23 don't know how his name is pronounced.
 24 Q. Both Zonolite employees, correct?
 25 A. I don't know. Yeah, I don't know about that.

1 Rupp is, it looks like, Chicago.
 2 So if we look at Exhibit 13, in which there isn't a
 3 date provided, but Dr. Nelson is directing that letter to
 4 -- excuse me. Mr. Rupp is directing that letter to
 5 Dr. Nelson, and Dr. Chenoweth this is cc'd on that letter.
 6 Q. But there's no date on Exhibit 13, correct?
 7 A. Correct.
 8 Q. And Exhibit 12 says it should be sent on to
 9 the insurance company, but there's no actual document
 10 showing that it had, in fact, been sent to the insurance
 11 company, correct?
 12 A. Correct.
 13 Q. So for Section 2.3 of your report in studies
 14 identified in there, there's no evidence that they were
 15 actually sent to Maryland Casualty, correct?
 16 MR. LEFTRIDGE: Objection; form, foundation.
 17 THE WITNESS: I can't make that conclusion
 18 just based on the communication that I'm seeing in Exhibit
 19 13. Dr. Chenoweth is clearly copied in.
 20 Q. But you don't have a date on that letter, do
 21 you?
 22 A. I do not see a date on that letter.
 23 Q. And it doesn't reference the 1959 report, the
 24 '69 report, correct?
 25 A. Yeah, there is no date on that letter, but

1 there is a letter in which Mr. Rupp is sending to
 2 Dr. Nelson, and Dr. Chenoweth is copied in that letter.
 3 MR. JOHNSTON: Why don't we take a break here
 4 about five or 10 minutes.
 5 (A brief recess was taken.)
 6 (Document marked Deposition
 7 Exhibit No. 5 for identification.)
 8 BY MR. JOHNSTON:
 9 Q. Dr. Hart, I'd like to focus now on your
 10 interview and the summary of Mr. Hutt's exposures in your
 11 report. That's Section 3.1.
 12 In the second full paragraph, you reference Mr. Hutt
 13 arriving in Troy when he was 21, and he went to work in
 14 the Troy mine with his father. What Troy mine are you
 15 referring to there?
 16 A. I don't know. I don't know the official name
 17 of the mine near Troy.
 18 Q. Do you know what type of mine it was?
 19 A. I don't.
 20 Q. Do you know what type of work Mr. Hutt was
 21 doing there?
 22 A. He noted that he was helping his father on the
 23 drill rig, which involved pulling steel.
 24 Q. Was this drilling into steel beams, or what
 25 type of work was it?

1 A. I'm assuming that the drill rig was drilling
 2 into ore of some type, but I didn't ask specific questions
 3 to Mr. Hutt related to that other than when I heard:
 4 "drilling," I asked about how dusty it was.
 5 Q. And he indicated that since it was wet
 6 drilling, there was little dust?
 7 A. Yes.
 8 Q. Did you ask him if he wore a respirator?
 9 A. I did not.
 10 Q. Did you ask him anything else about the
 11 working conditions there?
 12 A. I did not, other than the conditions in terms
 13 of the potential to generate dust.
 14 Q. Okay. Your report indicated he went into the
 15 Army in 1963, and after about three years, he arrived in
 16 Troy, Montana, correct?
 17 A. Yes.
 18 Q. So that would be 1966?
 19 A. Yes, either '66 or '67.
 20 Q. After he worked with his father drilling, he
 21 went to work for Dempsey as a log skidder and he also
 22 worked for Nelson logging in Pipe Creek where he ran a
 23 skidder.
 24 Do you see that?
 25 A. Yes.

1 Q. He then bought a chain saw and logged for
 2 approximately ten years in the Libby-Troy area, usually in
 3 the Yaak.
 4 Do you see that?
 5 A. Yes.
 6 Q. So my question is: If he arrived in Troy in
 7 '66 or '67, worked as a log skidder, and then bought a
 8 chain saw and logged for approximately ten years, wouldn't
 9 that put him sometime in the mid 1970s?
 10 MR. LEFTRIDGE: Objection; form.
 11 THE WITNESS: I'm not sure that's a
 12 chronological order here. He obviously had his employment
 13 at W.R. Grace. I'd have to go back and visit with him or
 14 look more closely in terms of that ten years. Did he work
 15 a couple years at the Grace site and then a few more? I'm
 16 not positive.
 17 Q. (By Mr. Johnston) But that might be in your
 18 notes from your interview?
 19 A. I don't believe so. I don't believe I was
 20 that specific when I interviewed him in terms of, in terms
 21 of that duration. I don't believe there's more
 22 specificity in my report or in my original notes.
 23 Q. Was the interview reported?
 24 A. No.
 25 Q. When you take exposure histories for

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1 individuals, it's critical that you get all the detail
 2 possible in their work experience, correct?
 3 A. Yes.
 4 Q. But for whatever reason, this part of his work
 5 history is, as you said, not specific?
 6 A. I don't know if I would say "not specific,"
 7 but it certainly is lacking the detail in terms of this
 8 ten years and what exactly the years are that it spanned.
 9 Q. When he bought a chain saw and logged for
 10 approximately ten years in the Libby-Troy area, usually in
 11 the Yaak. Where is the Yaak?
 12 A. So the Yaak is, it's a -- I don't know if I'd
 13 call it a mountain or a drainage, but it's an area that is
 14 closer to Libby. It's off of Highway 37. Up the Yaak is
 15 where the landfill is for the community of Libby or
 16 Lincoln County. It's also where a ski area, Turner
 17 Mountain ski area is. So in relation to the vermiculite
 18 mine, it's closer, it's quite a bit closer to Libby.
 19 Q. In your studies and research regarding
 20 amphibole traces within the bark and the surrounding area,
 21 would that cover the Yaak?
 22 A. We did not extend into the Yaak area.
 23 Q. How far did your studies expand into from the
 24 Libby plant? Was there a radius in which you conducted
 25 your studies?

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1 A. Our studies, so our initial one with the tree
 2 bark was in Operable Unit 3, so one location was right at
 3 the mine site, another down Rainy Creek Road, another
 4 where Rainy Creek Road intersects Highway 37.
 5 From there, our firewood harvest study was on Rainy
 6 Creek Road also in the Operable Unit 3. Our occupational
 7 study was outside of Operable Unit 3 where Forest Service
 8 workers at the time were working as part of their normal
 9 job activity. But it was to the, to the east of the
 10 vermiculite mine where we conducted the occupational
 11 study, so instead of going towards Libby, it was east of
 12 the mine site.
 13 Q. And how far did that extend from the mine site
 14 east?
 15 A. Our occupational study was not terribly far
 16 from the mine site. I'd say within a mile, maybe two
 17 miles. Now, since our work, EPA and contractors working
 18 with the EPA have done tree bark and tree duff and soil
 19 sampling at various radii away from the mine site along
 20 with prevailing wind directions, and so forth. So it
 21 extends several miles out, most pronounced in the
 22 prevailing wind direction, which would be northeast.
 23 Q. And which direction is the Yaak from the
 24 plant?
 25 A. The Yaak would be west towards Libby.

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1 Q. Were there any studies conducted, then,
 2 heading in a westerly direction from the plant?
 3 A. I would have to review the EPA activity-based
 4 studies to know that, but I believe from the west, it
 5 didn't extend more than a couple miles away.
 6 Q. The next sentence in your report says that:
 7 "He stated that Pipe Creek was the closest he logged near
 8 the mine and that Pipe Creek was a couple of drainages
 9 away from the W.R. Grace Mine."
 10 Where in relation to the mine is Pipe Creek?
 11 A. Pipe Creek is, it's actually on the other side
 12 of the Kootenai River, so the Kootenai River flows from
 13 Lake Kucanusa into Libby, and it's paralleled with Highway
 14 37. Highway 37 is how the former mine is accessed up
 15 Rainy Creek Road. Pipe Creek is on the other side of the
 16 Kootenai River and it's west toward Libby.
 17 Q. And approximately how far, then, would Pipe
 18 Creek be from the plant?
 19 A. Looking at a map, I believe that Pipe Creek is
 20 similar to the Yaak in that it's closer to Libby than it
 21 is the Rainy Creek area.
 22 Q. Looking at page 17 of your report, it
 23 indicates that Mr. Hutt began working for W.R. Grace in
 24 March 1968, correct?
 25 A. Correct.

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1 Q. And the first position he had was as a sweeper
 2 in the dry mill, correct?
 3 A. Correct.
 4 Q. Okay. How long was he a sweeper in the dry
 5 mill?
 6 A. He worked there a few months, the last
 7 sentence of that paragraph. And he noted, I remember, in
 8 his interview, him talking about he tried to bid off of
 9 that as soon as he could.
 10 Q. What do you mean by "a few months"? Two to
 11 four?
 12 A. I would say two to four is a range. I
 13 interpret "a few" as three.
 14 Q. So "a few months" was Mr. Hutt's words?
 15 A. Yes.
 16 Q. Next, he worked in the skip shack; is that
 17 correct?
 18 A. Yes.
 19 Q. Could you describe for me what the skip shack
 20 was?
 21 A. Yes. So after the vermiculite ore was sent to
 22 the dry mill and the vermiculite was separated from the
 23 ore and put in various grades by size, it was transported
 24 down to the rail loadout. In order to do that, the
 25 vermiculite concentrate was loaded in these cars that they

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1 referred to as "skip cars."
 2 And the way Mr. Hutt explained, and when I look at
 3 pictures it confirms, is that the one car, one loaded car
 4 was moving down the mountain on the system while another
 5 one was coming up, and he would fill those cars. Those
 6 cars would then go to a truck operation, which would
 7 transport the ore -- excuse me, the concentrate down the
 8 remainder of the Rainy Creek roadway.
 9 Q. Okay. He reported that he worked in the skip
 10 shack quite awhile. That's the last sentence of the
 11 second paragraph. How long was he at the skip shack when
 12 you say "quite awhile"?
 13 A. I don't know the exact duration.
 14 Q. Did you ask him?
 15 A. I don't recall asking him, no.
 16 Q. Next he went to the transfer point at the
 17 mine. I think you just described what happens at the
 18 transfer point, that that's where the concentrate is
 19 loaded on the trucks. Is that correct?
 20 A. No.
 21 Q. No.
 22 A. The transfer point is further back in the
 23 mining process where the ore, before it gets to the dry
 24 mill, the large pieces are separated from the shaker
 25 system. So trucks from the pit, the mining operation, are

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1 dumping into the transfer point first, then it's processed
 2 in the dry mill, then the skip shack would follow.
 3 Q. How did Mr. Hutt describe the conditions at
 4 the transfer point?
 5 A. So at the bottom of the paragraph on page 17,
 6 the last paragraph, he talked about fine dust coming down
 7 the chute, that his clothes were dusty with that
 8 operation; that he had to sweep and shovel under belts,
 9 and he also performed tasks when they were shut down for
 10 maintenance.
 11 Q. But he didn't describe it as "nasty" as he had
 12 described the dry mill and skip shack, correct?
 13 A. He did not use the term "nasty" to describe
 14 the transfer point, but I wouldn't say he never said it
 15 was pristine or not dusty.
 16 Q. Sure. I'm just, comparatively speaking --
 17 A. Yes.
 18 Q. -- I'm trying to get a sense of how the
 19 transfer point compared to his two previous positions at
 20 the dry mill and skip shack.
 21 A. Okay.
 22 Q. Are you able to characterize or compare and
 23 contrast those conditions?
 24 A. I would say based on Mr. Hutt's description,
 25 that I would anticipate exposure levels to be lower at the

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1 transfer point than at the skip or the dry mill, and
 2 previous studies would support that as well.
 3 Q. Okay. How long did he work at the transfer
 4 point?
 5 A. I don't know the exact duration.
 6 Q. Did you ask him?
 7 A. No.
 8 Q. When he was at the dry mill, Mr. Hutt reported
 9 that he was told by Mr. Deshazer that it was just dust and
 10 that it wouldn't hurt him, and that they would joke with
 11 the guys regarding the dust. Who was Mr. Deshazer?
 12 A. It's my understanding that he was a management
 13 person with the Grace operation.
 14 Q. He wasn't with Maryland Casualty, correct?
 15 A. No.
 16 Q. Mr. Hutt's position at the transfer point was
 17 his last position at the plant, correct?
 18 A. I believe so based on our interview with
 19 Mr. Hutt, but I believe in Dr. Redlich's, or someplace, I
 20 read since my report that he may have operated a dozer at
 21 some point after that. But he did not, he did not state
 22 that when I interviewed him.
 23 Q. But when you interviewed him, you asked him
 24 about all the positions he held at the plant, correct?
 25 A. Yes.

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1 Q. Mr. Hutt left the Grace plant in October of
 2 1969, correct?
 3 A. Correct.
 4 Q. Do you know why he left?
 5 A. I don't know.
 6 Q. Mr. Hutt reported that he has never used
 7 tobacco, correct?
 8 A. Correct.
 9 Q. But throughout his time, he hunted, fished,
 10 and other recreational activities over the area, correct?
 11 A. Correct. When I ask somebody about hunting
 12 and fishing, I always follow up with "where" to see how
 13 relatively -- how close it was to the former mine.
 14 Q. And Mr. Hutt indicated that he never did
 15 either in Rainy Creek?
 16 A. Correct.
 17 Q. The final Paragraph on page 18, the last
 18 sentence on that page:
 19 "In Lincoln County, where numerous sources of
 20 occupational as well as environmental pathways have been
 21 identified, it is likely that multiple sources contributed
 22 to the Mr. Hutt's cumulative fiber exposure."
 23 What are the multiple sources that you're
 24 referencing here?
 25 A. Well, just about -- a large fraction of the

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1 literature pertaining to Libby indicates that it's quite
 2 common for individuals to have multiple exposure pathways.
 3 They may have had vermiculite insulation in their home,
 4 they may have played baseball upon the ball fields where
 5 it was used not only in the field but adjacent to
 6 operations, or they may have lived close to the railroad
 7 tracks, or they may have fished close to the Rainy Creek
 8 area.
 9 So because of that, because of the literature and
 10 activity-based exposure assessments that have been
 11 conducted, it would be very deceiving of me to say that
 12 Mr. Hutt never inhaled an asbestos fiber in Libby outside
 13 of his W.R. Grace work.
 14 So we looked at things like duration, intensity,
 15 frequency. But in reality, multiple pathways most likely
 16 contributed.
 17 Q. So as you sit here today, you can't rule out
 18 community exposure as being a contributing factor for his
 19 asbestos-related disease?
 20 A. I can't rule it out but, certainly, the
 21 community studies, the community exposure studies, No. 1,
 22 when we look at intensity, duration, exposure, the
 23 exposure levels that were reported through various means
 24 at the mine were substantially higher than community.
 25 And Mr. Hutt didn't live in the Libby community. He

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1 lived in Troy, which is an operable unit as well, but he
 2 wasn't directly within the Libby community.
 3 So I have to be very careful in that statement in
 4 that, certainly, his intensity at the mine, I would
 5 anticipate to be substantially greater than other areas
 6 community based.
 7 Q. Okay. But you write: "It is likely that
 8 multiple sources contributed to Mr. Hutt's cumulative
 9 fiber exposure."
 10 Correct?
 11 A. Correct.
 12 Q. Okay. The next sentence discusses the
 13 intensity, frequency, and duration of Mr. Hutt's Libby
 14 amphibole asbestos exposure that occurred during his
 15 employment. How did you determine the intensity of
 16 Mr. Hutt's exposure during his time at the plant?
 17 A. Well, there are epidemiology studies that cite
 18 exposure monitoring among Grace personnel and different
 19 job tasks. One, in particular, is Amandus, et al., 2000
 20 -- excuse me, 1987.
 21 Then I had the Bureau of Mines report that cited
 22 exposure assessments a couple years after Mr. Hutt's
 23 employment. The Amandus study was estimated from '64 to
 24 '71. And the McDonald publications, McDonald 1986, has
 25 exposure estimates for various Grace operations.

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1 So there's quite a bit of supporting literature to
 2 base the claim that intensity was greater at the
 3 vermiculite mine.
 4 Q. The Bureau of Mines report, that was data
 5 collected after Mr. Hutt had left the Libby plant,
 6 correct?
 7 A. It was.
 8 Q. Okay. Which of the reports that you just
 9 referenced collected data into 1968 and 1969?
 10 A. Well, if I could back up before I answer that.
 11 The Bureau of Mines study, although it's two years later,
 12 in my mind it would still be relevant in that the
 13 exposures revealed in that study were considerably high.
 14 It indicates that modifications were not made to the work
 15 areas, that exposures were allowed to remain high.
 16 So although it's two years later, I don't think we
 17 should rule that out. Now, the specific study that I was
 18 mentioning during Mr. Hutt's employment was Amandus.
 19 Do you mind if I go to that?
 20 Q. No, please go right ahead.
 21 A. So Amandus, et al., 1987, reports average
 22 fibers per cc values collected from 1967 to 1982 for the
 23 dry mill sweeping at 35.9, fibers per cc; the dry mill at
 24 33.2 fibers per cc; the skip area at 17.4 fibers per cc.
 25 And they appear to be quite consistent with the Bureau of

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1 Mines report, but that would be within the time frames of
 2 Mr. Hutt's employment.
 3 Q. Those are averages over a 15-year period?
 4 A. Well, actually the three data sets that I just
 5 provided, it's a little bit more refined. It's from '67
 6 to '71, the years of those three data sets.
 7 Q. And what positions were those data sets from?
 8 A. Dry mill sweeping, dry mill, and the skip
 9 area.
 10 Q. So those cover the first two positions that
 11 Mr. Hutt had at the Libby plant, correct, the skip and the
 12 dry mill?
 13 A. They do.
 14 Q. But not the transfer point.
 15 A. Oh, actually, there is a transfer point, 2.2
 16 fiber per ml from '67 to '74.
 17 Q. And that would have been below the TLV at that
 18 time, correct?
 19 A. That would have been.
 20 Q. What were the readings for the dry mill and
 21 the skip shack in '67 to '71?
 22 A. They were 35.9, 33.2, 17.4.
 23 Q. On page 19 of your report on the last
 24 paragraph on that page (quoted as read):
 25 "In 1968, the ACGIH published 'notice of

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<p>1 intended changes' and proposed (1) that the 5 million 2 parts per cubic foot be dropped to 2 million parts per 3 cubic foot." 4 Do you see that? 5 A. Yes. 6 Q. And you go on to reference the British 7 Occupational Hygiene Society Threshold in 1968. 8 Are you offering any opinions in this matter 9 regarding the standard of care for TLVs in 1968 and 1969? 10 MR. LEFTRIDGE: Objection; form. 11 THE WITNESS: Well, I'm providing some 12 background in terms of the history of the exposure limits, 13 and that the 5 million particles per cubic feet through 14 ACGIH from the 1948 until 1968 is -- it was for dust 15 containing asbestos. And so the early methods of 16 industrial hygiene sampling were impinger based. And they 17 were sampling for dust in general, and that 5 million 18 particles per cubic feet then was based on asbestos 19 containing dust. 20 Now, my literature review indicates that in 21 the UK, most likely due to numerous health studies, they 22 were quite a bit more conservative than the U.S. with 23 their standards. Once our methodologies changed from the 24 impinger method to collecting fibers on filter media, then 25 the standard changed.</p>	<p>1 W.R. Grace that they apply or are consistent with the 5 2 million particulars per cubic foot standard, correct? 3 A. Correct. 4 Q. And W.R. Grace rejected that recommendation, 5 correct? 6 A. Yeah. I don't know exactly how it transpired. 7 I just remember reading through the multiple documents, 8 that somehow, although 5 was the standard, that was what 9 was originally proposed, that somehow it was agreed or it 10 was allowed that Grace would consider a higher value and 11 use the -- I remember seeing the 5 million particles per 12 cubic feet as a goal versus an outcome that they were 13 expected to achieve. 14 Q. Was it agreed or was it allowed? 15 A. I don't know. 16 Q. When you say "allowed," what do you mean by 17 "allowed to happen"? Allowed by whom? 18 MR. LEFTRIDGE: Objection to form. 19 THE WITNESS: Well, although it was proposed 20 -- or it was cited as a standard, somehow it was not, it 21 was not fully adopted. It was simply a goal. 22 Q. (By Mr. Johnston) And you testified earlier 23 this morning that when you've worked with insurance 24 companies in the past and they give you a recommendation, 25 you follow those recommendations, correct?</p>
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<p>1 My opinion in terms of this whole context 2 would be that the 5 million particles per cubic feet is 3 specific to the amount of asbestos in the dust, so there's 4 a couple of health service data that indicates it was 40 5 percent. I've seen it as high as 60 percent in terms of 6 Libby amphibole measured. And the fact that workers were 7 displaying disease indicates that caution should have been 8 made with this 5 million particles per cubic feet exposure 9 limit in that wasn't truly, wasn't truly protective. 10 And then along those lines, it appears, based 11 on the information that I reviewed, that when W.R. Grace 12 rejected the 5 million particles per cubic feet and so now 13 we're going to go with a higher one, that that was simply 14 allowed to happen. 15 Q. (By Mr. Johnston) When did the standard change 16 in the U.S.? 17 A. It was 5 million particles per cubic feet from 18 the '40s through, actually, through ACGIH, through the 19 early '70s. And then when OSHA came about, they're now 20 going with a fiber-per-ml concentration. In fact, the 21 standard was changed. 22 Q. So 5 million parts per cubic foot was the 23 standard in 1968 and 1969, correct? 24 A. Correct. 25 Q. And you referenced a recommendation by MCC to</p>	<p>1 A. Well, yes, we -- I don't think we would be 2 insured long if we didn't. 3 Q. And you would agree with me that Maryland 4 Casualty didn't have any control over the Libby plant, 5 correct? 6 MR. LEFTRIDGE: Objection; form, foundation. 7 THE WITNESS: What I read was that they worked 8 hand in hand, Mr. Park worked hand in hand with W.R. Grace 9 personnel to develop their safety program for them, to 10 conduct quarterly inspections, to ensure that workers were 11 receiving health assessments and they were reviewing the 12 positive x-rays. And so I interpret that as control. 13 Q. (By Mr. Johnston) You believe that Maryland 14 Casualty had control over the operations at the Libby 15 plant? 16 MR. LEFTRIDGE: Objection; asked and answered. 17 THE WITNESS: Well, yeah. 18 MR. LEFTRIDGE: Go ahead and answer. 19 THE WITNESS: I interpret their direct 20 involvement with their development of their health and 21 safety plan: We are going to be -- we are insuring you, 22 we will help you develop this plan, here's the plan that 23 you'll follow, we'll conduct inspections on a quarterly 24 basis, we'll ensure that employees are monitored from a 25 health purpose.</p>

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1 There is control. I don't know what level,
 2 but I interpret that as certainly direct involvement, if
 3 not control, in their program.
 4 Q. (By Mr. Johnston) How often was MCC personnel
 5 at the Libby plant?
 6 A. I don't know.
 7 Q. And you would agree with me that W.R. Grace in
 8 many instances rejected or didn't follow recommendations
 9 by MCC, correct?
 10 A. Well, I would say that they followed many in
 11 terms of this 5 million particles per cubic feet. It
 12 appears that somehow they were able to have a higher
 13 exposure limit, but there's evidence, when I read through
 14 the documents, evidence of putting a warning sign to
 15 indicate an overhead hazard.
 16 And so there were certainly numerous instances of
 17 ventilation changes and other recommendation that they
 18 appeared to follow.
 19 Q. Did MCC recommend to W.R. Grace that their
 20 employees wear respirators at all times in dusty
 21 conditions?
 22 A. I believe so, but I don't know what specific
 23 document that was.
 24 Q. Did W.R. Grace follow that recommendation?
 25 A. According to Mr. Hutt's interview, if he was

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1 working in the dry mill, it appears he was allowed to work
 2 without a respirator.
 3 Q. So W.R. Grace did not follow that
 4 recommendation by MCC?
 5 MR. LEFTRIDGE: Objection; form, foundation.
 6 THE WITNESS: I don't know if I can speak for
 7 every single worker other than what Mr. Hutt has told us.
 8 The Bureau of Mines report does indicate respiratory
 9 protection. So I don't know, I don't know how widely used
 10 it was.
 11 Q. (By Mr. Johnston) The Bureau of Mines, in
 12 fact, reported that on its inspection of the plant that
 13 workers were not wearing respirators, correct?
 14 A. I don't know. May I take a moment to review
 15 that?
 16 Q. Sure.
 17 A. Well, in talking about the dry mill, this
 18 report states: The use of a respirator should not be
 19 considered a substitute for environmental controls.
 20 So I would not say that there was no respiratory
 21 protection worn.
 22 On page 2 of the Bureau of Mines report, it
 23 discusses the control mechanisms that were observed during
 24 the sample period. Those include oiling the roadways to
 25 minimize dust. And Bullet No. 4: Bureau approved Dustfoe

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1 77; and American Optical, there's a model number,
 2 respirators were provided for work in dusty areas and
 3 clean filters were furnished on request. Respirators were
 4 required for some job operations and some areas.
 5 Q. So is it your testimony that W.R. Grace
 6 followed MCC's recommendation that respirators be used in
 7 dusty areas?
 8 A. I have conflicting messages. I have a report
 9 that says they were using respirators or at least
 10 providing, but Mr. Hutt testified that he was not provided
 11 an appropriate respirator other than the dust mask.
 12 Q. What did MCC's inspection reports indicate?
 13 MR. LEFTRIDGE: Objection; form, foundation.
 14 THE WITNESS: I'd have to go back and review
 15 them, I don't know.
 16 Q. (By Mr. Johnston) Did MCC have a full-time
 17 safety individual at the W.R. Grace plant?
 18 A. Not to my knowledge. Most of the material is
 19 offered by Mr. Parks. I don't believe he was stationed at
 20 the W.R. Grace site.
 21 Q. Did W.R. Grace have a full-time safety
 22 individual at the Libby plant?
 23 A. I don't know. I saw communication regarding a
 24 safety committee. I honestly don't know.
 25 Q. Was MCC on the safety committee?

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1 A. I don't know about being on a committee, but I
 2 remember reading the health and safety program that
 3 specified the committee and what individuals should be on
 4 the committee. I don't know if one of those was MCC.
 5 Q. In fact, the proposed safety plan did not
 6 indicate that any MCC personnel would be on the safety
 7 committee, correct?
 8 BY MR. LEFTRIDGE: Objection; form,
 9 foundation.
 10 THE WITNESS: I honestly don't know. I'd have
 11 to go back and read exactly who was on there.
 12 Q. (By Mr. Johnston) Looking at page 20 of your
 13 report, Section 3.3 Exposure Levels at Mr. Hutt's
 14 Employment, the first paragraph discusses the Bureau of
 15 Mines report that you mentioned a moment ago, correct?
 16 A. Correct.
 17 Q. And that was two years after Mr. Hutt left the
 18 Libby plant, correct?
 19 A. Yes.
 20 Q. And, again, the next paragraph of your report,
 21 it references or at least uses the information from the
 22 Bureau of Mines report, correct?
 23 A. Correct.
 24 Q. If I could go back a moment to page 19 of your
 25 report, the top of the page, the last sentence of the

1 first full paragraph (quoted as read):
 2 "It is more probable than not to a reasonable
 3 degree of scientific certainty that this occupational
 4 exposure significantly contributed to his overall fiber
 5 burden and was sufficient to cause his asbestos-related
 6 disease."
 7 Do you see that?
 8 A. Yes.
 9 Q. Is that your opinion or is that Dr. Redlich's
 10 opinion?
 11 A. That is my opinion based on Dr. Redlich's
 12 medical evaluation and review of literature, review of
 13 exposure assessment reports.
 14 Q. Did you talk to Dr. Redlich before drafting
 15 your report?
 16 A. I did not, but I reviewed her draft report. I
 17 reviewed the medical history and reviewed extensive
 18 epidemiology literature related to Libby amphibole
 19 asbestos.
 20 Q. What, if anything, from her report are you
 21 relying upon for your opinions in this case?
 22 A. So Dr. Redlich has indicated that Mr. Hutt has
 23 asbestos-related disease. She's indicated that his
 24 asbestos-related disease is nonmalignant respiratory
 25 disease with specific types of fibroses identified. She's

1 A. Yes.
 2 Q. Okay. Who is responsible for giving those
 3 warnings?
 4 A. I think it's the direct responsibility of the
 5 health and safety program management. And so in this
 6 case, the health and safety program was developed by
 7 Maryland Casualty. They regularly inspected and they
 8 provided warning on other hazards at the facility.
 9 Q. MCC provided the warning or made the
 10 recommendation that warnings be given?
 11 A. Made the recommendation.
 12 Q. In fact, it's the employer's responsibility to
 13 give the warnings, correct?
 14 MR. LEFTRIDGE: Objection; form, foundation,
 15 asked and answered.
 16 THE WITNESS: In this situation or in this
 17 case, W.R. Grace was relying on the guidance and the
 18 direction of their health and safety program from Maryland
 19 Casualty. So along with the other provisions of the
 20 program, employee warning is a critical aspect to disease
 21 prevention.
 22 Q. (By Mr. Johnston) But Grace didn't always
 23 follow the recommendations of MCC, correct?
 24 MR. LEFTRIDGE: Objection; foundation, asked
 25 and answered.

1 also opined that this is consistent with asbestos
 2 exposure. And so all of those would be critical to me
 3 forming an opinion, along with other relevant literature
 4 pertaining to Libby amphibole asbestos.
 5 Q. When did you receive a copy of her draft
 6 report?
 7 A. I don't know exactly, but I know it was before
 8 finalizing my report. I don't know the exact date.
 9 Q. Was it a matter of days before your report was
 10 finalized or did you get it a few weeks in advance?
 11 A. A few weeks is my best estimate.
 12 Q. On the final page of your report under
 13 "Conclusion," I'm looking at the second paragraph now
 14 which is the last paragraph of your report, it says:
 15 "Furthermore, with exposure levels this
 16 extreme, it is imperative to warn those exposed to the
 17 hazard of the danger. Given this level of toxic exposure,
 18 necessary warnings should have reflected the hidden nature
 19 of the asbestos hazard, the degree of the hazard, the
 20 consequences of the excessive exposures, and how to
 21 protect oneself from the hazard."
 22 Do you see that?
 23 A. Yes.
 24 Q. And are these opinions that you intend to
 25 render at trial in this case?

1 THE WITNESS: Well, as noted, they appeared
 2 not to follow the 5 or not to adhere to the 5 million
 3 particles per cubic feet, but there were several examples
 4 that I read where they did follow ventilation changes,
 5 other warning signs.
 6 Q. (By Mr. Johnston) So sometimes they'd follow
 7 the recommendations, sometimes they didn't, correct?
 8 A. Correct.
 9 Q. You indicated it is a responsibility of the
 10 health and safety program management. MCC wasn't part of
 11 the safety committee at W.R. Grace, correct?
 12 MR. LEFTRIDGE: Objection; form.
 13 THE WITNESS: I don't know. As I indicated
 14 earlier, I'd have to go back and review to see exactly who
 15 was designated on that safety committee. Certainly, the
 16 committee itself and the whole concept behind the
 17 committee was part of the overall safety program by which
 18 Maryland Casualty was providing direction.
 19 Q. (By Mr. Johnston) They were providing
 20 recommendations, correct?
 21 A. Correct.
 22 Q. And W.R. Grace was administering that program,
 23 correct?
 24 MR. LEFTRIDGE: Objection; form, foundation,
 25 asked and answered.

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1 THE WITNESS: Again, I think W.R. Grace was
 2 relying on their guidance, their direction, at least based
 3 on everything I read. And so it would be who -- I
 4 don't --
 5 Q. (By Mr. Johnston) Well, who --
 6 A. -- have any more to add. I'm sorry.
 7 Q. Well, who administered the safety program?
 8 A. The safety program was written and directed by
 9 Maryland Casualty.
 10 Q. That's not my question. My question is: Who
 11 administered it once it was in final form?
 12 MR. LEFTRIDGE: Objection; asked and answered.
 13 THE WITNESS: I would say it was both Maryland
 14 Casualty and, in terms of implementing recommendations and
 15 so forth, W.R. Grace took the action at various times to
 16 implement the recommendations provided.
 17 Q. (By Mr. Johnston) W.R. Grace, correct?
 18 MR. LEFTRIDGE: Objection; form.
 19 Q. (By Mr. Johnston) With respect to the warnings
 20 that you reference on page 21, what was the standard of
 21 care for warnings in 1968 and 1969?
 22 A. I don't know. I know that as early as the
 23 '40s, the international labor organization and other
 24 groups had guidance documents, but I'd have to revisit.
 25 Q. Was there anything from the ACGIH that you're

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1 relying upon to establish a standard of care in 1968 and
 2 1969?
 3 A. Well, certainly, I would rely on ACGIH
 4 exposure limits.
 5 Q. But those are exposure limits. Those aren't
 6 warning requirements, are they?
 7 A. No.
 8 Q. Okay. Is there anything, then, that you're
 9 relying upon in terms of the literature as support for
 10 your final paragraph in your report on page 21?
 11 A. You're talking specifically about literature
 12 from 1968 or 1969; is that correct --
 13 Q. Yes.
 14 A. -- am I interpreting your question?
 15 Q. Yes.
 16 A. I'm not familiar with a specific requirement.
 17 I'd have to visit that in terms of that era.
 18 Q. Is there anything you're relying upon as
 19 support for your final paragraph in your report on page
 20 21?
 21 A. Appropriate industrial hygiene practices, if
 22 workers are not aware of a hazard, they'll be considerably
 23 less likely to take measures to reduce their exposures to
 24 a hazard.
 25 Q. But what I'm looking for is: What establishes

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1 the standard of care in 1968 and 1969 with respect to
 2 warnings?
 3 A. I don't know.
 4 Q. That's all the questions I have. I don't know
 5 if folks on the phone have any.
 6 MR. SEIFERT: None here.
 7 UNIDENTIFIED SPEAKER: None here.
 8 MS. MATIC: No questions from the State.
 9 MR. LEFTRIDGE: Can we take a 5-minute break?
 10 MR. JOHNSTON: Yeah, why don't we take a
 11 5-minute break.
 12 (A brief recess was taken.)
 13
 14 BY MR. LEFTRIDGE:
 15 Q. Dr. Hart, I just have a few questions for
 16 clarification. First, you were talking about the area
 17 called "the Yaak" that Mr. Hutt logged in.
 18 A. Um-hmm [affirmative].
 19 Q. And you were talking about how it extended up
 20 Pipe Creek Road; is that correct?
 21 A. Well, it extended up Turner Mountain and,
 22 yeah, it is an extension of Pipe Creek Road but extends on
 23 beyond. That's where the landfill and Turner Mountain is,
 24 and it goes clear into Idaho.
 25 Q. Yeah, that Pipe Creek Road continues and turns

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1 into the Yaak River Road, which goes up kind of by the
 2 Canada border and over by Idaho before dropping down. Is
 3 that your understanding?
 4 A. Yes.
 5 Q. So that whole area, which is a pretty large
 6 swath of Northwest Montana, is kind of referred to as "the
 7 Yaak"?
 8 A. Yes.
 9 Q. Okay. And that general area, that large,
 10 general area is what Mr. Hutt was referring to when he
 11 said he was logging up the Yaak?
 12 A. That's my understanding, yes.
 13 Q. And in terms of your professional and academic
 14 analysis of the area, the forest area that was
 15 contaminated with asbestos fibers, was that broad swath of
 16 the Yaak considered to be contaminated?
 17 A. Well, it's typically outside of the EPA
 18 concentric radii assessment that was performed on soil and
 19 duff and bark. It's quite a ways toward Libby. It's
 20 closer to Libby than it is the mine.
 21 Q. And have you done an analysis of Mr. Hutt's
 22 work exposure during his period of logging and other
 23 occupational -- other jobs over his career?
 24 A. I have done, using the risk assessment, risk
 25 model for the RFC, I have done a hazard index assessment

Page 81	<p>1 of his occupational history as he described it. And his 2 occupational history indicated hazard, I believe I have 3 noted that in my report, I think there were well over a 4 couple hundred, if I remember correctly. 5 Q. In your analysis, did you take into account 6 any of his other employments besides W.R. Grace? 7 A. I did not with that initial analysis, but I 8 easily could. The initial analysis was so high from his 9 occupational, from his 19 months of occupational, that we 10 have a guidance from the EPA that hazard indices greater 11 than one indicate not necessarily that an effect will 12 occur, but the larger the index value, the more likely an 13 adverse effect will occur. I was seeing, as I noted, 14 several hundred due to occupational. 15 Q. In any of his other employments - including 16 his logging or his other mine work or, really, any of his 17 other occupational, his other jobs - would you consider 18 that cumulatively to be a substantial exposure to 19 Mr. Hutt? 20 A. Not in any degree that I observed with his 21 occupational. While I noted in our discussions today that 22 most likely multiple pathways contribute to an 23 individual's disease, certainly, the occupational was so 24 severe in terms of the intensity of his exposure that I 25 would anticipate his others to be very minor in relation</p>	Page 83	<p>1 Q. When evaluating community exposure, do you 2 take into account a take-home exposure as part of a 3 community exposure? 4 A. Are you referring to taking home on clothing 5 and other material from the job -- 6 Q. Yes. 7 A. -- and then later exposed within the home or 8 through that pathway? 9 Q. Yes. 10 A. Take-home exposures are, if they're related to 11 occupational sources, are typically considered an 12 extension of the occupational exposure. There have been 13 many studies and a NIOSH publication on the severity of 14 take-home exposures within worker populations. 15 Q. You were talking earlier about warnings and 16 the responsibility of providing those warnings. You 17 testified that part of that responsibility falls on the 18 health and safety program management; is that correct? 19 A. Yes. 20 Q. What is your definition of who's entailed in a 21 health and safety program management? What does that mean 22 to you? 23 A. Well, it's usually an extensive network of 24 processes. And many times individuals -- first of all, in 25 the development of a program from the ground up, it's</p>
Page 82	<p>1 to it. 2 Q. And when you're talking "occupational," you're 3 talking about W.R. Grace? 4 A. Yes, yes. 5 Q. So his logging was not a substantial factor in 6 the development of his exposure? 7 MR. LEFTRIDGE: Objection; form. 8 THE WITNESS: It's unlikely based on where he 9 was logging, and the results of bark and soil and duff 10 assessments. 11 Q. (By Mr. Johnston) Have you also conducted an 12 analysis of his what's called "nonwork-related exposure" 13 or "community exposure"? 14 A. I have not included any community exposure in 15 my analysis. It's very difficult to quantify. He lived 16 in Troy versus Libby. And, again, I would anticipate 17 those exposures to be substantially lower than what he 18 experienced at the mine. 19 Q. When you say "Troy versus Libby," Troy was 20 further away from the W.R. Grace Mine and many of the 21 operations that existed inside of the community of Libby? 22 A. Correct. 23 Q. And that's part of your analysis of why the 24 community exposure was insignificant? 25 A. Correct.</p>	Page 84	<p>1 critical to understand what potential hazards you have, 2 and then from that approach, develop guidances for 3 managing the hazards and minimizing, minimizing risk, 4 minimizing exposures, informing/educating workers as to 5 where those hazards are so that they can make informed 6 decisions as well, and then continuously assessing that 7 and in terms of program effectiveness, and so forth. 8 Q. I have no further questions. Thank you, 9 Doctor. 10 11 BY MR. JOHNSTON: 12 Q. Just a few follow-up questions based on those 13 questions from Counsel. 14 Dr. Hart, what did you discuss during our break just 15 now between my final questions and the ones you were just 16 asked by Counsel? 17 A. We discussed clarification of the Yaak. I had 18 the Yaak extending to Turner Mountain versus being a 19 larger geographical area. We discussed what my opinion 20 was in terms of what constitutes a safety program, and 21 then we talked about community versus occupational 22 exposures. 23 Q. Are you aware that Mr. Hutt lived with his 24 parents for a time period before working at the W.R. Grace 25 plant?</p>

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1 A. Yes, it's my understanding that he lived there
 2 before and during part of his employment with W.R. Grace.
 3 Q. Okay. And prior to working at W.R. Grace,
 4 Mr. Hutt's father was employed at the Libby plant,
 5 correct?
 6 A. Correct.
 7 Q. And, in fact, prior to Mr. Hutt working for
 8 W.R. Grace, his father would bring home dust from his time
 9 while working at the Libby plant, correct?
 10 A. That's certainly possible.
 11 Q. Did you ask Mr. Hutt about that when you
 12 interviewed him?
 13 A. No.
 14 Q. Did you see any reference to that in either
 15 Mr. Hutt's deposition or any other documents in this case?
 16 A. I saw reference to his father's work history.
 17 I don't recall seeing reference to denoting that as
 18 potentially -- potential take home.
 19 Q. Okay. If an employee at the Libby plant took
 20 home dust to his or her household and exposed other
 21 members of the household, that would be community
 22 exposure, correct?
 23 A. If the individual worked at a site and
 24 transferred contaminants to the home that exposed that
 25 individual once again, I would consider that a secondary

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1 occupational for that individual. If it were family
 2 members, then that gets a little fuzzy with family
 3 members. It's not truly occupational, but it's
 4 occupationally derived, and so it could be a component of
 5 community for the family members.
 6 Q. Are you aware of Mr. Hutt gardening with any
 7 vermiculite at any point in time?
 8 A. I do recall in, I believe it was,
 9 Dr. Redlich's report, noting an occasion where he gardened
 10 with vermiculite. I think it was that he hauled a few
 11 bags, or something like that, and he used it for gardening
 12 purposes.
 13 Q. And you would consider that community
 14 exposure, correct?
 15 A. Yes.
 16 Q. You referenced a hazard index a moment ago.
 17 A. Yes.
 18 Q. What is the hazard index that you were
 19 referring to?
 20 A. So the RFC is specific for Libby amphibole
 21 asbestos for noncancer effects. And there is an RFC,
 22 again, specific for Libby, and there's also an inhalation
 23 unit risk for cancer effects. And that RFC and exposure
 24 durations and exposure concentrations can be applied with
 25 the RFC to indicate the degree of hazard as part of a risk

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1 assessment processor, or it can be applied for the
 2 potential for the risk of cancer effects if we're talking
 3 about the inhalation unit risk.
 4 Q. Where can I find the RFC and/or hazard index?
 5 Is that an EPA document? I couldn't find it in your
 6 report. I know that you reference the RFC, but I was
 7 looking for the source document.
 8 A. The RFC is on page 27 of my report, U.S.
 9 Environmental Protection Agency 2014b is the toxicological
 10 review of Libby amphibole asbestos where the RFC was
 11 originally published. And then the US EPA 2014a is
 12 applying the RFC in human health risk assessments.
 13 Q. And the literature, the list of literature
 14 attached to your report here, the references cited, is
 15 this a summary of all of the various sources that are
 16 cited throughout your report?
 17 A. Yes.
 18 Q. Okay. Are there any additional references or
 19 cites in here that aren't within your report?
 20 A. Not that I'm aware of.
 21 Q. Okay. And the references, did you compile
 22 this list or identify each of these references on your
 23 own, or did you rely upon anyone else for these
 24 references?
 25 A. I did this on my own. Sometimes I'll use a

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1 reference-citing software, but it's all part of my
 2 database.
 3 Q. Okay. You were asked a couple of questions
 4 about the health and safety management, program
 5 management. Do you remember that?
 6 A. Yes.
 7 Q. In fact, W.R. Grace was receiving
 8 recommendations from entities above and beyond MCC,
 9 correct?
 10 MR. LEFTRIDGE: Objection; form, foundation.
 11 THE WITNESS: Well, they were receiving, they
 12 were receiving reports from the State, from Bureau of
 13 Mines. Those two come to mind specifically.
 14 Q. (By Mr. Johnston) Do you recall any
 15 recommendations from Johns-Manville?
 16 A. I remember reading in Dr. Spear's report about
 17 W.R. Grace personnel visiting a Johns-Manville site and
 18 seeking guidance on how they can improve conditions.
 19 Q. Are you aware of assessments or inspections
 20 by Johns-Manville of the Libby plant?
 21 A. I am not.
 22 Q. Are you aware of any recommendations that
 23 Johns-Manville provided W.R. Grace concerning operations
 24 at the Libby plant?
 25 A. No.

1 Q. Okay. If they, in fact, had given them safety
 2 recommendations, would you consider Johns-Manville part of
 3 the health and safety program management?
 4 MR. LEFTRIDGE: Objection; form.
 5 THE WITNESS: No. I would consider them
 6 peers. I mean, it was my understanding they were seeking
 7 out Johns-Manville as their peer operation. "You're doing
 8 things. How can we improve?"
 9 I don't see Johns-Manville of having any type
 10 of oversight or direction for W.R. Grace.
 11 Q. (By Mr. Johnston) They wouldn't have any
 12 control over the Libby plant, Johns-Manville, correct?
 13 A. Right. I think they were just peers, yeah,
 14 saying, "Here's what we do."
 15 Q. Right. And they wouldn't have any authority
 16 to implement anything at the Libby plant, correct?
 17 A. No; correct, yes.
 18 Q. But their recommendations were focused on
 19 minimizing risks at the Libby plant, correct?
 20 MR. LEFTRIDGE: Objection; form.
 21 THE WITNESS: Again, I'm only familiar with
 22 Grace personnel visiting their site. I don't recall doing
 23 any assessment at W.R. Grace sites.
 24 MR. JOHNSTON: Okay. That's all the questions
 25 I have.

1 STATE OF MONTANA)
 2 :
 3 County of Silver Bow)
 4 I, Candice L. Nordhagen, Court Reporter - Notary
 5 Public in and for the County of Silver Bow, State of
 6 Montana, do hereby certify:
 7
 8 That the witness in the foregoing deposition, Julie
 9 F. Hart, Ph.D., was by me first duly sworn according to
 10 law in the foregoing cause; that the deposition was then
 11 taken before me at the time and place herein named; that
 12 the deposition was reported by me in machine shorthand and
 13 later transcribed by computer, and that the foregoing
 14 ninety (90) pages contain a true record of the witness,
 15 all done to the best of my skill and ability.
 16 IN WITNESS WHEREOF, I have hereunto set my hand and
 17 affixed my notarial seal this _____ day of _____,
 18 2018.
 19
 20
 21
 22 _____
 23 Candice L. Nordhagen
 24 Notary Public for the State of
 25 Montana residing at Butte,
 Montana. My commission
 (NOTARIAL SEAL) expires October 26, 2020.

1 BY MR. LEFTRIDGE:
 2 Q. Before we go off the record, Dr. Hart,
 3 earlier, you had referenced a flash drive of reliance
 4 documents that you didn't bring today; is that correct?
 5 A. That's correct.
 6 Q. Okay. And will you provide me a copy? And
 7 we'll give it to Counsel and include it, perhaps, as an
 8 exhibit here?
 9 MR. JOHNSTON: Yeah, that would be fine. I
 10 think we're up to Exhibit 6. If we want to just identify
 11 that now on the record as Exhibit 6, the flash drive.
 12 MR. LEFTRIDGE: That sounds good.
 13 (The deposition concluded at
 14 approximately 12:40 p.m.)
 15 (Signature reserved.)
 16
 17 * * * * *
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 25

1 DEPOSITION OF: JULIE F. HART, Ph.D.
 2 DEPOSITION DATE: NOVEMBER 19, 2018
 3 IN RE: ASBESTOS LITIGATION, HUTT vs. MARYLAND
 4 CASUALTY COMPANY
 5
 6 COURT REPORTER: CANDICE L. NORDHAGEN
 7
 8 I have read my deposition and make the following
 9 corrections or additions:
 10
 11
 12
 13
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 15
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 18
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 21
 22
 23
 24
 25
 Signed under penalty of perjury this _____ day
 of _____, _____.

 Julie F. Hart, Ph.D.

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