

UNITED STATES BANKRUPTCY COURT  
WESTERN DISTRICT OF NORTH CAROLINA  
CHARLOTTE DIVISION

ARMSTRONG WORLD INDUSTRIES,  
INC. ASBESTOS PERSONAL INJURY  
SETTLEMENT TRUST, *et al.*,

Plaintiffs,

v.

ALDRICH PUMP LLC, *et al.*

Defendants.

In re:

ALDRICH PUMP LLC, *et al.*,<sup>1</sup>

Debtors.

Miscellaneous Proceeding

No. 22-303 (JCW)

(Transferred from the District of Delaware)

Chapter 11

No. 20-30608 (JCW)

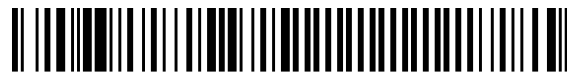
**DECLARATION OF BETH MOSKOW-SCHNOLL IN SUPPORT OF THIRD-PARTY  
ASBESTOS TRUSTS' SUPPLEMENTAL FILING IN OPPOSITION TO DEBTORS'  
MOTION FOR REHEARING CONCERNING THE ISSUE OF  
SAMPLING ON DCPF'S SUBPOENA-RELATED MOTIONS**

I, Beth Moskow-Schnoll, declare:

1. I am a partner at the law firm of Ballard Spahr LLP. My office is located at 919 N. Market Street, 11<sup>th</sup> Floor, Wilmington, Delaware 19801. I am a member in good standing of the Bar of the State of Delaware. There are no disciplinary proceedings pending against me.

2. I submit this declaration in connection with the Third-Party Asbestos Trusts'

<sup>1</sup> The Debtors are the following entities (the last four digits of their respective taxpayer identification numbers follow in parentheses): Aldrich Pump LLC (2290) and Murray Boiler LLC (0679). The Debtors' address is 800-E Beaty Street, Davidson, North Carolina 28036.



203060823051600000000010

Supplemental Filing in Opposition to Debtors' Motion for Rehearing Concerning the Issue of Sampling on DCPF's Subpoena-Related Motions filed contemporaneously herewith. I have personal knowledge of the matters set forth herein.

3. Attached as **Exhibit A** is a true and correct copy of Dr. Abraham Wyner's expert report in the above-captioned actions, served on all counsel of record on April 25, 2023.

4. Attached as **Exhibit B** is a true and correct copy of the transcript of the deposition of Debtors' expert Dr. Charles Mullin, taken in the above-captioned actions on May 8, 2023.

5. Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Dated: May 15, 2023



Beth Moskow-Schnoll  
Ballard Spahr LLP  
919 N. Market Street, 11<sup>th</sup> Floor  
Wilmington, DE 19801  
(302) 252-4465  
moskowb@ballardspahr.com

*Attorney for Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust; The Babcock & Wilcox Company Asbestos PI Trust; Celotex Asbestos Settlement Trust; DII Industries, LLC Asbestos PI Trust; Federal-Mogul Asbestos Personal Injury Trust; Flintkote Asbestos Trust; Owens Corning / Fibreboard Asbestos Personal Injury Trust; Pittsburgh Corning Corporation Asbestos Personal Injury Settlement Trust; United States Gypsum Asbestos Personal Injury Settlement Trust; and WRG Asbestos PI Trust*

# EXHIBIT A

**UNITED STATES BANKRUPTCY COURT  
WESTERN DISTRICT OF NORTH CAROLINA  
CHARLOTTE DIVISION**

In re  ALDRICH PUMP LLC, <i>et al.</i> , <sup>1</sup>  Debtors.	Chapter 11  Case No. 20-30608 (JCW)  (Jointly Administered)
ARMSTRONG WORLD INDUSTRIES, INC. ASBESTOS PERSONAL INJURY SETTLEMENT TRUST <i>et al.</i> ,  Plaintiff(s),  v.  ALDRICH PUMP LLC, <i>et al.</i>  Defendant(s).	Miscellaneous Pleading  No. 22-00303 (JCW) (Transferred from District of Delaware)
AC&S ASBESTOS SETTLEMENT TRUST, COMBUSTION ENGINEERING 524(G) ASBESTOS PI TRUST, GI HOLDINGS INC. ASBESTOS PERSONAL INJURY SETTLEMENT TRUST, GST SETTLEMENT FACILITY, KAISER ALUMINUM & CHEMICAL CORPORATION ASBESTOS PERSONAL INJURY TRUST, QUIGLEY COMPANY, INC. ASBESTOS PI TRUST T H AGRICULTURE & NUTRITION, L.L.C. ASBESTOS PERSONAL INJURY TRUST, and YARWAY ASBESTOS PERSONAL INJURY TRUST,  Petitioners,  v.	Miscellaneous Pleading  No. 23-00300 (JCW) (Transferred from District of New Jersey)

<sup>1</sup> The Debtors are the following entities (the last four digits of their respective taxpayer identification numbers follow in parentheses): Aldrich Pump LLC (2290) and Murray Boiler LLC (0679). The Debtors' address is 800-E Beaty Street, Davidson, North Carolina 28036.

ALDRICH PUMP LLC and MURRAY BOILER  
LLC,

Respondents,

VERUS CLAIM SERVICES, LLC,

Interested Party,

NON-PARTY CERTAIN MATCHING  
CLAIMANTS,

Interested Party.

**EXPERT REPORT OF ABRAHAM J. WYNER, PH.D.**

**I. INTRODUCTION & QUALIFICATIONS**

1. I am a Tenured Full Professor of Statistics and Data Science at University of Pennsylvania's Wharton School. I am also the Chair of the University's Undergraduate Program in Statistics. I also co-direct the Wharton People Analytics Initiative and the Wharton Sports Analytics and Business Initiative.

2. I completed my undergraduate education magna cum laude at Yale University with a Bachelor of Science in Mathematics in 1988. I then earned my Ph.D. in Statistics from Stanford University in 1993.

3. My conclusions in this report are based on my more than 25 years of professional and academic experience in the relevant field of statistics. During this time, I have worked with many large intersecting data sets (including asbestos trusts) and I am familiar with the complexities involved in extracting the data that is needed to do an analysis. My research interests have been broad. I have published across many methods and applications including Applied Probability, Information Theory, Mathematical Analysis of Algorithms, Machine Learning, Applied Statistical Analysis, and Bayesian Hierarchical Modeling.

4. I am being compensated at a rate of \$1,000 per hour for my efforts in connection with the preparation of this report. My compensation is in no way contingent on the results of this or any other proceeding. I have no financial interest in the outcome of this matter.

## **II. SCOPE OF MY REPORT**

5. I have been asked by counsel for the DCPF Trusts<sup>2</sup>, the Delaware Claims Processing Facility, LLC, the Verus Trusts<sup>3</sup>, and Verus Claims Services, LLC, to respond to the Declaration of Charles H. Mullin, Ph.D.<sup>4</sup>, submitted in support of Aldrich Murray LLC and Murray Boiler LLC's (the "Debtors") Motion for Rehearing, regarding the relative cost/benefits of sampling versus a full population census of the 12,000 at-issue claimants. I will opine on the accuracy and sufficiency of a sample of 1,200 claimants (10% of total population) for reasonable purposes.

6. As described in detail below, it is my opinion that a random 10% sample of 1,200 claimants would fulfill all of the Debtors' reasonable needs. My opinion and others described herein reflect my evaluation of the sources listed in Exhibit A to this report. I expressly reserve the right to modify, amend, and/or supplement my opinions expressed herein to respond to any arguments made by the Debtors directly, or through the testimony of its experts, in response to my opinions expressed herein, or to consider any new evidence that becomes available.

---

<sup>2</sup> The DCPF Trusts are the Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust; The Babcock & Wilcox Company Asbestos PI Trust; Celotex Asbestos Settlement Trust; DII Industries, LLC Asbestos PI Trust; Federal-Mogul Asbestos Personal Injury Trust; Flintkote Asbestos Trust; Owens Corning / Fibreboard Asbestos Personal Injury Trust; Pittsburgh Corning Corporation Asbestos Personal Injury Settlement Trust; United States Gypsum Asbestos Personal Injury Settlement Trust; and WRG Asbestos PI Trust.

<sup>3</sup> The Verus Trusts are ACandS Asbestos Settlement Trust; Combustion Engineering 524(g) Asbestos PI Trust; G-I Holdings Inc. Asbestos Personal Injury Settlement Trust; GST Settlement Facility; Kaiser Aluminum & Chemical Corporation Asbestos Personal Injury Trust; Quigley Company, Inc. Asbestos PI Trust; T H Agriculture & Nutrition, L.L.C. Asbestos Personal Injury Trust; and Yarway Asbestos Personal Injury Trust.

<sup>4</sup> Declaration of Charles H. Mullin, Ph.D., No. 22-mc-303 (JCW) (Dkt. No. 55) (the "Mullin Declaration").

7. If called to testify, I may also explain principles and terminology referred and alluded to in this report, as well as any documents referenced herein. I may also use demonstrative exhibits, animations, and other such testimonial aids in support of my testimony to illustrate the bases of my opinion.

### **III. DR. MULLIN'S DECLARATION**

8. Dr. Mullin's declaration is fundamentally an analysis that compares the costs of sampling (a potential increase in analysis time for recipient of data and loss of accuracy) to its benefits (reduction in privacy risk and lowering of administrative costs for provider). Most of the report is an attempt to downplay the privacy risks and emphasize a potential loss in accuracy, while attempting to downplay the contradictory, pro-samplings arguments made in the *Bestwall* case<sup>5</sup> by his colleague at Bates White, Jorge Gallardo-García, Ph.D., who clearly states that sampling is sufficient. At no point does Dr. Mullin quantify the potential loss of accuracy. He implies the loss is substantial enough to justify the costs without explanation, calculation, or quantification of any kind.

### **IV. SUMMARY OF MY OPINIONS**

9. It is my opinion that a random sample that is large (10%), weighted or stratified towards larger settlement values, would be practically and materially no less accurate than a full census of the approximately 12,000 claimants in the targeted population. Such a sample has already been discussed in the *Bestwall* Declaration, which does not identify any attribute of the population that cannot be accurately studied with a sample. The Debtors have further proposed a

---

<sup>5</sup> Declaration of Jorge Gallardo-García, PHD, *In re Bestwall LLC*, Bankr. No. 17-31795 (LTB) (Dkt. No. 2183) (the "*Bestwall* Declaration").

variation of that sampling design here, which they acknowledge provides a “reliable cross-section” of the targeted population.<sup>6</sup>

10. Consequently, there would be no practical or material benefit to requiring the production of the full population. In addition, there is a risk of an inadvertent dissemination of highly confidential data. The likelihood of such breach may be small, but the damage would be large if it occurred. If only 10% of the target population is produced, the damage in the resulting data breach to the individual claimants can be expected to be 10 times smaller because it would involve 10 times fewer claimants.

## **V. DISCUSSION**

### **A. The accuracy of sampling versus a full census**

11. Let me begin with an analogy. In the sport of football, it is generally regarded that taller quarterbacks are advantaged over shorter quarterbacks, if all other attributes are the same. Therefore, when drafting a quarterback, an NFL team has to consider height among the many considerations. If they were comparing two potential picks, one who is 6 feet and 1.00 inch (exactly) tall and another who is 6 feet and 0.99 inches tall, they would consider their heights to be practically and materially the same, even though it is technically true that there is a 0.01 inch difference in height. When comparing them, height would not be considered at all and only the other attributes would be discussed and weighed to make the determination. Similarly, when discussing samples of various sizes, it can often happen that there is no practical or material advantage gained with the larger dataset.

---

<sup>6</sup> Dec. 19, 2022 Email from Morgan R. Hirst (the “December Sampling Proposal”). It is my understanding that, since the Debtors made the December Sampling Proposal, the Debtors nearly reached agreement with the Official Committee of Asbestos Personal Injury Claimants and the Future Claimants’ Representative on a sampling proposal. I cannot opine specifically on this sampling proposal as it was not provided to the DCPF Trusts, the Delaware Claims Processing Facility, LLC, the Verus Trusts, or Verus Claims Services, LLC.



12. Dr. Mullin emphasizes that smaller samples can be less accurate than larger samples<sup>7</sup>, but he does not address the central question at issue here: *is a large, efficient 10% sample, materially and practically equivalent to a complete census?* As explained below, the answer to this question is yes – a 10% sample, as a practical matter, is just as good as a full census for the purposes described by Dr. Mullin and the Debtors’ reasonable needs.

13. The starting point for this analysis requires an understanding of what can make a sample inaccurate. Samples are most familiar in matters that involve polling and surveys. These samples are indeed frequently deficient and inaccurate, but not because they are too small. The typical samples seen and discussed in the media suffer from “sampling bias.”<sup>8</sup> They have characteristics that are invariably different from the population in key ways. But sampling bias is not an issue here, since the population is enumerable and identifiable. In other words, all the claimants in the Debtors’ database are known.

14. In fact, a trained statistician with access to an enumerated list of individuals in a targeted population can easily create a sample that makes optimal use of the data. Such a design was already proposed in the *Bestwall* Declaration, and a variation of that design was proposed by the Debtors here in the December Sampling Proposal.<sup>9</sup>

---

<sup>7</sup> Mullin Decl., ¶ 10.

<sup>8</sup> Sampling bias occurs when subjects with different attributes have different and unknown chances of inclusion in the sample.

<sup>9</sup> The sample set forth in the *Bestwall* Declaration and the Debtors’ December Sampling Proposal are of a stratified design, where samples of different sizes are taken from a large number of categories (called strata). Another approach, known as weighted sampling, would weight the probability of inclusion in the sample according to a specific attribute. For example, claimants can be included with probability in direct proportion to their settlement value. This “weighted” approach can be highly efficient and simple to analyze. It also requires fewer arbitrary decisions that may go into defining strata.

**B. A random 10% sample fulfills all of the Debtors' reasonable needs**

15. With an unbiased sample, it is possible to measure the precision of a sample when there is a specific characteristic of the population (called a “parameter”) that is the subject and purpose of the data analysis. Dr. Mullin does not specify precisely the parameter that he or the Debtors intend to measure. But he does sketch the general ideas:

Specifically, the data would allow us to compare exposure allegations to the products of the reorganized entities for which the trusts were established with the exposures those same claimants disclosed in their tort litigation against the Debtors. This would enable us to *quantify the proportion of alternative exposures* disclosed to the Debtors at the time of settlement.<sup>10</sup>

Thus, the first parameter of interest is a proportion of claimants that failed to disclose alternative exposures.

16. When the parameter of interest is a proportion (which is a percentage between 0% and 100%), then the equivalent sample proportion is an “estimate” of the parameter. The accuracy of an estimate is measured using the laws of probability theory, by calculating the “standard error” of the estimate, which is defined to be the typical<sup>11</sup> difference between the sample proportion and the population proportion.

17. For example, if the true population proportion of claimants that have undisclosed alternative exposures is 5%, and the sample proportion of the same quantity is 4% then the difference is called the sampling error, which in this example is 1%. The standard error quantifies this difference in frequency terms. For example, if the true population proportion were 10% and the standard error were 1% then most samples (about 2/3 of samples) would have a sample proportion between 9% and 11% and it would be very unusual (about 5% of samples) for the

---

<sup>10</sup> Mullin Decl., ¶ 16 (emphasis added).

<sup>11</sup> The standard error is the standard deviation of the difference between the sample proportion and the population proportion, where the variation is caused by sampling.

sample proportion to be greater than 12% or less than 8%. This means that any attribute that the whole population has will be mirrored closely in the population. If the population proportion is 10%, the sample proportion is very likely to be very close to 10%. If the population has a proportion of 2%, the sample proportion will be very close to 2%.

18. One of the most useful formulas in statistics, tells us that, for a simple random sample, the standard error of a sample proportion is at most  $\frac{1}{2\sqrt{n}}$ , where  $n$  is the sample size.<sup>12</sup> Thus, a simple sample of 1,200 drawn from a population of 12,000 (10% of the total) has a standard error that is *less than 1.5%*. This means that, whatever the true percentage of claimants that failed to disclose alternative exposures, the results from a simple random sample of 10% of the population would likely be within 1.5% of the true population proportion.

19. It is common to double the standard error to be extra sure about the range of possible values. So in the case of a simple random sample of size 1,200, we can be nearly certain that the true population proportion is within 3% of the number that is calculated from the sample. If there is a practical purpose for this data that requires more accuracy than this, it has never been disclosed or argued, certainly not by Dr. Mullin.

20. In practice, however, the standard error for a simple sample of 1,200 observations (10% of the total) will usually be a lot smaller than 1.5%. If the true population proportion were 5%, then the standard error would be less than 0.6%. A stratified sample (like the methodologies proposed in the *Bestwall* Declaration and the December Sampling Proposal) can even be more efficient.

---

<sup>12</sup> The precise formula for the standard error of a sample proportion is  $\frac{\sqrt{p(1-p)}}{\sqrt{n}}$  where  $p$  = true proportion. This is always less than  $\frac{1}{2\sqrt{n}}$ .

21. A stratified sample groups the population into different “strata” and samples more frequently from strata with higher variability. This approach is more efficient in the sense that it makes optimal use of each data point. The reason for this has to do with the importance of each observation to the conclusion. In a simple random sample, every claimant has equal likelihood of inclusion. In a stratified sample, like the one in *Bestwall*, claimants that have very low settlements are less likely to be included. This is more efficient since the consequence of any improper disclosure is smaller for smaller settlements so fewer small settlements are needed to estimate their impact. In the end, this means that, with the same sample size, the resulting standard errors can be lower than in a simple random sample.

22. Thus, for purposes of testing the first parameter of interest, the proportion of claimants that failed to disclose alternative exposures, a simple or stratified random sample would provide an exceedingly accurate result. The very small uncertainty in the proportion that remains after sampling will have no practical impact on the claim evaluation process. In fact, as I will explain later, this uncertainty is very much smaller than the modeling uncertainty about claims valuations.

23. Dr. Mullin also discusses a second parameter of interest:

Further, if full disclosure has not occurred, then variation in disclosure patterns would allow us to model the impact of partial information on settlement amounts. If that information is not communicated to a defendant, a plaintiff can artificially increase settlement amounts in a number of different ways.<sup>13</sup>

Dr. Mullin suggests that he wants to measure the impact of non-disclosure on settlement amounts. The assumption here is that a claimant who fails to disclose their exposure completely would have been owed a smaller settlement value had they in fact disclosed such information. The overall

---

<sup>13</sup> Mullin Decl., ¶ 17.

average impact of such non-disclosures would be a population parameter of great interest. For this parameter, at issue before the Court is the following question: *If a sample were used to estimate this value, how precise would that estimate be?*

24. Because the *proportion* of non-disclosed claimants has a very small standard error, it follows, if all the settlements were the same size, that the standard error of the overall average impact would also be small. If the settlements are not the same size, a stratified sample can be drawn that oversamples the claims with the highest variation. When this happens an additional “finite sample correction factor” is added to the formula, which reduces the standard error.<sup>14</sup> Applying this here, since we know that the settlement amounts are not the same size for each claimant, a properly stratified sample of 1,200 claimants’ data, would allow Dr. Mullin and the Debtors to calculate the average size of the impact of non-disclosure on settlement values with uncertainty that is extremely small.

25. Beyond the two parameters discussed above, Dr. Mullin does not specify precisely or intimate any other parameters of interest. In my review of the relevant materials, I have not encountered any argument or specific identification of any need that cannot be fulfilled by a sample and that would require a full census. As discussed above, a sample would provide an exceptionally accurate result that would be commensurate with a result derived from the total population.

26. It is possible that there may be a desire to do more than accurately and scientifically assess the Debtors’ liability. For example, if the Debtors are looking for stories to support their arguments anecdotally, then having a larger pool of claimants would produce a larger pool of

---

<sup>14</sup> The finite sample correction factor lowers the standard error by an amount  $c = \sqrt{\frac{(N-n)}{(N-1)}}$  where n = sample size in given strata and N=strata size. This can be substantial reduction in the standard error if the sample size is large relative to the size of the strata. This is why the sampling proportion will be high for certain strata with large settlements.

stories. To illustrate, if you want to study how much money gamblers lose on average in sports betting in an effort to marshal arguments to illegalize sports betting, then a random sample of sufficient size would be sufficient to accurately and reliably measure the economic losses. If, on the other hand, the best argument requires an example of a losing streak, then a full census will generate more extreme results that could be used to illustrate this point.

**C. A full census provides no material benefit**

27. What I have demonstrated is that a 10% sample is completely sufficient and not materially worse than a census for the purposes outlined by Dr. Mullin or the Debtors' reasonable needs. So what benefit is there to doing a complete census? Dr. Mullin indicates that there are a few benefits, I will consider them and show that any such benefit is exceedingly minor.

28. Dr. Mullin discusses the "analytical burden" of sampling without defining or explaining it.<sup>15</sup> He does not say what that burden is exactly or how extensive that burden would be. Simple random samples are trivially handled, and unweighted stratified samples are not substantively harder to implement and analyze (for appropriately qualified experts) since there are readily available or derivable formulas that can be applied to stratified or weighted samples.<sup>16</sup>

29. While there are a few extra statistical calculations that are required to compute standard errors (that are not needed when doing a census), this is not hard or particularly burdensome. Data analysis on the full dataset is not substantively easier especially since there will be statistical challenges of all types that will arise, sampling or no sampling. Even if a full census were taken and analyzed, there would still be uncertainty about the parameters at issue. There are

---

<sup>15</sup> Mullin Decl., ¶¶ 25-31.

<sup>16</sup> E.g., Ken Aho, *Confidence Intervals for Stratified Random Samples*, INST. FOR STATISTICS & MATHEMATICS, <https://search.r-project.org/CRAN/refmans/asbio/html/ci.strat.html> (last visited Apr. 25, 2023).

other unknowns that would have to be estimated and would require the creation of a statistical model. These will introduce new uncertainty, distinct and irreducible, and **not due to sampling**.

30. For example, it may be quite important to compute what the dollar value of a settlement would have been, under the counterfactual that a full and accurate disclosure had been made. This cannot be known precisely and would have to be estimated using a model for each claimant who failed to accurately disclose. Consequently, even if all the data for every claimant is collected (without sampling), a statistical model would be required to make an estimate of a counterfactual settlement amount. The uncertainty of this can be guessed, but not known. Based on my experience in modeling and statistics, the uncertainty in estimating the counterfactual would far exceed the standard errors caused by sampling. In short, as a practical matter a 10% sample is just as good as a full census.

31. In his Declaration, Dr. Mullin also cites the Internal Revenue Service (“IRS”) recommendation that samples should not be used when “it is reasonable to examine 100 percent of the items under consideration.”<sup>17</sup> This recommendation is given without any context and is not applicable. The IRS is not tasked with *estimating* the amount of taxes owed. It needs to know the amount exactly, if possible, thus the recommendation. The IRS is tasked with finding every incident of tax avoidance. If they were only interested in estimating the average size of underpayments then a sufficiently large sample can be practically and materially no worse than a complete census. In fact, sometimes a sample can be preferred because samples can sometimes be more carefully checked for inaccuracies. This is particularly important when some of the data fields consist of “narratives” (like descriptions of exposure histories) that require human readers and curation.

---

<sup>17</sup> Mullin Decl., ¶ 20.

32. Because there is no practical loss in accuracy created by sampling, there is no need for, or material benefit from, taking a full census of the claimants' data, especially when balanced against the significant privacy benefits that sampling provides. It is always possible that a data breach will occur exposing the data and breaking the confidentiality that has been promised. The chance of such a breach can be minimized, but never eliminated. If the entire population of claimants is released than all the claimants private and confidential information is at risk. If a sample of 10% is released, then the size of the at-risk population is 10 times smaller. Since the damage in a confidentiality breach is measured in proportion to the size of the number of individuals that are exposed the potential damage to the individual claimants *is 10 times smaller*.

## **VI. CONCLUSIONS**


33. Dr. Mullin has argued that sampling should not be used because a full census is more accurate and the burdens of a full census are not sufficiently large to outweigh the benefits. What Dr. Mullin fails to do is quantify, even approximately, how much less accurate a sample will be. I conclude that a random sample that is large (10%), weighted or stratified towards larger settlement values, would be practically and materially no less accurate than a full census of the approximately 12,000 claimants in the targeted population.

34. A proper stratified random sample can accurately estimate the proportion of claimants that did not consistently disclose their exposure histories and also estimate the average difference in settlement amount if exposures were properly disclosed. With respect to these issues, there would not be a practical or material difference in the information acquired from a large, targeted sample of 1,200 than would be gained from the full census of the entire population of 12,000.



Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true  
and correct.

Dated: April 25, 2023  
Philadelphia, PA

  
\_\_\_\_\_  
Abraham J. Wyner, Ph.D.

**EXHIBIT A**

**List of Sources:**

1. Motion of the Debtors for an Order Authorizing the Debtors to Issue Subpoenas on Asbestos Trusts and Paddock Enterprises, LLC [*In re Aldrich Pump LLC, et al.*, Dkt. No. 1111];
2. Reply in Support of Motion of the Debtors for an Order Authorizing the Debtors to Issue Subpoenas on Asbestos Trusts and Paddock Enterprises, LLC [*In re Aldrich Pump LLC, et al.*, Dkt. No. 1182];
3. Third-Party Asbestos Trusts' Motion to Quash or Modify Subpoenas [*DCPF Proceeding*, Dkt. No. 3];
4. Delaware Claims Processing Facility, LLC's (I) Motion to Quash or Modify Subpoena and (II) Joinder [*DCPF Proceeding*, Dkt. No. 4-2];
5. Aldrich Pump LLC and Murray Boiler LLC's Brief in Opposition to (A) Third-Party Asbestos Trusts' Motion to Quash or Modify Subpoenas; and (B) Delaware Claims Processing Facility, LLC's (I) Motion to Quash or Modify subpoenas and (II) Joinder [*DCPF Proceeding*, Dkt. No. 4-9];
6. Third-Party Asbestos Trusts' Reply in Support of Motion to Quash or Modify Subpoenas [*DCPF Proceeding*, Dkt. No. 6-2];
7. Delaware Claims Processing Facility, LLC's Reply in Support of its (I) Motion to Quash or Modify Subpoena and (II) Joinder [*DCPF Proceeding*, Dkt. No. 6-5];
8. Transcript for Hearing/Trial Held on November 30, 2022 [*DCPF Proceeding*, Dkt. No. 35];
9. December 19, 2022 Email from Morgan R. Hirst re: In re Aldrich Pump LLC, et al (Case No. 20-30608);
10. Debtors' Motion for Rehearing Concerning the Issue of Sampling on DCPF's Subpoena-Related Motions [*DCPF Proceeding*, Dkt. No. 54];
11. Declaration of Charles H. Mullin, Ph.D. [*DCPF Proceeding*, Dkt. No. 54];
12. Third-Party Asbestos Trusts' Opposition to Motion for Rehearing Concerning the Issue of Sampling on DCPF's Subpoena-Related Motions [*DCPF Proceeding*, Dkt. No. 70];
13. Declaration of Beth Moskow-Schnoll in Support of Third-Party Asbestos Trusts' Opposition to Motion for Rehearing Concerning the Issue of Sampling on DCPF's Subpoena-Related Motions [*DCPF Proceeding*, Dkt. No. 70];

14. Debtors' Reply in Support of Debtors' Motion for Rehearing Concerning the Issue of Sampling on DCPF's Subpoena-Related Motions [*DCPF Proceeding*, Dkt. No. 87];
15. Transcript for Hearing/Trial Held on March 30, 2023 [*DCPF Proceeding*, Dkt. No. 119];
16. Third-Party Asbestos Trusts' Motion to Quash Subpoenas and in Support of Stay [*Verus Proceeding*, Dkt. No. 2-1];
17. Verus Claims Services, LLC's Motion to Quash Subpoenas and to Stay [*Verus Proceeding*, Dkt. No. 2-6];
18. Respondents' Motion to Transfer Subpoena-Related Motions to the Issuing Court, the United States Bankruptcy Court for the Western District of North Carolina [*Verus Proceeding*, Dkt. No. 3-9];
19. Aldrich Pump LLC and Murray Boiler LLC's Opposition to (I) Third-Party Trusts' Motion to Quash Subpoenas and in Support of Stay; (II) Verus Claim Services, LLC's Motion to Quash Subpoenas and to Stay; and (III) Non-Party Certain Matching Claimants' Joinders and Motion to Quash [*Verus Proceeding*, Dkt. No. 5-2];
20. Third-Party Asbestos Trusts Reply in Further Support of their Motion to Quash Subpoenas [*Verus Proceeding*, Dkt. No. 5-10]; and
21. Verus Claim Services, LLC's Reply in Further Support of its Motion to Quash [*Verus Proceeding*, Dkt. No. 6-1].

**EXHIBIT B**

**Expert Testimony in the Last 4 Years:**

1. *Grayson v. Gen. Elec. Co.*, No. 3:13-cv-01799 (D. Conn. Feb. 9, 2018) (Deposition Testimony);
2. *United States, ex rel. J. Scott v. Ariz. Ctr. for Hematology & Oncology*, No. 2:16-cv-03703 (D. Ariz. Aug. 21, 2019) (Deposition Testimony);
3. *Arwood v. Broadtree Partners, LLC*, C.A. No. 2019-0904-JRS (Del. Ch. Oct. 2020) (Trial Testimony);
4. *Honeywell Int'l, Inc. v. N. Am. Refractories Co. Personal Inj. Settlement Tr. (In re N. Am. Refractories Co.)*, Adv. No. 21-2097-TPA (Bankr. W.D. Pa. May 2022) (Trial Testimony);  
and
5. *Mann v. Nat'l Review, Inc.*, 2012 CA 008263 B (D.C. Super. Nov. 2020) (Trial scheduled for June 2023).

### **EXHIBIT C**

#### **Publications in the Last 10 Years:**

1. Ryan Brill, Sameer Deshpande, Wyner, "A Bayesian Analysis of the Time Through the Order Penalty," Submitted to the JQAS, Published at <https://arxiv.org/abs/2210.06724>
2. Elizabeth Walshe EA, Elliott MR, Romer D, Cheng S, Curry AE, Seacrist T, Oppenheimer N, Wyner AJ, Grethlein D, Gonzalez AK, Winston FK, "Novel use of a virtual driving assessment to classify driver skill at the time of licensure," Transp. Res. Part F Traffic Psychol. Behav., 2022 May.
3. Elizabeth A. Walshe, Abraham J. Wyner, Shukai Cheng, Robert Zhang, Alexander K. Gonzalez, Natalie Oppenheimer, Daniel Romer, and Flaura K. Winston, "License Examination and Crash Outcomes Post-Licensure in Young Drivers: Are the youngest drivers most at risk?, 2022. JAMA Network.
4. "Is the Third Time Through the Order Penalty Real?," Abraham Wyner and Russel Walters, To Appear, SABR 2021 Conference.
5. Matthew Olson, Abraham J. Wyner, Richard Berk, "Generalizations of the Random Forest Kernel," KDD 2019.
6. Matt Olson and Abraham Wyner, "Modern Neural Networks Generalize Well on Small Data Sets," NIPS, 2019.
7. Matt Olson and Abraham Wyner, "Do Random Forests Estimate Class Probabilities?," Submitted Journal of Machine Learning Research, 2018.
8. Sameer K. Deshpande, Abraham J. Wyner, "A hierarchical Bayesian model of pitch framing," Journal of Quantitative Analysis in Sports, Volume 13, Issue 2, October 2017.
9. Phillip Earnst. Shepp, L. and Abraham Wyner, "Yule's 'nonsense correlation' solved!," The Annals of Statistics. Volume 45, Number 4 (2017), 1789-1809.
10. Abraham J Wyner, Matthew Olson, Justin Bleich, David Mease, "Explaining the Success of AdaBoost and Random Forests as Interpolating Classifiers," Journal of Machine Learning Research 18 (May, 2017) 1-33.
11. Mathieu E. Wimmer, Justin Rising, Raymond J. Galante, Abraham Wyner, Allan I. Pack, Ted Abel, "Aging in Mice Reduces the Ability to Sustain Sleep/Wake States," PloS one 8 (12), e81880, December 2013.
12. McShane, Blakely B.; Jensen, Shane T.; Pack, Allan I.; Wyner, Abraham J., "Modeling Time Series Dependence for Scoring Sleep in Mice," Journal of the American Statistical Association, 108 (504), 1147-1162, 2013.

13. McShane, Blakely B.; Jensen, Shane T.; Pack, Allan I.; Wyner, Abraham J., “Rejoinder: Modeling Time Series Dependence for Scoring Sleep in Mice,” *Journal of the American Statistical Association*, 108 (504), 2013.
14. Driver, R. J., Lamb, A. L., Wyner, A. J., & Raizen, D. M. “DAF-16/FOXO Regulates Homeostasis of Essential Sleep-like Behavior during Larval Transitions in *C. elegans*,” *Current Biology* (2013).
15. Richard Sander and Abraham Wyner, “Studies Fail to Support Claims of New California Ethnic Studies Requirement,” *Tablet Magazine*, Mar. 29, 2022.
16. Abraham Wyner and Alan Salzburg, “The insanity of mandating boosters for Kids,” *Tablet Magazine*, June 6, 2022.
17. “Not a Time for Politics or Bad Data,” *The Hill*, Published May 28, 2020.
18. “I’m a Statistician Closing Camps would be a big Published Mistake,” *The Forward*, May 5, 2020.
19. Wyner, Abraham, “A Statistician Reads the Sports Pages: Can the Skill Level of a Game of Chance Be Measured?,” Shane Jensen (column editor) *Chance*, Vol. 25.3, 2012.
20. Wyner, Abraham, “Why Do Women’s Salaries Still Lag Behind?,” *The Forward*, December 20, 2013.

# EXHIBIT B

UNITED STATES BANKRUPTCY COURT  
WESTERN DISTRICT OF NORTH CAROLINA  
CHARLOTTE DIVISION

-----X  
ARMSTRONG WORLD INDUSTRIES, )  
INC. ASBESTOS PERSONAL ) Miscellaneous Proceeding  
INJURY SETTLEMENT TRUST, )  
et al., ) No. 22-00303 (JCW)  
)  
Plaintiffs, ) (Transferred from  
)  
v. ) District of Delaware)  
)  
ALDRICH PUMP LLC, et al., )  
)  
Defendants. )  
-----X  
In re ) Chapter 11  
)  
ALDRICH PUMP LLC, et al., ) Case No. 20-30608  
)  
Debtors. )  
-----X

DEPOSITION OF CHARLES HENRY MULLIN, PH.D.  
Monday, May 8, 2023; 1:06 p.m. EDT

Reported by: Cindy L. Sebo, RMR, CRR, RPR, CSR, CCR,  
CLR, RSA, NYRCR, NYACR, Remote CA CSR #14409, NJ CCR  
#30XI00244600, NJ CRT #30XR00019500, Washington State  
CSR #23005926, Oregon CSR #230105, TN CSR 998, Remote  
Counsel Reporter, LiveLitigation Authorized Reporter,  
Notary Public  
Job No. 5905066



Deposition of CHARLES HENRY MULLIN, PH.D.,  
held at the law offices of Jones Day, 51 Louisiana  
Avenue, Northwest, Washington, D.C. 20001, before  
Cindy L. Sebo, Registered Merit Court Reporter,  
Certified Real-Time Reporter, Registered Professional  
Reporter, Certified Shorthand Reporter, Certified  
Court Reporter, Certified LiveNote Reporter, Real-Time  
Systems Administrator, California Shorthand Reporter  
#14409, New Jersey Certified Court Reporter,  
#30XI00244600, New Jersey Certified Realtime Reporter  
#30XR00019500, New York Realtime Certified Reporter,  
New York Association Certified Reporter, Washington  
State CSR #23005926, Oregon CSR #230105, Tennessee CSR  
#998, Remote Counsel Reporter, LiveLitigation  
Authorized Reporter and Notary Public, beginning at  
approximately 1:06 p.m. EDT, when were present on  
behalf of the respective parties:

A P P E A R A N C E S:

Attorneys for Plaintiff ACC:

ROBINSON & COLE LLP

AMANDA R. PHILLIPS, ESQUIRE

One Boston Place, 26th Floor

Boston, Massachusetts 02108

617.557.5916

aphillips@rc.com

-and-

LAURIE A. KREPTO, ESQUIRE

1650 Market Street, Suite 3030

Philadelphia, Pennsylvania 19103

215.398.0554

lkrepto@rc.com

-and-

CAPLIN & DRYSDALE

JEANNA RICKARDS KOSKI, ESQUIRE (Via Zoom)

One Thomas Circle, Northwest, Suite 1100

Washington, D.C. 20005

202.862.5069

jkoski@capdale.com

A P P E A R A N C E S (Continued):

Attorneys for Plaintiff Claimants' Representative,  
Joseph Grier:

ORRICK HERRINGTON & SUTCLIFFE LLP

DEBRA L. FELDER, ESQUIRE

Columbia Center

1152 15th Street, Northwest

Washington, D.C. 20005-1706

202.339.8567

dfelder@orrick.com

Attorneys for Custom Matching Claimants:

HOGAN MCDANIEL

DANIEL K. HOGAN, ESQUIRE

1311 Delaware Avenue

Wilmington, Delaware 19806

302.656.7540

dkhogan@dkhogan.com

1 A P P E A R A N C E S (Continued):  
2 Attorneys for Debtors/Defendants Aldrich Pump LLC  
and Murray Boiler LLC:

3 EVERT WEATHERSBY HOUFF

4 C. MICHAEL EVERT, JR., ESQUIRE

5 3455 Peachtree Road, Northeast, Suite 1550

6 Atlanta, Georgia 30326

7 678.651.1250

8 cmevert@ewhlaw.com

9 -and-

10 CLARE M. MAISANO, ESQUIRE

11 111 South Calvert Street, Suite 1910

12 Baltimore, Maryland 21202

13 443.573.8507

14 cmmaisano@ewhlaw.com

15  
16  
17  
18  
19  
20  
21  
22

A P P E A R A N C E S (Continued):

Attorneys for DCPF:

YOUNG CONAWAY STARGATT & TAYLOR, LLP

KEVIN A. GUERKE, ESQUIRE

1000 North King Street

Wilmington, Delaware 19801

302.571.6616

kguerke@ycst.com

Attorneys for DCPF Trust:

BALLARD SPAHR LLP

BETH MOSKOW-SCHNOLL, ESQUIRE (Via Zoom)

919 North Market Street, 11th Floor

Wilmington, Delaware 19801-3034

302.252.4447

moskowb@ballardspahr.com

-and-

BRIAN N. KEARNEY, ESQUIRE

1735 Market Street, 51st Floor

Philadelphia, Pennsylvania 19103-7599

215.864.8265

kearneyb@ballardspahr.com

A P P E A R A N C E S (Continued):

Attorneys for Debtors and Debtors in Possession:

JONES DAY

BRAD B. ERENS, ESQUIRE (Via Zoom)

MORGAN R. HIRST, ESQUIRE

110 North Wacker Drive, Suite 4800

Chicago, Illinois 60606

312.782.3939

bberens@jonesday.com

mhirst@jonesday.com

Attorneys for Trane Technologies Company LLC and  
Trane U.S. Inc.:

MCCARTER & ENGLISH, LLP

PHILLIP S. PAVLICK, ESQUIRE (Via Zoom)

Four Gateway Center

100 Mulberry Street

Newark, New Jersey 07102

973.849.4181

ppavlick@mccarter.com

A P P E A R A N C E S (Continued):

Attorneys for Non-Party Verus Trust:

LOWENSTEIN SANDLER LLP  
MICHAEL A. KAPLAN, ESQUIRE  
One Lowenstein Drive  
Roseland, New Jersey 07068  
973.597.2302  
mkaplan@lowenstein.com

Attorneys for Verus Claim Services, LLC:

ANSELMi & CARVELLI, LLP  
ANDREW E. ANSELMi, ESQUIRE  
101 Avenue of the Americas  
8th & 9th Floors  
New York, New York 10013  
212.308.0070  
aanselmi@acllp.com

ALSO PRESENT:

PETER CUMBO, Bates White (Via Zoom)  
ALLAN TANANBAUM, Vice President, Deputy General  
Counsel, Product Litigation at Trane  
Technologies (Via Zoom)  
JOSEPH GRIER, Claimants' Representative

--oOo--

INDEX OF EXAMINATION

CHARLES HENRY MULLIN, PH.D.

Armstrong World, et al. v Aldrich Pump LLC, et al.

Monday, May 8, 2023

--oOo--

EXAMINATION BY	PAGE
Mr. Kaplan	11
Mr. Guerke	144
Mr. Hogan	207
CERTIFICATE OF REPORTER	217
INSTRUCTIONS TO WITNESS	218
ERRATA	219
ACKNOWLEDGMENT OF WITNESS	221



--oOo--

INDEX TO EXHIBITS

CHARLES HENRY MULLIN, PH.D.

Armstrong World, et al. v Aldrich Pump LLC, et al.

Monday, May 8, 2023

--oOo--

(Exhibits Provided Electronically to Reporter.)

CM DEPOSITION

EXHIBIT NUMBER	DESCRIPTION	PAGE
----------------	-------------	------

Number 1	Declaration of Charles H.	
----------	---------------------------	--

	Mullin, Ph.D.	17
--	---------------	----

Number 2	Subpoena to Produce Documents, Information, or Objects or to Permit Inspection of Premises in a Bankruptcy Case (or Adversary Proceeding)	51
----------	---	----

Number 3	Expert Report of Abraham J.	
----------	-----------------------------	--

	Wyner, Ph.D.	101
--	--------------	-----

--oOo--

P R O C E E D I N G S

--oOo--

Washington, D.C.

--oOo--

Monday, May 8, 2023; 1:06 p.m. EDT

--oOo--

--oOo--

CHARLES HENRY MULLIN, PH.D.,

after having been first duly sworn by the certified  
stenographer to tell the truth, the whole truth, and  
nothing but the truth, testified as follows:

--oOo--

CERTIFIED STENOGRAPHER: Thank

you.

The witness is sworn.

MR. KAPLAN: Thank you.

--oOo--

EXAMINATION BY COUNSEL FOR NON-PARTY VERUS TRUST

--oOo--

BY MR. KAPLAN:

Q. Good afternoon, Dr. Mullin. I'm

1 Michael Kaplan. We met briefly off the record. I  
2 represent the nonparty Verus Trust.

3 And I think I've drawn the short  
4 straw of -- of going first today, and maybe the  
5 only. We'll see.

6 You have been deposed before,  
7 correct?

8 A. Correct.

9 Q. I'd be lying if I told you I didn't  
10 know that.

11 So I'm going to give you the very  
12 abbreviated version of today's sort of ground rules  
13 so that we can't ever have a disagreement.

14 You know all of your answers have to  
15 be verbal?

16 A. Correct.

17 Q. We have to do our best not to talk  
18 over one another, right?

19 A. That's the goal.

20 Q. Right.

21 You understand you're testifying  
22 under the penalty of perjury, correct?

1 A. Correct.

2 Q. You understand that from time to  
3 time, maybe in response to every question, your  
4 counsel is going to potentially object to something  
5 that I'm saying.

6 Unless he instructs you not to  
7 answer, you know you can answer, right?

8 A. I have the option of answering, yes.

9 Q. Okay. Lastly and, I think, most  
10 importantly is if you don't understand my question,  
11 I'd like you to tell me that you don't understand  
12 it, and maybe we'll -- and I'll be able to rephrase  
13 it for you so that you get a question you  
14 understand.

15 If you answer, I'm going to assume  
16 that you understood the question.

17 Correct?

18 A. That may be a poor assumption.

19 If I answer, I had a clear  
20 understanding of the question. I have no way of  
21 knowing if that aligned with your intent of the  
22 question.

1 So it doesn't necessarily mean that  
2 your understanding and mine are the same; it just  
3 means we both have one.

4 Q. Well, the benefit will be that if you  
5 think there's a problem with the question in any  
6 way, you shouldn't answer; you should tell me.  
7 Because if you do, I promise you, when, we get to  
8 court, I'm going to hold up the deposition  
9 transcript and say you answered, so you understood.

10 All right?

11 A. And I will tell the judge what I  
12 understood, so it will be fine.

13 Q. Terrific. And we will be off to the  
14 races there.

15 Lastly, if you need a break in this  
16 very, very short session, hopefully, that we  
17 have -- we'll take one for sure, but please let me  
18 know at any time.

19 And, obviously, if there's any  
20 question of privilege, somehow, that came up, we  
21 can stop, take a break and get the privilege issue  
22 resolved and come back in. But I don't think we're

1 going to have that issue today.

2 All right.

3 (Pause.)

4 BY MR. KAPLAN:

5 Q. So, Doctor, what is it that you're  
6 being -- being proffered as an expert in here?

7 A. I'm -- the proffer I don't control.  
8 I've been asked to really explain the difference  
9 between using a 10 percent sample or -- 10 percent  
10 sample of what's really about a 3 percent sample of  
11 the claims data already or using the 3 percent we  
12 asked for in the \$12,000 in totality and how that  
13 would affect the precision of the ultimate analyses  
14 offered in estimation down the road.

15 Q. Okay. My question was a little more  
16 straightforward than that. Let me rephrase it for  
17 you because it might be you didn't understand.

18 What is your expertise in?

19 A. I'm trained as an economist. I have  
20 extensive expertise in statistics, econometrics,  
21 economic modeling. I have applied those in a mass  
22 tort setting frequently.

1 And probably most germane to this  
2 process, I have expertise in estimating future  
3 liabilities under various different sets of  
4 assumptions and -- which get into the estimation  
5 process itself but in terms of the data inputs and  
6 how they affect that and the statistical properties  
7 and, hence, the precision.

8 So it's really estimation and  
9 statistics are probably the two applications, but  
10 there's a lot of underlying training and expertise  
11 that underlies those two areas.

12 Q. Okay. Did anyone assist you in  
13 preparing your declaration that was submitted here?

14 A. Yes.

15 Q. Okay. And who are those people?

16 A. I couldn't give you a whole list  
17 sitting here. My process -- I work with a team --

18 Q. Okay.

19 A. -- and I draft reports with the team.  
20 I ultimately review them and edit them to make sure  
21 they reflect my opinions. And that work done is  
22 under my direction.

1 Q. Okay. And I'm going to mark for you,  
2 just so that we have and we can get started with  
3 it --

4 MR. KAPLAN: Can we just call it  
5 CM-1? Anyone have a problem with that?

6 MR. EVERT: Sure, that's fine.

7 MR. KAPLAN: CM-1.

8 It is your -- and I apologize for  
9 those in Zoom world. I don't have electronic  
10 copies to share, but it's Dr. Mullin's  
11 declaration at Docket 55, filed on March 9th,  
12 2023.

13 I do have copies for the room --  
14 some copies for the room.

15 --oOo--

16 (CM Deposition Exhibit Number 1,  
17 Declaration of Charles H. Mullin,  
18 Ph.D., marked for identification, as  
19 of this date.)

20 --oOo--

21 BY MR. KAPLAN:

22 Q. Okay. Do you recognize this



1 document, Dr. Mullin?

2 MR. EVERT: Hang on one second.

3 I just wanted to make sure, for  
4 everybody on the phone, that they know  
5 it's -- because he's filed more than one  
6 declaration in the case. So it's Docket  
7 -- it's -- the declaration at Docket 55 is  
8 the declaration filed in association with the  
9 -- I believe with the Motion for  
10 Reconsideration, although . . .

11 MR. KAPLAN: Sure hope it is.

12 MR. EVERT: Yeah, that's right.

13 MR. KAPLAN: Okay.

14 BY MR. KAPLAN:

15 Q. You recognize that document,  
16 Dr. Mullin?

17 A. I do.

18 Q. Okay. And the team that you talked  
19 about in the process you use -- is that what you  
20 used to prepare what we're calling CM-1?

21 A. Correct.

22 Q. Okay. Do you know how many hours you

1 spent in preparing this?

2 A. I do not.

3 Q. Okay. How much time did you spend  
4 preparing for your deposition today?

5 A. Specifically for the deposition?  
6 Probably five to eight hours.

7 Q. Okay. Did you speak to anyone  
8 besides counsel about your deposition today?

9 A. I spoke with a couple members of my  
10 team.

11 Q. Okay. And what did you talk about  
12 there?

13 A. So, first, I'll clarify what I mean  
14 by "prepare," because that will give context, which  
15 is I reviewed Dr. Wyner's rebuttal report --

16 Q. Okay.

17 A. -- and so I talked to my team about  
18 that report and talked to -- principally, that was  
19 the main topic of conversation with my team.

20 Q. It was about Dr. Wyner's report?

21 A. Correct.

22 Q. Okay. We'll get to that at some

1 point today.

2 Did you meet with counsel in advance  
3 of the deposition?

4 A. I did.

5 Q. Okay. How many hours did you meet  
6 with counsel for?

7 A. In terms of this is the topic?

8 Around an hour, maybe an hour and a  
9 half.

10 Q. Okay. And when was that?

11 A. So a meeting on Thursday or Friday of  
12 last week and then a little bit of time before the  
13 start of the deposition this morning.

14 Q. Let me just say this: The document  
15 which we've showed you as CM-1, this declaration  
16 for the motion for reconsideration -- is this the  
17 only document that you are planning on relying on  
18 in the -- for the June 6th hearing?

19 MR. EVERT: I'm sorry. Let me  
20 ask, when you say "document," do you mean  
21 declaration?

22 MR. KAPLAN: I'm sorry.

1 Declaration. Bad wording. Yes.

2 THE WITNESS: I don't know the  
3 technicalities of it. I had a similar  
4 declaration that I think was in response to  
5 an action in New Jersey, and I don't know the  
6 technicalities of how that transfers over.  
7 But there's a lot of overlap in the content  
8 of those two. But, really, the content  
9 across those would be the focus of that  
10 testimony as I see it.

11 BY MR. KAPLAN:

12 Q. Okay. Are you preparing any kind of  
13 supplemental declaration in response to Dr. Wyner?

14 MR. EVERT: I'm just going to  
15 break in, Michael.

16 I think we agreed we weren't going  
17 to do that, that this was going to be his  
18 supplemental declaration.

19 You weren't part of those  
20 discussions, so I apologize for jumping in  
21 and answering the question, but -- yeah. So  
22 I think, at least from a legal perspective,

1 we would be relying on any declarations  
2 Dr. Mullin has filed that are applicable to  
3 the Trust discovery issue; but, no, he's not  
4 going to file -- his deposition is going to  
5 serve sort of as his response.

6 MR. KAPLAN: Excellent. All  
7 right. Good. That will short-circuit some  
8 of -- some of those questions.

9 BY MR. KAPLAN:

10 Q. I apologize, Dr. Mullin. I was  
11 not -- were you present at the March 30th, 2023  
12 hearing that sort of preceded this round of  
13 exercises we're doing right now?

14 A. I was present at a hearing. If that  
15 was the date of it --

16 Q. Yeah.

17 A. -- probably.

18 MR. EVERT: Yes, he was.

19 MR. KAPLAN: He was there.

20 BY MR. KAPLAN:

21 Q. Okay. Excellent.

22 All right. So I want to focus you in

1 on -- on, really, two questions -- two sets of  
2 questions today -- others may have other questions,  
3 but I want to focus you in on two. The first is  
4 that judge's question about why sampling doesn't  
5 work for the Debtors' side, and the second is why  
6 sampling wouldn't reduce the risk of even human  
7 error of missing some PII being disclosed.

8 Okay?

9 A. Okay.

10 Q. All right. By background, have you  
11 offered an expert opinion previously on the  
12 sufficiency of a sample side?

13 A. Yes.

14 MR. EVERT: In any case?

15 MR. KAPLAN: In any case.

16 MR. EVERT: Okay.

17 BY MR. KAPLAN:

18 Q. How many of the cases?

19 A. I couldn't give you a count. I know  
20 it's a common topic in the insurance coverage work  
21 that I've done, so it comes up frequently in that  
22 context. So that's going to be the principal

1 context.

2 I've done sampling in, I guess --  
3 with the Consumers Finance Bureau [sic]. There's  
4 probably other cases as well, but I've used  
5 sampling in an array of different positions.

6 Q. How about in any type of mass tort  
7 case?

8 A. Most of those insurance coverage  
9 actions involve mass tort claims --

10 Q. Okay.

11 A. -- so definitely, in relation to mass  
12 torts, I've given opinions on sampling before.

13 Q. Okay. Can you recall the last time  
14 you gave an opinion on sampling in -- in a mass  
15 tort case?

16 A. It's common. I'd have to go look. I  
17 don't know the last time I did it.

18 Q. Okay. And you said in the insurance  
19 context.

20 Who is it that retained you in those  
21 contexts -- in those cases -- excuse me, not  
22 contexts, cases?

1                   A.       I've been retained by policyholders;  
2                   I've been retained by insurance companies; I've  
3                   been retained by reinsurance companies, whether  
4                   it's reinsurance and insurers in litigation, and  
5                   retrocession errors. So it's kind of up and down  
6                   the line.

7                               Sampling is common regardless of who  
8                   my clients are in those contexts.

9                   Q.       Okay. You were involved in the -- in  
10                  the Mallinckrodt case, correct?

11                  A.       Correct.

12                  Q.       What was it that you did there?

13                  A.       I was retained relatively late in  
14                  that case. There was a settlement in place. There  
15                  were objectors to that plan, and I was brought in  
16                  to discuss the reasonableness of the settlement --

17                  Q.       Okay.

18                  A.       -- with regard to opioid claimants in  
19                  particular was the emphasis of that.

20                  Q.       Okay. If you flip to Page 17 of 30,  
21                  the ECF page numbers on the top of your  
22                  declaration, there is a list of selected



1 experience.

2 Does that document help refresh your  
3 recollection at all in terms of the case in which  
4 you offered an expert opinion on sampling, outside  
5 of this case, of course?

6 A. In general, this is the cases I'm  
7 allowed to publicly disclose at this point --

8 Q. Okay.

9 A. -- so there's numerous cases on this  
10 list where I would have offered opinions on  
11 sampling.

12 Q. Can you give me an example of -- of  
13 an opinion -- again, obviously, we can only ask you  
14 about publicly available cases and you can only  
15 disclose publicly available cases.

16 So looking at this list, which is the  
17 universe we're working off here, can you give me an  
18 example of a case which you offered an opinion on  
19 sampling in?

20 A. Some of the analyses that are in the  
21 public domain of what I've done on the Aearo  
22 bankruptcy originally dealt with the 1 percent

1 sample that had been drawn in the MDL --

2 Q. Okay.

3 A. -- so I didn't design that sample,  
4 but I utilized that sample.

5 (Whereupon, the witness reviews the  
6 material provided.)

7 THE WITNESS: Fourth bullet on  
8 what's Page 18 of 30 --

9 BY MR. KAPLAN:

10 Q. Yeah.

11 A. -- is the Consumer Finance Protection  
12 Bureau case in which I've designed and utilized a  
13 sample.

14 (Whereupon, the witness continues to  
15 review the material provided.)

16 THE WITNESS: I had input in some  
17 of the sampling discussions in Bestwall. I  
18 was not ultimately the person who signed off,  
19 but I had input into those.

20 (Whereupon, the witness continues to  
21 review the material provided.)

22 THE WITNESS: There was some

1 sampling in the ACE Bermuda Insurance versus  
2 3M arbitration.

3 (Whereupon, the witness continues to  
4 review the material provided.)

5 THE WITNESS: The General Re-SCOR  
6 matter, about two-thirds, three-quarters of  
7 the way down Page 19, had sampling.

8 (Whereupon, the witness continues to  
9 review the material provided.)

10 THE WITNESS: My recollection is  
11 there was sampling in the bottom two on that  
12 page.

13 MR. EVERT: That would be the  
14 AIU Insurance and the THAN?

15 THE WITNESS: Yep.

16 (Whereupon, the witness continues to  
17 review the material provided.)

18 THE WITNESS: I believe the fourth  
19 bullet on Page 20, the National Indemnity  
20 matter there versus the State of Montana.

21 I believe the next one, Newco  
22 versus Allianz, had sampling.

1 The U.S. Silica versus Ace matter  
2 two-thirds the way down the page had  
3 sampling.

4 I think the third from the bottom,  
5 Cannon Electric versus Affiliated, had  
6 sampling.

7 The Goodrich matter, penultimate  
8 one on the page, had sampling.

9 I did a lot more insurance work  
10 earlier in my career, and we're going to  
11 start to get a long list of them if not, we  
12 can keep going if that's sufficient.

13 BY MR. KAPLAN:

14 Q. Let me stop you there for a second --  
15 no. Let me stop you there, which is -- in -- in  
16 the cases that you identified on these first few  
17 pages -- and I understand there's potentially  
18 more -- were you a proponent or opponent of  
19 sampling in those cases?

20 A. I don't really view it as either.

21 Q. Okay.

22 A. I mean, I'm trying to work towards

1 getting sufficiently precise opinions for the  
2 parties to resolve a matter. And it's  
3 fact-specific as to any given matter whether  
4 sampling or a census or some other process is  
5 what's going to be most efficient in getting to  
6 resolution of the case, in reality.

7 And so that's really how I approach  
8 these. I'm neither pro sampling or against  
9 sampling. I'm what's going to work most  
10 effectively in a given setting.

11 Q. So let me understand.

12 Is it your testimony that different  
13 cases can have different outcomes with respect to  
14 sampling in terms of whether it's efficient or not  
15 efficient?

16 A. Correct. It's a cost-benefit  
17 analysis --

18 Q. Sure.

19 A. -- and you're looking at that  
20 cost-benefit analysis, which is going to be  
21 fact-specific to the case. And sometimes it makes  
22 sense to look at the census.

1 In this case, for example, we are  
2 using the entire Debtors' historical claims  
3 database. We're not saying let's use a 10 percent  
4 sample of data already in electronic format. We're  
5 saying no, we use all of it because it's all  
6 already in electronic form. And that's going to,  
7 on a cost-benefit analysis, make sense as opposed  
8 to sampling from the historical claims data.

9 You know, in contrast, when you look  
10 at claim files in the case and you say what  
11 historical claim files might want to get produced  
12 and reviewed, that's an expensive operation; you do  
13 sampling.

14 So in one case, you turn over  
15 everything because it's already in electronic  
16 format. In the other case, because there's a large  
17 volume of manual labor and cost and time, you use a  
18 sample.

19 So even within this case, there's  
20 places where my opinions are use all the data, and  
21 there's other places where it's use a sample of the  
22 data. It's not one or the other; it's what makes

1 sense for the question at hand and the facts at  
2 issue.

3 Q. Let's look at -- see if I can put  
4 this into some specifics here.

5 You said that you offered an opinion  
6 on sampling in the Aearo Technologies case,  
7 correct?

8 A. I said I used -- I had opinions that  
9 utilized a sample --

10 Q. Okay.

11 A. -- and I utilized the 1 percent  
12 sample that was preexisting from the underlying MDL  
13 proceeding.

14 Q. All right. And in your opinion, was  
15 that sample sufficient for the purpose you were  
16 using it for?

17 A. For the scope of the opinion I was  
18 doing, I mean, it was a constraint. It was the  
19 only thing available at the time, so it more  
20 prescribed the strength of the opinion I was able  
21 to offer.

22 So by construction, it was sufficient

1 for the opinion I offered. With more data, I could  
2 have offered a more refined opinion.

3 Q. Okay. How about in the Consumer  
4 Financial Protection Bureau case? You said you  
5 offered an opinion -- I don't want to misstate  
6 it -- that utilized sampling or on sampling.

7 Which was it?

8 A. I designed the sample on that case --

9 Q. Okay.

10 A. -- it involves literally millions of  
11 phone calls. So it would be completely time  
12 prohibitive to have people listen to the millions  
13 of phone calls and do something comprehensive. So  
14 from a cost-benefit analysis, it was necessary  
15 there to use sampling.

16 Q. I think you said you participated in  
17 Bestwall, but I think we all understand you didn't  
18 offer the principal opinion there, correct?

19 A. I haven't filed any declarations or  
20 reports in Bestwall.

21 Q. Okay. Good.

22 How about -- you said ACE Bermuda --



1 you utilized a sample there?

2 A. Correct.

3 Q. And what was the context in that  
4 case?

5 A. Well, it's a Bermuda form insurance  
6 action, which I think means it's all  
7 confidential --

8 Q. Okay.

9 A. -- so I don't think I can really tell  
10 you the substance of it outside of it's insurance  
11 coverage.

12 Q. Okay. That makes it a little  
13 difficult to -- how about let's go down to the  
14 bottom of the page to the AIU versus  
15 Philips Electric that's in Delaware Chancery?  
16 Public that you can talk about?

17 A. I know the two -- the general  
18 theme -- the two that are there are connected to  
19 each other. It's really the same opinion in both.  
20 They both stem from the THAN Trust. And AIG and  
21 the THAN Trust had coverage litigation, and they  
22 were seeking discovery on the underlying records

1 from the THAN Trust itself.

2 Q. Okay. And what was it -- how did the  
3 opinion on sampling work in there?

4 A. I have a recollection sampling was in  
5 it, but I don't recall, sitting here. I haven't  
6 reread that even if I have it still. I don't think  
7 those are both in the public domain, but I'm not  
8 100 percent certain of that.

9 Q. It's in the SDNY. Everything is in  
10 public there.

11 Have you ever offered an expert  
12 opinion on data privacy before?

13 A. No.

14 Q. All right. Do you have any type of  
15 specialized training in data privacy?

16 A. I don't know what you consider  
17 specialized. We have an entire technological  
18 services department; we have HITRUST certification;  
19 we have SOC 2 certification. Part of all of that  
20 certification is training for everybody at  
21 Bates White, including myself. So I've had all of  
22 the training that goes with those certifications.

1 This is where, if you say  
2 "specialized," I think HITRUST would say some of  
3 that is specialized, but I'm not sure what you mean  
4 by that.

5 So I've gone through the training  
6 that goes along with the company getting all of the  
7 security credentials.

8 Q. Okay. Have you taken any -- beyond  
9 what the company is -- is offering, any specific  
10 type of coursework on data privacy?

11 A. No.

12 Q. Do you have any certifications, you,  
13 yourself, in data privacy?

14 A. No.

15 Q. All right. Have you ever been  
16 proffered as an expert in data privacy previously?

17 A. No.

18 Q. Okay. And finally -- I'm fairly  
19 certain I know the answer to this, but if you tell  
20 me "yes," I'm going to be pretty surprised -- which  
21 is is you're not a lawyer, correct?

22 A. No.

1 Q. All right. We're off to a good  
2 start.

3 You're not qualified to offer a legal  
4 opinion on the question of law, right?

5 A. That's a whole different question,  
6 but I don't intend to offer any.

7 Q. Are you qualified to offer a legal  
8 opinion on the Federal Rules of Civil Procedure?

9 A. I don't intend to offer any.

10 Q. Not my question.

11 Are you qualified to offer an opinion  
12 on the Federal Rules of Civil Procedure, in your  
13 view? This is only your view.

14 A. No.

15 Q. Okay.

16 All right. I showed you before -- if  
17 we can flip back to the meat of your -- sort of  
18 your declaration there, CM-1.

19 Anything in there that needs to be  
20 corrected before we dive into it?

21 A. Not that I'm aware of.

22 Q. All right. Excellent.

1 All right. In looking through the  
2 declaration, Dr. Mullin, can you point me to which  
3 paragraph or paragraphs contain your opinion on why  
4 the proposed 10 percent sample is not sufficient  
5 for the Debtors?

6 (Whereupon, the witness reviews the  
7 material provided.)

8 THE WITNESS: I think the core of  
9 that starts in Paragraph 15 --

10 BY MR. KAPLAN:

11 Q. Okay.

12 A. -- and probably runs through  
13 Paragraph 18 of how the data would be used in broad  
14 brush strokes.

15 Q. Okay. And is it your opinion that a  
16 10 percent sample is not sufficient for the  
17 purposes?

18 A. So it's my opinion that on a  
19 cost-benefit assessment, which is how you decide  
20 whether you should sample or not, the benefits  
21 greatly outweigh the costs here, so it makes sense  
22 to get those benefits when they outweigh the costs.

1 So it's going to allow me an estimation to give a  
2 much more precise answer and address some questions  
3 that otherwise I may not be able to address or  
4 quantify reliably, so it -- so, yes, because it  
5 passes that cross -- cost-benefit analysis.

6 Q. Okay. Yeah, the -- is your entire  
7 opinion related to the sufficiency tied to just  
8 cost-benefit?

9 A. I mean, that is the fundamental  
10 principle of designing a sample and when do you  
11 sample and when don't you, so you can't really  
12 answer these questions about is sampling  
13 appropriate or not in the absence of talking about  
14 what it costs.

15 If there's zero cost to having all  
16 the data, you should use all the data because  
17 you'll be more precise, and why would you give up  
18 the precision? If it's impossible to get all the  
19 data, it's a silly exercise to talk about what  
20 would happen if we did get it. So the two are --  
21 can't be separated, the -- what are the benefits,  
22 what are the things that the data enable you to do

1 and what's the cost of gaining access to that data.

2 That's the trade-off of sampling  
3 always. So to -- you can't answer questions absent  
4 that framework about sampling.

5 Q. Okay. Let me try it this way: Why  
6 is -- why is a 10 percent sample not sufficient for  
7 the stated purposes?

8 A. Well, so I think this is a place  
9 where we need to clarify. One, the Debtors have  
10 over 400,000 historical claims. I have not asked  
11 for 400,000 data through counsel as a request to  
12 assist in our work. We asked for 12,000; less than  
13 3 percent.

14 So this isn't like the examples where  
15 the Trusts say, Federal-Mogul asked for 435,000  
16 Claimants; they asked for 12,000; 3 percent. So I  
17 was prudent. I did take into a sense the costs of  
18 this, and I asked for 3 percent through counsel to  
19 get data on a very limited set of 3. And now I'm  
20 being asked to go, for the sake of the analysis,  
21 from 3 percent to .3, 10 percent of 3 percent.

22 So you're going to say it's

1 10 percent?

2 I think you're asking me to take  
3 .3 percent of the available data, not 10, and move  
4 from what was already a request for 3 down to .3.

5 So if we're going to say 10 percent,  
6 let's make sure it's 10 percent of 3 percent, which  
7 I think is the intent of your question. But I want  
8 to make that very clear, if that's how we're going  
9 to use the terms.

10 Q. Well, let's see -- let's drill down  
11 on that because I don't represent the Debtor as,  
12 you know; I represent one non-party.

13 So can you explain to me how it is  
14 you're getting from this 10 percent to 3 percent to  
15 .3 percent? Because I'm not -- I'm not following.

16 A. Okay.

17 So the Debtors have faced hundreds of  
18 thousands historical claims in the tort system.  
19 Some requests that have gone to the Trusts from  
20 prior parties have requested their entire  
21 historical data, so hundreds of thousands of  
22 claims.



1 I don't think I need that. I have  
2 tried to filter this down in how we think about  
3 this request. We asked for 12,000. We -- I  
4 already said, anything before 2005, it's not going  
5 to give me enough information that I need to go  
6 after that right now.

7 I eliminated all dismissed claims.  
8 Dismissed claims have been produced in other  
9 contexts. They were produced in Garlock. They  
10 contain a little bit of information that would help  
11 but not a lot. That's -- 80 percent of the  
12 mesothelioma claims, for example, against Murray  
13 resulted in dismissal. I've already eliminated  
14 those. I've constrained it to just mesothelioma  
15 claims.

16 So it's not that I asked for the  
17 ocean through counsel in these requests. I'm  
18 seeking for estimation a very targeted subset  
19 that's going to be most informative. That's about  
20 3 percent of the historical Claimants. I'm seeking  
21 information on those three through the subpoenas --  
22 or, really, the Debtors, on my behalf, are seeking

1 that. So that's where I'm saying we're starting at  
2 3 percent. And now others are saying, Let's go  
3 from 3 to .3, take 10 percent of that 3 percent.

4 Q. Okay. So you're talking about the  
5 totality of the universe; you aren't being specific  
6 to -- for instance, I represent the Verus Trusts.

7 Are you familiar with those?

8 A. Yes.

9 Q. Okay. Your testimony is that  
10 in -- in looking at the information the Verus  
11 Trusts potentially possess as a whole, that's how  
12 you're drilling down from 10 percent to 3 percent  
13 to .3 percent, correct?

14 A. No.

15 Q. Okay.

16 Are you only looking for -- what is  
17 the limitation on the Verus Trust, then?

18 A. So the Debtors, Aldrich and Murray,  
19 combined have over 400,000 -- received claims on  
20 behalf of 400,000-plus Claimants. So if you wanted  
21 to collect information on all the historical  
22 Claimants that have brought claims against the

1 Debtors, you would be asking a request for over  
2 400,000 people.

3 That's not what the request was. It  
4 was for 12,000, around 3 percent of the universe of  
5 historical Claimants that these two Debtors have  
6 received claims from.

7 So it started targeting at 3 percent,  
8 3 out 100, and so it's the universe of Claimants  
9 who brought tort claims against the Debtors'  
10 prepetition. That's the initial universe.

11 Q. Is it your testimony that the Verus  
12 Trusts possess 400,000 Claimants' worth of  
13 information?

14 A. I think you can look at reports, and  
15 they have more than 400,000 Claimants that filed  
16 claims against entities by the Verus Trusts, but  
17 what's the overlap -- the question of what's the  
18 overlap between the 400,000-plus the Debtors faced  
19 and which ones are in -- file a Trust claim against  
20 Verus. But the Verus entities have received more  
21 than -- claims on behalf of more than 400,000  
22 individuals.

1 Q. Let's try it this way: What is it  
2 that the Debtors need -- excuse me.

3 Strike that.

4 What is it that you need this  
5 information for that you asked the Debtors to go  
6 get it?

7 A. So when estimating future  
8 liabilities, there's a few different steps in that  
9 process. One is, how many future people will  
10 develop mesothelioma with the types of  
11 characteristics that would make them compensable  
12 against these Debtors?

13 When doing that exercise, the  
14 industry and occupational work backgrounds of  
15 Claimants matters. That affects the odds that they  
16 will be compensable. So when you're doing this  
17 forecast, you'd really like to break Claimants down  
18 into industry and occupational groups that have  
19 different levels of valuation associated with them.

20 So one of the things that this data  
21 provides is, in electronic form already, a rich set  
22 of industry and occupational work history

1 information, so you're able, then to forecast by  
2 different industry and occupational groups because  
3 they have different demographic characteristics.  
4 So some of those groups taper off more quickly, so  
5 the claims would decrease faster. Some will  
6 decrease more slowly.

7 So to get a more precise estimate of  
8 the number of future claims that the Trust would  
9 receive, you really want to do the analysis by  
10 industry and occupational groups; that both gives  
11 you a more precise estimate of the totality of the  
12 liability and, probably just as importantly, it  
13 helps you better protect future Claimants relative  
14 to pending Claimants. Because when you do this  
15 type of a forecast, forecasting the number of  
16 claims the Debtor would have received one year post  
17 petition, that's easy, relative to forecasting the  
18 number of claims the Debtor would receive 20 years  
19 post petition.

20 The further into the future you go,  
21 the more uncertainty. And so we want to minimize  
22 that because we really don't want to be in a

1 position where future Claimants are getting paid  
2 less than the pending Claimants, so improving that  
3 forecast is important.

4 Q. Okay. Any other reason the Debtor  
5 needs the information?

6 A. So there's a second piece besides --  
7 that uses that same type of information to help you  
8 design a claims resolution process and then,  
9 similarly, helps you show that that claims  
10 resolution process is feasible at confirmation, so  
11 you're using it for those purposes as well.

12 Depending on the exercise you're  
13 doing, but, in particular, under what is often the  
14 Plaintiff's theory in these cases, you're trying to  
15 do an estimate of what Claimants would have been  
16 paid in the tort system; and that's something that  
17 varies by both industry, occupation but also law  
18 firm, jurisdiction.

19 And so when you start asking these  
20 questions, it may be that only 100 of the 1,200  
21 claims apply to a question of interest, so that's  
22 constrained to a 1,200-claim sample, but only one

1 in 12 go to a subpopulation that I need to estimate  
2 something on behalf of; now I have only a sample  
3 size of 100 to answer that question. And that's  
4 not sufficient.

5 So when you start peeling down, if  
6 you really want to ask a question that's just one  
7 average for the whole population, 1,200 claims, in  
8 general, would be enough. But as soon as you start  
9 saying there's a subpopulation of interest, like  
10 maybe pipefitters and electricians are different  
11 from carpenters, maybe certain jurisdictions are  
12 different from others, so you need to look at a  
13 subset, I no longer get to look at 1,200 claims,  
14 and so I need those subsets to also be big enough  
15 to give reliable opinions and accurately estimate  
16 the future.

17 Q. Okay. So let me -- is it -- before  
18 we go further, any other reasons why you ask the  
19 Debtor to go get this information?

20 A. There's what's the bulk of  
21 Paragraphs 15 and 16, which is really what fraction  
22 of a Claimant's exposures were known to the Debtors

1 at the time of settlement. So that's the thrust of  
2 Paragraphs 15 and 16 in my declaration, so that's  
3 another issue where this information would be  
4 important.

5 Q. All right. Let's start with that  
6 one, which is you say, What information was known  
7 to the Debtors at the time of settlement?

8 That is, it's -- how does that help  
9 advance the ball of the case?

10 MR. EVERT: I'm going to object to  
11 the form of the question. I'm not sure what  
12 you're asking.

13 THE WITNESS: So little bit of  
14 history: Key aspect of the Garlock case was  
15 that Judge Hodges found that not all that  
16 information had been revealed and concluded  
17 that tainted the tort history, so  
18 extrapolating historical tort settlements  
19 into the future wasn't appropriate.

20 The Plaintiffs assert -- and it  
21 may turn out to be true -- that post Garlock,  
22 that behavior stopped.



1 BY MR. KAPLAN:

2 Q. What behavior specifically?

3 A. Not revealing the totality --  
4 suppressing information or not revealing --

5 Q. Okay.

6 A. -- all the alternative exposure  
7 information.

8 Whether or not that stopped is an  
9 empirical question. For mine, maybe that did stop  
10 completely. Maybe it's identical to what was in  
11 Garlock. I don't have an opinion about that. I  
12 want to look at the data and have the data tell me,  
13 is that going on or not going on.

14 That was a very salient fact in the  
15 estimation in Garlock. I would expect the outcome  
16 of that empirical exercise to be a salient fact  
17 here. So that speaks directly to an aspect of what  
18 you could potentially rely on a tort system  
19 settlement for or not. So that's one spot where  
20 answering that question is going to directly enter  
21 into an estimation process.

22 Q. Okay. I want to show you the -- this

1 is just an exemplar subpoena of one. I believe  
2 they all were fairly similar, but this was one that  
3 was issued to the ACandS Asbestos Trust in  
4 connection with the -- when it was grouped  
5 in New Jersey.

6 MR. KAPLAN: We'll mark this as  
7 CM-2, and I have copies to share with  
8 everybody.

9 (Sotto voce discussion.)

10 --oOo--

11 (CM Deposition Exhibit Number 2,  
12 Subpoena to Produce Documents,  
13 Information, or Objects or to Permit  
14 Inspection of Premises in a  
15 Bankruptcy Case (or Adversary  
16 Proceeding), marked for  
17 identification, as of this date.)

18 --oOo--

19 BY MR. KAPLAN:

20 Q. Take a look at that, and let me know  
21 whenever you're ready.

22 MR. KAPLAN: Just for those on the

1 Zoom world, the cover page is not filed  
2 anywhere, but the thrust of what I'm about to  
3 talk about is filed at --

4 MR. EVERT: It's the order  
5 granting the subpoenas --

6 MR. KAPLAN: Yeah, Docket 1240.  
7 Yep.

8 MR. EVERT: -- right, Docket 1240  
9 in the main case.

10 MR. KAPLAN: Yes.

11 BY MR. KAPLAN:

12 Q. All right. Have you seen that  
13 document -- again, I want to focus in on the order  
14 here, Dr. Mullin.

15 Have you seen this document before?

16 A. I believe I've seen the order before.

17 Q. Okay. Excellent.

18 I want to focus you in on Paragraph 5  
19 of the order, which is, I believe, what we were  
20 just covering a moment ago, which talks about what  
21 the subpoenas are seeking evidence for.

22 Do you see that?

1 A. I do.

2 Q. All right. And I believe that the  
3 first thing you spoke to me about was the -- the  
4 estimation of the Debtors' liability for current  
5 and future asbestos-related claims and the  
6 negotiation, formulation and confirmation of the  
7 plan, correct?

8 MR. EVERT: I'm sorry.

9 Could you repeat that question?

10 MR. KAPLAN: Sure. I'm just  
11 trying to -- he gave me -- if I recall, there  
12 were three areas which he gave me to --

13 BY MR. KAPLAN:

14 Q. -- that you needed the data for: One  
15 was forecasting; one was -- call it claims  
16 resolution and -- and the Trust distribution; and  
17 the third I'll generally refer to as the "Garlock  
18 problem."

19 Okay?

20 Did I get those right, those three --  
21 what -- the three purposes?

22 A. So estimating liability, of which you

1 have a lot of inputs into, the Garlock problem is a  
2 subset of that, if it exists. You know, so there's  
3 estimating liability; and there's designing the  
4 plan; and then there's showing the plan as feasible  
5 in confirmation.

6 Q. Okay.

7 MR. ANSELM: I'm sorry.

8 Could you repeat that last answer?

9 I couldn't hear.

10 Or could you repeat it back, what  
11 the answer was?

12 --oOo--

13 (Whereupon, the certified  
14 stenographer read back the pertinent  
15 part of the record.)

16 --oOo.

17 MR. ANSELM: Okay.

18 BY MR. KAPLAN:

19 Q. So that's what I was trying to drill  
20 down on, what this is.

21 Your testimony is that this -- this  
22 -- if we look at the colon past "specifically,"

1           there's a semicolon, and then we get to -- The  
2           estimation of the Debtors' asbestos liability is  
3           the second phrase or clause there, correct?

4           A.       Correct.

5           Q.       And that's where your testimony is is  
6           that the -- determining whether that there was a  
7           similar issue in Garlock falls in?

8           A.       Correct. This is broken out a little  
9           different, probably the phrase before that  
10          semicolon --

11          Q.       The reliable basis --

12          A.       -- in this context, is probably where  
13          the Garlock part falls; but yes.

14          Q.       Okay. And this "permitted purposes"  
15          term is a defined term that I didn't design, but  
16          I'm going to go with it.

17                    You see that term there which talks  
18          about the permitted purposes?

19          A.       I do.

20          Q.       Okay. My question is this: With  
21          respect to the first permitted purpose, the  
22          determination of whether prepetition settlements of

1 mesothelioma claims provide a reliable basis for  
2 estimating the Debtors' asbestos liability, is it  
3 your opinion that a 10 percent sample would not be  
4 sufficient?

5 A. For most aspects of that, I'm  
6 actually constraining myself to a 10 percent sample  
7 already.

8 So for most aspects of that -- like,  
9 for example, whether or not all the exposures have  
10 been revealed -- there's a comparison of Trust data  
11 to underlying Claimant information as collected  
12 from the claim files, that's being envisioned as a  
13 comparison of claim file sample to the Trust data  
14 and would likely be done with approximately 1,200  
15 Claimants.

16 So for most of the things that I  
17 think would fall under that, the 10 percent sample  
18 is already being used, because it would be --  
19 that's where the claim file production, which is  
20 not already in electronic format so has a different  
21 level of expense associated with it, has a  
22 different cost-benefit analysis. And so that's the

1 binding constraint on addressing the bulk of what  
2 would fall under that first item.

3 Q. Okay. How about with respect to the  
4 estimation of the Debtors' asbestos liability -- is  
5 it your opinion that a 10 percent sample would not  
6 be sufficient for that?

7 A. "Sufficient" is probably not the term  
8 I would use.

9 Could I perform an estimate with a  
10 10 percent sample if constrained? Yes. That  
11 estimate would have a much broader range of  
12 uncertainty about it, and so the Court would have  
13 less guidance; the Trust would have a higher risk  
14 of not reserving enough funds for future claims.

15 So this is a question of precision,  
16 right? It's -- is it worth gaining the extra  
17 precision for whatever costs are associated with  
18 producing those data?

19 It's still feasible to give an  
20 opinion, but you're just going to have a lot less  
21 precise about that opinion.

22 Q. Let's stop there for a second with



1 respect to precision.

2 Can you quantify how much less  
3 precise 10 percent would be versus, say, for  
4 example, a 12 percent sample size?

5 A. So there are areas where I was  
6 comfortable doing that. You know, I did drop all  
7 the dismissed claims from the request. I dropped  
8 everything that wasn't a mesothelioma from the  
9 request. So there's areas where I felt like I had  
10 the information to have confidence that  
11 constraining myself to 3 percent of the historical  
12 claims that the Debtors have received would still  
13 leave me in a position where I hadn't given very  
14 much up in terms of precision.

15 Beyond that, it's very hard to  
16 quantify until you have the data, because you don't  
17 know what you're going to find.

18 So, for example, if you take the  
19 Garlock-style question, if it turns out that the  
20 assertions of the Plaintiffs' bar is validated and  
21 all exposures are being revealed in a  
22 contemporaneous manner, that issue just drops out

1 of the estimation. So I wouldn't need a large  
2 sample size if it turns out -- for that question if  
3 it turns out it never happens.

4 In contrast, if it happens but it  
5 only happens in select jurisdictions or for select  
6 types of claims, then I need a lot more data,  
7 potentially, to address that.

8 So saying exactly how much data you  
9 need and the critique that Dr. Wyner said, if I  
10 haven't quantified it, that's because it's not  
11 actually quantifiable at the moment, but you're  
12 taking a big risk for -- you know, on that front.

13 On other aspects, like estimating  
14 claims by industry and occupation group, I haven't  
15 run it in this particular context, but I know the  
16 -- for example, the occupational exposure curve for  
17 construction claims goes out about 10 years further  
18 as a shift from lots of traditional industrial  
19 exposures. So having a good understanding of that  
20 can move your estimate 5 or 10 percentage points.

21 And so knowing the breakdown of those  
22 in a fulsome manner could easily add, you know, 5

1 or 10 percentage points of precision to the type of  
2 estimate you're making, and that would be -- when  
3 you're talking hundreds of millions of dollars, 5  
4 or 10 percentage points can be a lot of money.

5 You know, I haven't done all that  
6 work. I don't have the data, so I don't know  
7 exactly what it's going to move it. That's  
8 something you can't know until after the fact.

9 Q. Again, I'm trying to understand if  
10 there is a way to -- so I think I understand you  
11 said it's not quantifiable, but let me just make  
12 sure.

13 The precision of a 10 percent versus  
14 a 15 percent sample size -- again, this is all  
15 before you have the data -- you're not able to  
16 quantify the mathematical difference in terms of  
17 how precise they would be?

18 A. So there are places where you could  
19 be concrete.

20 Q. Okay.

21 A. So if you took, for example, a law  
22 firm that has 400 resolved claims and now we take a

1 10 percent sample of 400 paid claims during the  
2 sampling period. Now we take a 10 percent sample;  
3 we'd expect to get 40. If it turns out that  
4 breaking that law firm out and doing analyses by a  
5 law firm is important, I now have a sample size of  
6 40, which is going to have three-and-a-half times  
7 the uncertainty of what I would have had with 400.  
8 400 for that law firm probably would be enough; 40  
9 is almost assuredly not. And so now, I'm going to  
10 introduce a whole bunch of uncertainty.

11 Most of the law firms have well under  
12 400, so there's only a handful of law firms that  
13 have more than 400 paid claims during this period,  
14 so is -- for all but a handful of them, if you  
15 needed to do something by law firm, you'd want the  
16 totality of the available claims out of the 12,000.

17 There's a couple that have more than  
18 4- or 500 claims, but it's only a couple. So  
19 that's an example where I know which law firms I'll  
20 need to break out and treat separately -- I don't  
21 know yet. When we do financial reporting work,  
22 it's common to break out 10 or 20 law firms in the

1 analysis to get the most precise estimate of what  
2 we would expect in the tort system.

3 So I expect I have to break it out by  
4 law firm. I expect that analysis to matter  
5 materially to the precision. And if I only get  
6 10 percent, I'm going to lose an awful lot of  
7 information from there and my work is going to be  
8 materially less precise.

9 Q. How much less precise?

10 A. So at the law firm level, you're  
11 going to be, again, more than tripling the amount  
12 of uncertainty. The baseline level of uncertainty  
13 is unknown. You're tripling the uncertainty, but  
14 you don't know the baseline until the data comes in  
15 and you do the analysis. So that's not answerable;  
16 the relative loss is.

17 Q. Okay. Let me turn to the sort of  
18 last point there, and then I'll take a break for a  
19 couple of minutes.

20 The development and evaluation of  
21 Trust distribution procedures for any plan of  
22 reorganization confirmed in these cases, the third

1 purpose.

2 Okay?

3 Is a 10 percent sample sufficient for  
4 that purpose?

5 A. It may turn out to be sufficient for  
6 some occupational groups you'd want to look at and  
7 almost assuredly insufficient for others. So,  
8 again, it's similar to law firm. Until you've done  
9 the work, you don't know how you're going to bundle  
10 those groups together, but it's typical to have  
11 multiple groups.

12 The smallest groups are frequently  
13 the most highly paid claims, so you have a very  
14 high per-claim value in a CRP for relatively small  
15 number of people fitting it, is the typical fact  
16 pattern. So you're expecting the place that the  
17 precision matters most to be the place exactly  
18 where getting a 10 percent sample instead of all  
19 the data is going to cause you the biggest problem  
20 because it may only be that 5 percent of the claims  
21 are in that group; and so then, instead of having  
22 1,200 claims to work with, suddenly I have 60. And

1 60 is not going to be enough for almost any  
2 reasonable statistical analysis.

3 In contrast, 600 would be.

4 Q. Is it your testimony here that there  
5 is no percentage, in terms of sample size, that  
6 would be sufficient?

7 MR. EVERT: I'm just going to  
8 object. I don't think that's what he said.  
9 I think the problem is with the word  
10 "sufficient," but . . .

11 THE WITNESS: I think quite to the  
12 opposite --

13 BY MR. KAPLAN:

14 Q. Okay.

15 A. -- I didn't -- I asked for 3 percent  
16 of the data to start with.

17 And so the context that's being lost  
18 in your questioning is before the Trusts ever  
19 received a request, I had already concluded I don't  
20 need this for 97 percent of the Claimants to do my  
21 work and get to a sufficiently precise estimate.

22 So quite to the contrary, I'm more

1 saying 3 percent's sufficient; .3 is not. Taking  
2 away 90 percent of the 3 percent request? No, that  
3 wouldn't be sufficient; the 3 percent is.

4 So I did that work up front and  
5 constrained the request to only 3 percent of the  
6 data.

7 MR. KAPLAN: Okay. All right.  
8 Why don't we take five minutes here? Try to  
9 actually make it five minutes, if we can. If  
10 not, it will be 10.

11 We'll go off the record.

12 --oOo--

13 (Whereupon, a recess was taken from  
14 1:59 p.m. EDT to 2:10 p.m. EDT.)

15 --oOo--

16 BY MR. KAPLAN:

17 Q. All right. Dr. Mullin, we're back  
18 from the break.

19 Any reason you can't continue?

20 A. No.

21 Q. Okay. Not at least this break.

22 Before we left, you said, a couple



1 different times -- you were talking about you  
2 had -- there was a universe of 400,000 claims which  
3 you limited to -- which you said was 3 percent of  
4 that and then took it down to .3 -- were being  
5 asked to take it to .3 percent.

6 Do you remember we were discussing  
7 that?

8 A. Yes.

9 Q. Okay. The 400,000 claims that you --  
10 that the claims universe was starting with -- are  
11 they all mesothelioma claims?

12 A. No.

13 Q. Okay. Approximately how many of the  
14 400,000 are mesothelioma claims?

15 A. I don't know the exact count.

16 Q. That's why I asked for an  
17 approximation, because I figured you didn't.

18 A. More than 25,000, less than 50-.

19 Q. Okay. And were you asked to do an  
20 analysis of nonmesothelioma claims?

21 A. Estimation is currently constrained  
22 to mesothelioma claims, but any plan of

1 reorganization will have to address all claims.

2 So for the purposes of the current  
3 scope of estimation, mesothelioma claims is what is  
4 needed, but eventually you'll have to design a  
5 claims resolution process for all claims.

6 Q. Okay. And you also talked about  
7 claims -- you eliminated claims that were  
8 dismissed, correct?

9 A. Correct.

10 Q. Were you asked to analyze claims that  
11 were dismissed?

12 A. Yes.

13 Q. Okay. And how is it that you would  
14 be analyzing the claims that were dismissed?

15 A. A fundamental question when valuing  
16 claims is which ones will be dismissed and which  
17 ones will be paid. So you often compare the  
18 characteristics of dismissed claims to paid claims.

19 If you only look at characteristics  
20 of paid claims and say these characteristics are  
21 associated with payment, it may turn out that those  
22 exact same characteristics are also associated with

1 claims that don't get paid. So you -- to figure  
2 out what subsets of claims would be paid, dismissed  
3 claims are relevant.

4 Q. How about -- where do administrative  
5 settlements factor into your analysis?

6 A. So administrative settlements, in  
7 many ways, for estimating liability make the  
8 problem more difficult because, frequently, in the  
9 context of administrative settlements, underlying  
10 Defendants and these Debtors, in particular, have  
11 not gone through as exhaustive a discovery process,  
12 so they contain less information about the  
13 characteristics of those claims. And understanding  
14 the characteristics of the actual claims is  
15 relevant for projecting the number of future  
16 claims.

17 Q. Okay. So I think you said just a  
18 moment ago that you were approximating somewhere  
19 between 25- to 50- mesothelioma claims of the  
20 universe of 400.

21 Did I get that right?

22 A. It's thousands on end of all of those

1 numbers, but yes.

2 Q. For -- yes. Let's get that right for  
3 the record purposes because, otherwise, one of us  
4 will try and use it later.

5 A. Don't know which one that would be.

6 Q. You can bank on that --

7 MR. ANSELM: It depends.

8 BY MR. KAPLAN:

9 Q. -- you can bank on -- no, I'm  
10 kidding.

11 Your testimony was, if I'm correct,  
12 that of the 400,000 or so claims, you believe that  
13 25- to 50,000 are mesothelioma claims?

14 A. Claims, yes. Claimants -- it might  
15 be a little lower. I'm -- 80 percent of the Murray  
16 claims were dismissed; 50 percent of the Aldrich  
17 claims are dismissed. So you need more than double  
18 the 12,000 because, over half, you have a dismissal  
19 rate even for one that's half and 80 percent for  
20 the other. So that's really where I got to the  
21 lower number of about 25,000.

22 But it could go -- how much higher

1 than that it goes -- that could go -- I haven't  
2 tabulated it. So it's more than 25,000, and I'm  
3 confident it's less than 50- but probably closer to  
4 25- than 50-.

5 Q. And the subpoenas that brought us all  
6 together on this lovely spring day in  
7 Washington, D.C. -- they are seeking information  
8 about mesothelioma -- mesothelioma claims, correct?

9 A. The request was constrained to 12,000  
10 mesothelioma claims; that's correct.

11 Q. Okay. So how is it that we get to  
12 the 3 percent, .3 percent when you have -- you're  
13 looking for information from 12,000 mesothelioma --  
14 mesothelioma Claimants out of 25- to 50,000? That  
15 seems like a higher percentage. I'm not a  
16 statistician, but . . .

17 A. I answered this question before,  
18 which is there's over 400,000 Claimants. I chose  
19 not to -- I chose -- I asked -- I did not ask the  
20 client to seek information on nonmesothelioma  
21 Claimants despite the fact that those could be  
22 relevant for designing claims resolution processes

1 or claim -- or claim feasibility. They could still  
2 be helpful in terms of the questions that are  
3 relevant, but they are not as important as the  
4 mesothelioma.

5 So I made a choice to constrain and  
6 not ask for anything that wasn't mesothelioma.

7 Q. You would agree with me that if there  
8 were, for example, 25,000 mesothelioma Claimants  
9 total, 12,000 is just shy of half, right?

10 A. It would be 48 percent if there were  
11 25,000. I can do that math on the fly.

12 Q. Thank goodness, because all the  
13 lawyers in the room were looking for their iPhones.

14 All right. That's -- that's  
15 48 percent.

16 And if it were 50,000, can you do  
17 that math on the fly?

18 A. Just multiply by 2, so 24 percent.

19 Q. Excellent.

20 So that's not 3 percent, correct?

21 A. It's more than 3 percent of the  
22 mesothelioma claims. I always said it was

1 3 percent of the approximately 400,000. And I've  
2 been clear with you the whole time that that was  
3 all diseases.

4 So if you switch the denominator, the  
5 percentage will change no matter -- and you can  
6 switch it to anything else, and it will be a new  
7 percentage, too. It's not what I was saying  
8 before.

9 I was actually using the universe of  
10 claims historically brought against the debts is  
11 what's north of 400,000.

12 Q. Right. And we agree that the  
13 universe of mesothelioma claims are lower than  
14 that, correct?

15 A. Correct. They have claims of people  
16 without mesothelioma.

17 Q. Let's turn back -- let's look at  
18 Paragraph 15 of your declaration, which is CM 1 for  
19 the record purposes.

20 And certainly feel free to look at  
21 whatever, but I want to focus in on the last  
22 sentence.

1                   Whenever you're ready, Doctor, the  
2                   last sentence in Paragraph 15.

3                   A.       Yes.

4                   Q.       Yeah. So what you're talking about  
5                   here is that -- provide more data that will improve  
6                   the quality of our estimation and  
7                   claims forecasting work.

8                   And we've talked a lot about this  
9                   previously.

10                  Do you see that?

11                  A.       I do see that.

12                  Q.       The number that we're sort of arguing  
13                  about in the context of this hearing are  
14                  somewhere -- a number between 1,200 claim files and  
15                  12,000 claim files, correct? Can we agree on that?

16                  A.       I think these are electronic records,  
17                  not claim files. But 1,200 -- 12,000 Claimants --  
18                  the information on 12,000 Claimants versus the  
19                  information on 1,200 Claimants.

20                  Q.       Okay. Let's talk -- let's use  
21                  Claimants, then, so we're both saying the same  
22                  thing.



1 We're talking about the difference  
2 between 1,200 Claimants and 12,000 Claimants,  
3 correct?

4 A. Correct.

5 Q. All right. How much -- can you  
6 quantify for me how much getting the, say, 2,400  
7 Claimant files would improve the estimation in  
8 claims forecasting?

9 A. So -- and what you can do  
10 definitively is talk about what's the relative  
11 improvement in precision. This is actually a place  
12 where Dr. Wyner and I don't disagree. The basic  
13 statistical formulas move with the square root of  
14 the sample size. So if you quadruple the sample  
15 size, you double your precision. You take the  
16 square root of the relative movement.

17 So asking to take a 10th of the  
18 sample is asking you to slightly more than triple  
19 your level of uncertainty in everything you're  
20 doing.

21 So we're going to present things to  
22 the Court that have three times -- a little bit

1 more than three times the uncertainty about them  
2 than if we had the 12,000. We know that's going to  
3 be the relative impact.

4 Q. Let's start with the 1,200 out of the  
5 12,000.

6 What -- can you quantify the level of  
7 precision there?

8 A. Again, it depends on the question.  
9 So I don't disagree with what Dr. Wyner put in,  
10 where he said, If you're asking the question about  
11 a proportion for the totality of the population.  
12 He applied that formula correctly.

13 If, on the other hand, you want a  
14 proportion for one law firm, and that law firm has  
15 300 records that now we only sampled 30, you're  
16 going to apply that same formula to a population or  
17 a sample of 30 and you're going to have very large  
18 confidence intervals. You can apply the same  
19 mathematical formula. I don't do those in my head.  
20 But you will have confidence intervals that are  
21 quite broad that -- in my experience, broad enough  
22 that most courts would say, that's not very

1 precise; I don't know if we're going to rely on it.

2 So it's a question of how large of a  
3 subpopulation are we able to analyze. And that's,  
4 I think, the main difference between what Dr. Wyner  
5 was looking at and myself. He's implicitly assumed  
6 you always only care about a question for the  
7 entire population so you get to use all 1,200  
8 files.

9 And as soon as you go to questions  
10 that involve a subset of the population -- maybe  
11 the liability differs by gender, and you want to  
12 look at females separately, but they're only  
13 20 percent of the Claimants.

14 Now, if gender matters, I don't have  
15 1,200; I have 240. I don't have 12,000. I'm  
16 already down to a 20 percent sample, in essence,  
17 because only 20 percent of the Claimants are  
18 female.

19 So as soon as you start looking at  
20 subpopulations of interest, 1,200 within a  
21 subpopulation would be sufficient, but there's many  
22 subpopulations that would have less than 1,200 if I

1 take a 10 percent sample.

2 Q. Is there a way to design the sample  
3 so that it addresses the subpopulations you're  
4 interested in?

5 A. You could attempt to mitigate. So  
6 you could say I want 1,200 females out of the 2,400  
7 or so females, if you were to -- out of the --  
8 yeah, 2,400 out of -- if it's about 20 percent, and  
9 then 1,200 males. You could make it bigger, and  
10 that might address that question.

11 But then if you go to law firm -- if  
12 there's a law firm that only has 300 claims --  
13 Dr. Wyner and I, I think, agree that 30 claims is  
14 not enough. We'll probably learn in his deposition  
15 whether he thinks 30 claims is sufficient, but, you  
16 know, at 300, we'd probably agree -- I don't want  
17 to put words in his mouth, but -- on the  
18 statistical formulas, that you'd need all 300.

19 So for any law firm that has less  
20 than somewhere usually in the 3- to 500 range, most  
21 statisticians are going to say you really need to  
22 look at all of them if you want to be able to use

1 that data to make projections about the future.

2 Q. Let's talk about -- turning back to  
3 the -- the 10 percent sample that is being  
4 discussed here, is there a way to design the sample  
5 size to address the stated purposes that you're  
6 looking for?

7 A. You can mitigate, right -- you can  
8 mitigate the risk. And that is what you do in  
9 sample design. Whenever you take a sample, you're  
10 always taking a risk that you actually won't have  
11 the information you need. It's in -- it's  
12 intrinsic to sampling.

13 And the smaller you make the sample,  
14 the greater that risk becomes because the ultimate  
15 answer is only known after the fact. You don't  
16 know ahead of time.

17 And so, in this context, yes, you can  
18 design things that mitigate that risk, but you  
19 can't eliminate it. And the smaller you make the  
20 sample, the greater that risk becomes.

21 Q. And sitting here today, can you give  
22 me -- can you quantify what the risk is if the

1 Court were to order just the 10 percent sample, or  
2 1,200 Claimants?

3 A. As I said, I can't give you a  
4 specific number because that's not known until  
5 after you have the data and you do the analysis.

6 That said, in general, if you want to  
7 forecast liability, particularly if you want to  
8 forecast what Claimants would have received in the  
9 tort system, you need to control for law firm and  
10 jurisdiction. Those are two things that, when I do  
11 financial reporting disclosure work, I will control  
12 for. When you're looking at future tort system  
13 spend, you control for those two elements.

14 If you start controlling for those  
15 two here and you look at a law firm in a given  
16 jurisdiction, there's only a couple law firms and  
17 jurisdictions that have more than 400 claims. So  
18 in those, maybe you could sample, and you would  
19 still end up with more than 10,000 claims, because  
20 for the vast majority, this -- you're already at a  
21 size where you wish you had more data.

22 Q. Maybe I just missed it.

1 I guess your testimony -- am I  
2 correct your testimony is you cannot quantify the  
3 risk sitting here today, put a number on it? If  
4 the sample -- what I mean -- by "quantify," I mean  
5 it's only 30 percent reliable or 40 percent  
6 reliable or 50 percent reliable.

7 A. So, ultimately, the Court, in my  
8 experience, is who tells me whether it's reliable  
9 or not. What I tell the Court is what's the  
10 uncertainty of the estimate.

11 And so every time you tell me to  
12 triple my uncertainty, I get nervous. If three  
13 different inputs all tell me to triple my  
14 uncertainty -- this is one input into estimation.  
15 Now the uncertainty is 27 times as big.

16 Going into a court where I might have  
17 been able to say, Here's an estimate plus or minus  
18 30 million, you tell me to triple, and now I have  
19 to say, Here's an estimate plus or minus 90. But I  
20 have another input that also adds uncertainty of  
21 threefold. Now, instead of plus or minus 90, it's  
22 plus or minus 270.

1 Each uncertainty interacts with the  
2 other ones, and they -- it's more multiplicative in  
3 nature. So it's not that this is the only  
4 parameter that matters and creates uncertainty;  
5 there are others. And as you fold them, they start  
6 to get larger.

7 So this is a place where sampling at  
8 10 percent will likely approximately triple the  
9 uncertainty for key inputs into the model.  
10 Tripling that uncertainty means I'm going to triple  
11 my confidence with the uncertainty at the end.

12 And I don't see the costs as  
13 justifying that, given the benefit of being able to  
14 triple my precision and the guidance I give a  
15 court, when, in the best case, a scenario is  
16 already going to be you have tens of millions of  
17 uncertainty; so now you're going to triple that.  
18 That's adding an awful lot of uncertainty -- tens  
19 of millions at least of uncertainty to the  
20 estimate.

21 So you said "quantify." Going to the  
22 10 percent sample will add tens of millions of



1           uncertainty, maybe 100 million. I don't know. I  
2           haven't done that work. But it will be at least in  
3           the tens of millions based on historical  
4           experience.

5                   Q.       When you say "uncertainty," can you  
6           explain what it is you mean there? There's  
7           factors -- is that factors or variables you can't  
8           account for? Or what is that?

9                   A.       I would have less data to be able to  
10          refine an estimate. So that future estimate will  
11          have greater statistical -- that will add  
12          statistical uncertainty on top of the other types  
13          of uncertainty that already exist. And so it's  
14          going to expand any level of confidence you have in  
15          an estimate; "expand" in the sense of degrade your  
16          confidence, expand the uncertainty.

17                   Q.       Let's look at Paragraph 16, which  
18          is -- again, I'm focusing on the end of it, which  
19          is where you say, This would enable us to quantify  
20          the proportion of alternative exposure disclosed to  
21          the Debtors at the time of settlement.

22                            You see that?

1 A. I do.

2 Q. Is it your testimony that the  
3 1,200-Claimant sample is not sufficient for that  
4 purpose?

5 A. No.

6 Q. It is sufficient for that purpose?

7 A. I'm actually -- the sample of claim  
8 files were going to juxtapose that with this  
9 currently approximately 1,200. So that compares --  
10 that requires the comparison of the two. So that's  
11 already being envisioned for that specific question  
12 of only looking at 1,200.

13 And that's really motivated by the  
14 cost of producing and reviewing claim files,  
15 because they're not already in electronic format.  
16 If all that information was in electronic format,  
17 I'd use more data than that, but it's not, so the  
18 cost is materially higher.

19 Q. Paragraph 17, you talk about The  
20 variations in disclosure patterns would allow us to  
21 model the impact of the partial information on  
22 settlement amounts.

1 Do you see that, Doctor?

2 A. I do.

3 Q. Is it your testimony that a  
4 10 percent sample of 1,200 Claimants wouldn't be  
5 sufficient for that purpose?

6 A. It may be. And, initially, that's  
7 what I'm going to try to do it with because, again,  
8 I'm only going to have that quantified for the ones  
9 that are contrasted with claim files.

10 If you learn, for example -- a  
11 complete hypothetical -- say Claimants represented  
12 by counsel -- or counsel represented by 25- -- let  
13 me get it right. I'll start that over.

14 Let's say there's a subset of law  
15 firms that represent 25 percent of the historical  
16 Claimants, where a small fraction of the exposures  
17 are being disclosed, but for the law firms that  
18 represent the other 75 percent of Claimants, almost  
19 everything's been disclosed.

20 I may not have enough data for that  
21 25 percent, but then I would do a targeted  
22 follow-up of -- to try to fill that information in,

1 and -- as opposed to asking for it over the whole  
2 universe.

3 So I really view this as a two-step  
4 process: the first, which is really Paragraph 16,  
5 where, if at all, is full disclosure not occurring,  
6 which gets -- so for which claims is the --  
7 Paragraph 17 even a relevant question.

8 And then not knowing the answer to  
9 that, I view this as -- I may be able to do it with  
10 1,200. I may need to supplement at some point to  
11 get precision.

12 Q. Okay. Short of a -- I think you  
13 referred to it as a "census" or a "population,"  
14 when you talk about all the claims.

15 Correct? That's what you're  
16 referring to?

17 You said in your report a couple  
18 times, you know, a census -- a population-level  
19 census analysis.

20 That would be all 12,000, correct?

21 A. Correct.

22 Q. Okay. Is there a number -- you know,

1 as you said a moment ago, it's the judge who's  
2 going to tell you what ultimately is reliable, and  
3 I would probably agree with that statement to the  
4 extent that I'm sure you're going to give the judge  
5 an opinion on what number he should come out at.

6 Is there some number short of 12,000  
7 that you are comfortable opining to the judge would  
8 be sufficiently reliable for the purposes we  
9 discussed?

10 A. As I said, I went about this really  
11 asking that question ex ante and how could I  
12 minimize the size of the request counsel would make  
13 on my behalf for data. And I already -- the things  
14 that I was comfortable eliminating, I've  
15 eliminated, which got me down to the 12,000. And  
16 so I've gone through that process already.

17 So I'm not at the point where I'd say  
18 I'm comfortable making it smaller. You can do all  
19 the analysis with a sample of 1,200; you can do all  
20 the analyses with a sample of 6,000. You'll just  
21 have less precision.

22 Whether that precision turns out to

1 be binding on the ultimate reliability in the  
2 Court's eyes, one, it's a question for the Court;  
3 but, two, it's where those numbers work out at the  
4 end.

5 If you could give an estimate that  
6 was plus or minus, you know, a dollar and it became  
7 plus or minus \$3, the Court would probably be fine  
8 with that; but if it was plus or minus 50 million,  
9 it became plus or minus 150 million, the Court may  
10 really not be okay with that. That may be too  
11 broad of a range.

12 But that's where, when you say  
13 "trip" -- when I think of it as tripling my  
14 uncertainty, until you've done the work, I don't  
15 know if I'm going -- no, I'm not going from \$1 to  
16 \$3; I can't be that precise -- but I don't know if  
17 I'm going from 50 to 150 million or if I'm going  
18 from 20 million to 60 million. I don't know the  
19 answer to those things until I've done the work.

20 Q. Again, I want to focus you on just  
21 the mesothelioma claims, because that's what --  
22 what we're talking about here is -- your testimony

1 is that you are not prepared to offer -- to suggest  
2 that any number short of 12,000 is sufficient,  
3 correct?

4 MR. EVERT: Object to the form of  
5 the question.

6 THE WITNESS: Again, "sufficient"  
7 I -- I don't think is the right term, which  
8 is why I struggle with answering that  
9 question. I think you are taking unnecessary  
10 risks relative to the cost of data production  
11 to reduce it further. And I would advise  
12 against it.

13 BY MR. KAPLAN:

14 Q. Okay. I'm using "sufficient" because  
15 I believe the Judge's words were "doesn't work."

16 So let me ask it this way, which is:  
17 Is it your testimony that only the 12,000 Claimants  
18 will work for the Debtors' purposes?

19 A. I'll try this a different way, see if  
20 we can get on the same page.

21 No statistician can tell you the  
22 sample size you need before the data is produced in

1 a discovery exercise like this to say the number of  
2 claims at which it will work. What happens is the  
3 more claims you get, the higher the probability  
4 that it will work becomes.

5 So it's not -- whether you -- there's  
6 almost no difference, right, if you give 12,000  
7 claims or 11,999. The odds that that 12,000th  
8 claim was the linchpin to take you from working to  
9 not working is almost zero, right? But at the same  
10 time, no one can tell if you go from 12,000 to  
11 11,000, that may be what swings it. Going from 11  
12 to 10 may be what does.

13 But as you shrink, the odds that the  
14 analysis you would want to perform to give the  
15 Court better guidance would become unfeasible. And  
16 it's a statistical probability. It's not a known  
17 thing until you have the data and it's after the  
18 fact.

19 It's like default risk in that sense.  
20 As somebody becomes riskier, their odds of default  
21 goes up. But it doesn't -- you don't know yet if  
22 they're going to default or not; you just know the



1 odds are up.

2 As you shrink the sample size, the  
3 odds that you won't be able to give sufficient  
4 guidance rise.

5 Q. Let me just see if we can get on the  
6 same page -- I appreciate that -- which is is can  
7 you estimate and forecast based on 1,200 Claimants?

8 A. It is feasible to do all the math,  
9 and you will have a broader confidence interval, so  
10 you will give up precision. But you -- you will  
11 get an estimate with a substantially broader  
12 confidence interval of degree of uncertainty about  
13 that estimate.

14 Q. Can you quantify the proportion of  
15 alternative exposures disclosed to the Debtors at  
16 the time of settlement with the 1,200 Claimants?

17 A. As we said before, that's what I'm  
18 trying to do, is I'm using the 1,200 for which --  
19 the claim files. That sample isn't finalized yet,  
20 but that's the size that's being discussed of the  
21 claims result for positive payment -- would be  
22 using those 1,200 and comparing those to the Trust

1 data to do that.

2 My intent is to do that. I am  
3 optimistic that will work. I can't guarantee it.  
4 And if you needed to supplement, you may, for  
5 certain law firms, need to supplement additional  
6 claim files, but you would already have the Trust  
7 data necessary.

8 Q. Can you create the model you discuss  
9 in Paragraph 17 and the impact of partial  
10 information on settlement amounts with the 1,200  
11 Claimants?

12 A. Not as a materially higher  
13 probability of not being feasible with the 1,200  
14 than the analysis in Paragraph 16, but it depends  
15 on how large of a subpopulation actually is failing  
16 to disclose all of the exposures contemporaneously.

17 It's really going to hinge on the  
18 answer to a question that is unknown until we  
19 observe the Trust data.

20 Q. So let me just ask it this way, which  
21 is easiest: I know you're talking about the  
22 reliability of the model. Can you create the model

1           you're envisioning with the 1,200 Claimants?

2                   A.       You can do it mathematically. Will  
3           it result in a level of precision -- I'll phrase it  
4           differently.

5                           I can always do the math, but if the  
6           precision is lacking sufficiently, it should still  
7           be thrown out on Daubert because you don't have  
8           sufficient guidance. There are standards where you  
9           can't just say, Here's an estimate; I have no idea  
10          how accurate it is. You actually need to give  
11          sufficient precision for someone to rely on it.

12                          The Court ultimately decides what  
13          that level of precision is; I don't. But I can do  
14          the math. It doesn't mean that the math will  
15          produce a number that the Court finds useful.

16                          So the model can mechanically work.  
17          But will it provide sufficient guidance to be  
18          deemed reliable by the Court? The odds that the  
19          answer to that is no go up as you shrink the sample  
20          size.

21                          Q.       Okay. Turn to Paragraph 19 of your  
22          declaration, if we could. You talk about cost and

1 benefits of sampling, which is in a -- I have  
2 some -- just specific questions for you here, which  
3 is, let's start with, What kind of sample is it  
4 that's being proposed here?

5 Assuming that the 1,200 would be --  
6 is how the Court -- what they stick with, what kind  
7 of sample is being proposed?

8 A. Stratified random sampling.

9 Q. Is there a different type of sample  
10 that would be more or less reliable -- or let's  
11 just stick with more reliable.

12 A. So ex post, again, once you know the  
13 answer, you can always go back and design a better  
14 sample than the one you did ex ante because you  
15 have more information.

16 So when you design a sample, you use  
17 historical experience to guide you on where there's  
18 likely to be more information or what types of  
19 Claimants are more important to the questions that  
20 you're asking, so the stratification is imposing  
21 certain assumptions. If those assumptions turn out  
22 to be directionally correct, then the sample

1 stratifying will be more efficient than taking a  
2 simple random sample.

3 There's really good reasons to  
4 believe that, for example, oversampling the  
5 high-value claims will lead to more precision. It  
6 could turn out not to be true, but in almost every  
7 case like this in the past, almost every case I've  
8 ever done that's involved a mass tort, that  
9 produces greater efficiency than not doing it.

10 Q. Okay. Let's skip ahead a  
11 couple minutes here, and I want to talk to you a  
12 little bit about the Court's second question, which  
13 is the -- why sampling wouldn't reduce the risk of  
14 even just human error, missing some of the PII  
15 being disclosed.

16 Where in your declaration is it that  
17 you're discussing that?

18 MR. EVERT: While he's looking,  
19 Andrew and Michael, I was going to say  
20 earlier, the declaration sort of says what it  
21 says, so I'd object. It's something that  
22 limits the paragraph he picks, but I hear --

1 I hear the fair point of your question.

2 (Whereupon, the witness reviews the  
3 material provided.)

4 THE WITNESS: The bulk of that  
5 information expands Paragraphs 23 to  
6 Paragraph 30.

7 BY MR. KAPLAN:

8 Q. And these are the paragraphs that  
9 talk about the process in place to scrub the PII,  
10 correct, as well as the base and what's the ability  
11 to maintain that information, or are we looking at  
12 different ones?

13 A. That is part of the content.

14 Q. Outside of what is contained in --  
15 and, again, I certainly appreciate counsel's  
16 point -- outside of what is contained in this -- in  
17 these paragraphs, are you going to offer any other  
18 opinion as to why the proposed 10 percent sample,  
19 or 1,200 Claimants, doesn't reduce the risk of PII  
20 being disclosed?

21 A. So for the Claimants themselves -- I  
22 mean, I don't know -- I don't think this is

1 inconsistent with what's in here in any way, but  
2 for the Claimants themselves, Bates White already  
3 possesses the PII. If we don't have the PII, it's  
4 not in the request. It's only people where we know  
5 the name and we know the Social Security number.

6 We're never asking the Trust to send  
7 us PII. So the only PII that's at risk that would  
8 be incremental would be information that  
9 Bates White actually doesn't want. It's  
10 information that was in an exposure field that, as  
11 I understand it, the Delaware facility is going to  
12 take a pass at redacting that. Bates White has its  
13 own obligation to redact that. So it has to be in  
14 the field to start with, failed to get redacted by  
15 the Delaware facility, failed to get redacted by  
16 Bates White, and then have a data breach.

17 So if we had 12,000 Claimants, if  
18 5 percent of the Claimants had a field with some  
19 additional PII, 99 percent of it gets redacted by  
20 Delaware, 99 percent of what they gets missed gets  
21 redacted by Bates White, you're talking .01  
22 incremental piece of PII, when you would have

1 already 12,000 people's PII in a data breach.

2 So going from 12,000 people to  
3 12,001, I don't want to be trivial about anybody's  
4 PII, but it's one more out of 12,000. So when you  
5 say, is this materially increasing the risk that  
6 already exists, going from 12,000 to 12,001, that's  
7 not a particularly material increase.

8 So this process, this specter that's  
9 being put out there for this, is so remote that,  
10 no, I don't put a lot of weight on it, because by  
11 the time you go through two levels of redaction and  
12 you need a data breach on top of it, you know, this  
13 is not going to produce a material number of people  
14 relative to the PII that is already out there.

15 Q. When you say "out there," you mean  
16 already in Bates and White's system?

17 A. Well, it's in Bates White; it's in  
18 the Debtors', it's in Verus; it's in the Delaware  
19 facility --

20 Q. Sure.

21 A. -- it's with, you know, Ankara, if  
22 they downloaded the claims database; it's with LAS.



1 I mean, all the various parties working in the case  
2 who have the Debtors' database or have the same  
3 Claimants in a different context also all have that  
4 PII, so all of these parties, in general, possess  
5 the PII to start with. You're not fundamentally  
6 changing that risk.

7 Q. You talked a moment ago about a data  
8 breach.

9 Are Bates and White's systems  
10 infallible?

11 A. I don't think there's any system  
12 that's infallible.

13 Q. Okay. Are you aware of whether  
14 Bates and White's systems have ever been breached  
15 prior to today?

16 A. They have not.

17 Q. In any form at all? No hacks? No  
18 phishing? No nothing?

19 I'm not talking about the Claimant  
20 files.

21 A. So my technical services people will  
22 tell me people attempt to breach our systems

1 multiple times every day. That's probably the  
2 training that all of you get, too, right?

3 We've never had a data loss.

4 A breach, has somebody ever clicked  
5 on a link somewhere, but there's so many layers of  
6 security, it doesn't go anywhere.

7 We've never had a data loss.

8 You know, what you call a "breach,"  
9 depending on how you define that, every single  
10 entity in the world has. If you say, Did any of  
11 your employees ever click on a false link, then  
12 every organization has. So -- but did it result in  
13 anything?

14 Bates White has never had a data  
15 loss.

16 Q. Okay. And when you say -- I want to  
17 make sure that we're talking about the same thing  
18 because this would be a scenario where we -- we  
19 would talk past each other.

20 Are you aware of proprietary  
21 information on Bates White's system ever being  
22 accessed by an external actor?

1 A. No.

2 Q. Okay. Your testimony is not that  
3 Bates and White's -- Bates and White cannot be  
4 hacked, correct?

5 A. As I said, I don't think there's any  
6 system out there --

7 Q. Right.

8 A. -- that it's impossible for a  
9 sufficiently motivated party to potentially hack.

10 MR. EVERT: If the Russian  
11 government wants your data, they can get your  
12 data.

13 MR. KAPLAN: I'm fairly certain  
14 they have mine, so I'm okay with it already,  
15 just to be clear.

16 MR. EVERT: We heard that, but --  
17 (Laughter.)

18 MR. KAPLAN: Yeah. It's because  
19 I'm a Philadelphia fan; they have everyone's.

20 BY MR. KAPLAN:

21 Q. You agree with me, Doctor, that you  
22 can't be 100 percent certain that the data will not

1 be improperly accessed, correct?

2 A. I agree. I don't think anybody in  
3 any -- I mean, I don't think the data sitting at  
4 Verus or the Delaware facility can be 100 percent  
5 certain. There's no such system.

6 Q. Thankfully, they're not sitting here  
7 for your deposition today, so I'll ask them another  
8 time, maybe.

9 All right. Let's turn now, as  
10 promised much earlier, to Dr. Wyner's report.

11 MR. KAPLAN: And we'll mark this  
12 as -- I think we're up to 3, correct -- to 3.

13 I was able to keep track of that,  
14 look at that.

15 --oOo--

16 (CM Deposition Exhibit Number 3,  
17 Expert Report of Abraham J. Wyner,  
18 Ph.D., marked for identification, as  
19 of this date.)

20 --oOo--

21 MR. KAPLAN: I don't know how many  
22 I printed so . . .

1 (Sotto voce discussion.)

2 BY MR. KAPLAN:

3 Q. Given that -- you've seen this  
4 before, correct, Dr. Mullin?

5 A. Correct.

6 Q. I believe you said you were  
7 discussing it with your team in advance of today.

8 Which part or parts of Dr. Wyner's  
9 opinion is it that you take issue with?

10 MR. EVERT: I object to the form  
11 of the question.

12 Is that really fair?

13 Do you want to walk him through  
14 each paragraph, or do you want to --

15 MR. KAPLAN: I just want to know  
16 what he disagrees with. You told me he's not  
17 going to produce a rebuttal report, so I'm  
18 not going to get an opportunity to hear -- to  
19 get it on a line-by-line. I want to know  
20 what he's got an issue with here.

21 MR. EVERT: Do you think you can  
22 do that?

1 THE WITNESS: I'm going to be  
2 talking for a while. That's a very broad,  
3 open question. I'm happy to answer it, but  
4 I'm going to ask you not to ask follow-up  
5 questions until I finish, because I need to  
6 give a complete answer if we're going to do  
7 that. I don't want to get segued halfway  
8 through by a follow-up and then be told that,  
9 no, you didn't finish and so that's it.

10 BY MR. KAPLAN:

11 Q. You have my absolute word. I'm ready  
12 for you to tell me what it is you have an issue  
13 with.

14 A. Start on Paragraph 6.

15 Q. Okay.

16 A. He says, As described in detail  
17 below, it is my opinion that a random sample -- a  
18 random 10 percent sample of 1,200 Claimants would  
19 fulfill all of the Debtors' reasonable needs.

20 He never defines "reasonable needs."  
21 He never defines "all." So he's made this blanket  
22 statement with a universal qualifier. And at no

1 point he -- does he -- he covers two specific  
2 questions in his report, two. He entirely ignores  
3 the question that the 90 percent of the data that  
4 the Trusts are requesting that not get produced  
5 would be used. He only addresses two questions,  
6 where my intent was to only use the 10 percent of  
7 the data that would be produced in the sample.

8 So if -- and the critique is, On the  
9 questions where Dr. Mullin's already only going to  
10 use a 10 percent sample, a 10 percent sample  
11 suffices; ergo, it suffices for everything.

12 The latter doesn't follow. He  
13 addressed the two places where I'm already  
14 constraining myself to a 10 percent sample and  
15 saying, There, it's enough.

16 He doesn't talk anything outside of  
17 that scope anywhere. Yet it doesn't even define  
18 what those other reasonable uses would be, yet has  
19 this universal statement with no backing anywhere  
20 in the report.

21 So at its highest level, you can put  
22 almost every complaint I have under that category.

1 I don't think he has any idea how I'm going to use  
2 the data. I don't know how he could.

3 I'm going to go forward and do an  
4 estimation report. I've given broad categories of  
5 how I would use that. And he's made a statement  
6 that "all reasonable" ways.

7 As we talked through earlier, I  
8 expect to have to condition things on law firm and  
9 jurisdiction because that's frequently very  
10 important.

11 It may turn out not to be here, but  
12 it's much more likely that it would be than not.  
13 And he has no opinions about what happens as soon  
14 as you need to address the subpopulation. All of  
15 his opinions are assuming I'm only looking at the  
16 entire universe at once, that he's disclosed here  
17 at least.

18 And so I expect to have to look at  
19 subpopulations. Jurisdiction, law firm would be a  
20 key one. Gender could easily come up as one, you  
21 know, and industry and occupational groups. I  
22 expect to use that data to put people into



1 clustered groups that behave similarly and then do  
2 extrapolations based on each of those subgroups.

3 So he has entirely ignored what  
4 happens when only a subset of the sample is  
5 applicable to the question of interest.

6 And if you look at simple tabulations  
7 in the data, like paid mesothelioma claims by law  
8 firm, paid mesothelioma claims by gender, paid  
9 mesothelioma claims by jurisdiction, you see really  
10 quickly that if you sample, you're not going to  
11 have enough data to answer those questions.

12 You know, so at a big level, that's  
13 the overarching problem with his whole report.

14 He very much mischaracterizes the  
15 testimony of my partner, Dr. Jorge Gallardo-Garcia.  
16 He asserts in Paragraph 8 that Dr. Gallardo-Garcia  
17 clearly states that sampling is sufficient.

18 He does not state that. If you go  
19 read his report, he makes it clear that there's a  
20 court order that constrains him to 10 percent, and  
21 within that, he's going to design the most  
22 sufficient sample -- the most efficient sample he

1 can -- but he actually is explicit that that's not  
2 what he believes is best, but he's got an external  
3 constraint forcing him.

4 To that point, I speak with  
5 Dr. Gallardo-Garcia on a regular basis. His office  
6 is a few doors from mine. I know that is not his  
7 opinion. So I don't know how he's reaching that  
8 when you read that report in totality, but it is  
9 explicitly wrong.

10 There's an irony. Well, he complains  
11 that At no point does Dr. Mullin quantify the  
12 potential loss of accuracy.

13 I think he very much knows that is an  
14 exercise you can't do ex ante when the very data  
15 you're seeking is fundamental to what  
16 subpopulations you need to analyze later. That's  
17 an impossibility.

18 The irony is, he reaches a conclusion  
19 that the 10 percent sample is enough in a  
20 cost-benefit without ever quantifying the cost. So  
21 if he's going to complain that you have to quantify  
22 an element of it and he's reaching the opposite

1 conclusion without ever quantifying the loss, the  
2 cost, and his -- one of his clients has done this  
3 exercise, so one of his clients has already  
4 redacted information for a different request.

5 So instead of all of us sitting here  
6 in the dark and saying, How often does this PII  
7 show up in these exposure fields, there's one --  
8 one of his clients knows the answer to that in the  
9 context of DPMP. He either didn't ask him for  
10 that, they didn't disclose it to him, but he could  
11 know, oh, that occurs in one in a thousand records,  
12 one in 100 records, one in two records, which could  
13 greatly inform this question.

14 He could also ask them, when they did  
15 their redaction process and their quality control  
16 on it, did they think they eliminated half of them?  
17 Ninety-five percent? Ninety-nine percent? So how  
18 many do you think slipped through?

19 He's silent even though his client  
20 actually has done this exercise once and has the  
21 data. So the person who could actually quantify  
22 the cost whose client has access to know exactly

1 how many records have this information and  
2 presumably has done quality control on that process  
3 to know what their rate of eliminating it is, he  
4 stays silent on, you know, that information. Yet  
5 he concludes at the same time, even though his  
6 client has this data, that the cost-benefit  
7 analysis isn't justified.

8 So if we had that information, you  
9 would be able to be much more precise. I gave a  
10 hypothetical; 5 percent of the fields have it;  
11 99 percent get cleaned up by the facility;  
12 99 percent get cleaned up of what was missed by  
13 Bates White to get to 0 or 1.

14 The first two numbers in that, they  
15 actually know. So those are knowable. So are we  
16 really looking at a handful of PII coming through?  
17 Thousands? I hope not thousands of records, given  
18 they went through that process. But he doesn't  
19 access any of that even though his client has it.

20 As an expert, if my client has  
21 information directly on point and doesn't share it  
22 with me -- you should ask for it; hopefully, they

1 volunteer it. So I'm -- that part confuses me as  
2 to why that's not in his report, given he has  
3 access. As I said, there's an irony because he has  
4 the ability to quantify and stays silent.

5 Going back to Paragraph 9, the second  
6 sentence, Such a sample has already been discussed  
7 in the Bestwall declaration, which does not  
8 identify any attribute of the population that  
9 cannot be accurately studied with a sample.

10 The purpose of that declaration is  
11 not to answer that question. The purpose of that  
12 declaration is to say, What's the most efficient  
13 sample we can get, given a third-party constraint  
14 that it's at 10 percent?

15 It wasn't a declaration intending to  
16 say, And these are the things that we can't do  
17 accurately with that.

18 So its absence drawing inference from  
19 that, when that's not the topic of the declaration,  
20 is misleading.

21 So Paragraph 10, I think I've largely  
22 already covered.

1 And his NFL analogy, in 11, is really  
2 quite misleading. We're talking about a tenfold  
3 difference in sample size, and he's talking about a  
4 .0 -- .01 difference in inches of height.

5 So the right analogy there is the one  
6 I gave you before, where if you said -- if you told  
7 me I can't have 12,000 claims, I get 11,999, we  
8 would probably just all go home. Right? That's  
9 the analogy to that. It's not -- you know, the  
10 proper analogy here would be more like, Oh, you  
11 have one that's 6-foot, 1 inches tall, and the  
12 other is 5'4". You're talking about a very large  
13 difference, a tenfold difference, not a very small  
14 difference. So while the -- I think the proper  
15 conclusion from that is actually in the exact  
16 opposite direction.

17 Paragraph 12 suffers the same flaw of  
18 him saying, for the purposes described by  
19 Dr. Mullin and the Debtors' reasonable needs.

20 He never says what that's meant to  
21 cover. He doesn't define "reasonable needs." I  
22 don't know how, you know -- without specifying what

1 he's putting in that bucket, how he can reach that  
2 conclusion.

3 His premise in Paragraph 13 is  
4 actually incorrect. He -- we actually do have a  
5 potential problem of sampling bias. We're using  
6 the historical Claimants to draw inferences about  
7 future Claimants. The demographics of Claimants is  
8 not constant through time. And so if you take --  
9 if you erroneously conclude that I'm going to have  
10 the same ratio of men to women, the same age  
11 distribution over the next 30 years of Claimants as  
12 I have in the last 10, you'll be very wrong. Those  
13 things shift through time.

14 So we have a historical sample where  
15 we're not actually trying to value the historical  
16 claims; we're trying to use information about the  
17 historical Claimants to draw inferences about  
18 future claims.

19 So while the group I have to sample  
20 is fixed, that group has different characteristics  
21 than the future claims, and I need to control for  
22 those differences or I will have bias.

1 So it's actually very much in the  
2 opposite direction of his conclusion. If he  
3 understood that, it reverses the point from what he  
4 is making.

5 That same flaw in logic really  
6 applies throughout.

7 So while I don't disagree with any of  
8 his math on Paragraphs 15 through 20, he bases it  
9 all on examples where the undisclosed alternative  
10 exposures is either 5 percent of what was available  
11 or 10 percent, and then he ends up concluding that  
12 this will, in percentage points, create a really  
13 small confidence interval amount. If he just  
14 assumed that it never happened, then he would say  
15 it's 0 and his confidence interval would be, I know  
16 that with virtual certainty and it's 0.

17 So when you push a probability  
18 towards 0 or 1, you actually minimize the impact of  
19 these factors.

20 So if you ran the exact same math but  
21 it turned out there's a subpopulation where half of  
22 the alternative exposures are not being disclosed,



1 it's not in Paragraph 20, 1.5 percentage points any  
2 longer. It gets dramatically bigger, and the  
3 difference is about fivefold. So you would be  
4 saying, instead of 1.5 percent, 7.5 percent.

5 So he's chosen an example that skews  
6 things low in the direction of the outcome that his  
7 client desires as opposed to choosing the example  
8 that's more -- that could go in the other  
9 direction, but it's not the -- you know, so this  
10 idea that, in practice, however, the standard error  
11 for a simple sample of 1,200 observations will  
12 usually be a lot smaller than 1.5 percent,  
13 that's -- you know, you can get to certain things  
14 -- if you're not looking at a subpopulation, you're  
15 looking at certain scenarios, that may be the  
16 outcome, but you may have a very large confidence  
17 interval if you end up with there's a subpopulation  
18 of interest and you need to get it for that.

19 And so his mathematical formulas are  
20 right, but he's really assuming throughout you only  
21 care about the whole population, which, of course,  
22 gives you no ability to change for changing

1 demographic characteristics because you have an  
2 estimate for one mix of demographics only, and you  
3 really need the estimates for each of the  
4 demographic groups to know how to remix that going  
5 forward to match the future population. And he's  
6 completely ignoring that fact through this whole  
7 process.

8 So Paragraph 24, he gets into  
9 estimating impact of potential nondisclosure of  
10 alternative exposures. His first sentence, Because  
11 the proportion of nondisclosed Claimants has a very  
12 small standard error, it follows, if all the  
13 settlements were the same size, that the standard  
14 error of the overall average impact would also be  
15 small.

16 Not only does it follow that; under  
17 that assumption, the impact is zero and you don't  
18 need to estimate anything. So if you assume the  
19 problem away, because everybody gets the same  
20 settlement amount whether they disclosed or not --  
21 so he's assumed there's no impact -- if we assume  
22 that it can't happen and has no impact, then we are

1 very precise when under that assumption, our  
2 estimate is no impact.

3 So that -- it's a complete  
4 misrepresentation of the real world. He's  
5 literally assumed it has no impact. It's like  
6 assuming it never occurs and then estimating that  
7 you don't need a lot of data for things that never  
8 occurred to get -- get the probabilities very low.

9 So he's really in a corner solution  
10 that makes no sense. If settlements are not the  
11 same size, so now we're, at least, in the relevant  
12 framework, a stratified sample can be drawn that  
13 over-samples the claims with the highest variation.

14 You really can't. This, again, shows  
15 a fundamental misunderstanding.

16 What we're trying to get is the  
17 connection between the amount of disclosed  
18 exposures, which is unknown at the time of  
19 designing the sample. So he's saying, Let's look  
20 at a parameter that we don't know right now and  
21 stratify on it.

22 This is not a classic statistics

1 exercise. It also has discovery in it.

2 You're learning about one of these  
3 variables. You can't stratify on the variable that  
4 you don't know yet. And that's what he's telling  
5 me to do in this paragraph, is to stratify on a  
6 variable that I won't know until after I get the  
7 data in the sample.

8 So that's actually completely  
9 infeasible, but it shows a fundamental lack of  
10 understanding that this is a discovery exercise and  
11 I don't know that. If I already knew it, I  
12 wouldn't need a sample, right? I would already  
13 have the information.

14 So that's a place that it's just  
15 disconnected from the exercise that's going on.  
16 He's suggesting something that's completely  
17 infeasible.

18 There is no finite sample correction  
19 factor, which he has in Paragraph 14, because we  
20 aren't trying to estimate the impact for the  
21 historical Claimants. We're trying to use the  
22 historical Claimants to talk about pending and

1 future claims. So we are always estimating.

2 The finite sample correction factor  
3 applies to people you want to estimate that you  
4 don't need to estimate now because the sample told  
5 you the answer for those people.

6 We don't have any of those. These  
7 are all historical claims.

8 We're not estimating what they get  
9 paid. They've been paid. They've been released.  
10 So, again, it shows that fundamental  
11 misunderstanding of what we're actually trying to  
12 accomplish.

13 If you don't understand how the data  
14 is being used, you don't know how to design the  
15 sample, you don't know what sample size you need,  
16 and he's just repeatedly displaying his ignorance  
17 as to how the data are actually being used in  
18 estimations.

19 And, you know, it's things like this  
20 that are huge red flags that he doesn't actually  
21 know the facts of the situation, so he's applying  
22 the wrong statistical tools to the question.

1 Paragraph 25 is just wrong. He says,  
2 Beyond the two parameters discussed above,  
3 Dr. Mullin doesn't specify precisely or intimate at  
4 any other parameter of -- parameters of interest.

5 We can go back, where -- this is  
6 where he has entirely ignored Paragraph 15 of my  
7 report. He chose to do an example for  
8 Paragraph 16, an example for Paragraph 17. But  
9 Paragraph 16, where you're really talking about the  
10 need to control maybe for industry and occupational  
11 groups, the need -- all the uses beyond is where  
12 all the composure is revealed, he's ignored that  
13 entire discussion in my report.

14 And, apparently, according to him, I  
15 didn't even intimate any other parameters of  
16 interest. So he seems to have skipped certain  
17 paragraphs in the reading of my report to reach  
18 that conclusion.

19 He talks, in Paragraph 26, about  
20 anecdotes. In my experience, it's common for both  
21 sides in a litigation to use anecdotes. They're  
22 not necessarily statistically representative, but

1 developing anecdotes is frequently done by both  
2 defendants and plaintiffs in cases. So I don't  
3 know if he's trying to insinuate that's bad or  
4 good. It's a little unclear. But he at least  
5 acknowledges that, to the degree anecdotes by  
6 either side are important, a larger sample would  
7 enable that better.

8 So it seems to be the one place where  
9 he acknowledges that that's something where a  
10 larger sample may be worthwhile.

11 So when we get into Paragraph 27,  
12 again, he doesn't define "reasonable needs." He  
13 doesn't appear to understand how it's being used.  
14 So I don't know what he actually knows, but based  
15 on what's -- he's written, you know, he makes  
16 statements that are inconsistent with how the data  
17 would be used. So I don't know, without him  
18 stating what he believes the reasonable needs  
19 are -- either his list is incomplete or his  
20 conclusion is wrong.

21 It's wrong either way, but whether  
22 it's because he has an incomplete list of the

1 reasonable needs or he actually does know the full  
2 list, hasn't specified them, then the data is  
3 important for that list.

4 So Paragraph 28 makes me suspicious  
5 that Dr. Wyner has not spent much time in a  
6 litigation environment. The analytical burden of  
7 sampling, I do discuss. When you sample in a  
8 discovery process, so you learn more information  
9 after having seen it, it is not uncommon for  
10 experts to assert some form of ex post  
11 stratification on the data to improve the  
12 efficiency of an extrapolation.

13 There is lots of room for experts to  
14 disagree about that. And I have been in many cases  
15 where months, if not more, have been spent on  
16 parties litigating over what is the proper way to  
17 extrapolate.

18 If you're in the pure ivory tower  
19 academic, prespecified population and I'm not  
20 extrapolating outside of that population but I'm  
21 going right back to the population I sampled from,  
22 those problems don't exist, and then it's



1 relatively straightforward mathematically.

2 But in a litigation setting, where  
3 you need to control for differences going forward,  
4 this can become a very expensive and drawn-out  
5 process, and so steps to minimize that, I would  
6 advise clients on, because it -- otherwise, you can  
7 get into a lot of gamesmanship in that phase.

8 So Paragraph 29, I agree that if you  
9 used statistical calculations that are required to  
10 compete with the standard errors is not  
11 particularly burdensome, that's correct, if all the  
12 experts agree on which methodology to use to do it  
13 in the first place. So it's a methodological  
14 fight, not a computational fight. The computations  
15 are straightforward. The methodology is not  
16 necessarily straightforward.

17 He is correct -- and he nods a little  
18 bit to this in the next sentence -- data analysis  
19 on the full data set. He says, It's not  
20 substantial -- substantively easier, especially  
21 since there will be statistical challenges of all  
22 types that will arise, sampling or no sampling.

1           It's an interesting sentence because  
2           most of his opinions are based in the framework  
3           where that doesn't happen, so acknowledging that,  
4           you're exacerbating that if you sample from this  
5           group. So he's correct that many of the problems  
6           will still exist, but you will exacerbate those  
7           problems and you will get likely more litigation  
8           around it as opposed to -- if you exacerbate the  
9           issue.

10           He's definitely correct at the end of  
11           that paragraph that he puts in bold. The sentence  
12           before it defines the "these," but These will  
13           introduce new uncertainty, distinct and  
14           irreducible, and not due to sampling.

15           That is correct, but that emphasizes  
16           the need for as much precision as you can get  
17           through the sampling exercise. If I have two  
18           sources of error, they compound each other; so the  
19           gain in precision, knowing that I have other  
20           irreducible error of improving my precision through  
21           this sampling exercise, gets larger. That means  
22           there's a bigger return having a larger sample size

1 than if there wasn't irreducible error for other  
2 sources.

3 So the fact that those other things  
4 are irreducible and you can't reduce them  
5 dramatically increases the return for reducing them  
6 in the places where you can, because these interact  
7 with each other.

8 That's really the same critique of  
9 Paragraph 30.

10 The IRS critique in Paragraph 31, I  
11 don't agree with. The IRS does not have the  
12 resources to do what he is asking them to do, as he  
13 says is their charge, so they definitely, because  
14 they are resource-constrained, can't do that. So  
15 they do at times use sampling. Other times, they  
16 use a census.

17 They're making the point that when  
18 it's all available electronically, a census doesn't  
19 cost particularly more, so, okay, when it's all  
20 available electronically, we'll take a much broader  
21 review than if it's not available electronically.

22 They are resource-constrained. The

1 cost of doing nonelectronic records is higher, so  
2 we take fewer. The cost of electronic records is  
3 lower, so we take more. That's the only point of  
4 citing to it. It's no different than the Debtors  
5 here who said, Our historical claims database will  
6 produce the entirety of it; you can have all of it;  
7 it's in electronic form; no need to sample.

8 Underlying claim files, there's a  
9 need to sample. Those aren't already in electronic  
10 form.

11 So the main point is, things in  
12 electronic form are low cost to produce and you  
13 take dramatically more, potentially all, than  
14 things not already in electronic form.

15 Paragraph 32, he says, Because  
16 there's no practical loss in accuracy created by  
17 sampling -- and he goes on -- there's no need for,  
18 draws other conclusions.

19 He appears to be focused entirely on  
20 estimating a proportion for the entire universe of  
21 12,000 historically paid claims. And on that,  
22 there isn't really a practical loss in accuracy.

1 And if that was the only thing you needed, I, too,  
2 am already only using 1,200 claims for that because  
3 that's what the claims file sample is. But to go  
4 broader, if you're using it to estimate the number  
5 of future claims and you want to do that by  
6 industry and occupational groups, again, if you're  
7 going to value by law firm or by jurisdiction, that  
8 no longer applies.

9 So, again, it shows -- it just goes  
10 back to that lack of fundamental understanding of  
11 what is the exercise.

12 His last part about a data breach, in  
13 Paragraph 32, there's already 12,000 people whose  
14 PII is at risk. We're going to add a small number  
15 to that, a number that were in the data field -- in  
16 the exposure fields that the Trusts failed to  
17 redact and Bates White fails to redact.

18 So we're not really getting -- if  
19 there were a data breach, we aren't going from --  
20 we don't get a 90 percent reduction. The 12,000 is  
21 the same 12,000. So you're going to have the  
22 12,000 and you're going to add a few more, or

1           instead of saying adding 10 more, maybe add one  
2           more; instead of adding one more, maybe add 0, but  
3           the 12,000 is still there.

4                       So the real risk of the data breach  
5           is the 12,000 we already have, not the handful that  
6           are going to make it through all the screenings  
7           that come along first. So saying this is  
8           fundamentally changing the risk of data breach is  
9           ignoring the amount of data that's sitting at risk.  
10          You know, and there's lots of things being done to  
11          minimize the odds of that. I don't disagree that  
12          you can't drive it to 0, but it's a very low  
13          possibility.

14                   Q.       Excellent.

15                       I kept my bargain that I wasn't going  
16          to interrupt you in the middle of it, so --

17                   MR. EVERT: That, you did. Thank  
18          you very much, Michael.

19                   MR. KAPLAN: Yes.

20                   BY MR. KAPLAN:

21                   Q.       Let me ask you a couple of questions,  
22          then I think it's time for another break, which is,

1           you discussed very early on -- and I wrote this  
2           down -- this fundamental misunderstanding of the  
3           subpopulation that you would like to study and work  
4           off of. I think you said it in response to almost  
5           the first paragraph, Paragraph 6, where you were  
6           talking about -- when we were discussing reasonable  
7           needs.

8                           Do you recall that?

9                   A.       Yes.

10                  Q.       Where in your declaration,  
11           Dr. Mullin, do you talk about the subpopulations  
12           that you want to study?

13                           (Whereupon, the witness reviews the  
14                           material provided.)

15                   THE WITNESS: So this is in  
16           Paragraph 15. In particular, if you go to  
17           the middle of that paragraph, there's a  
18           sentence, Further, the relationship of  
19           exposures alleged to the various occupations  
20           and trades of the Debtors' historical  
21           Claimants and the extent to which the full  
22           range of the alleged exposures is changing

1 over time are important to estimating a  
2 Defendant's legal liability share.

3 So that's talking specifically  
4 about industry and occupation and being able  
5 to do things at that level to control for  
6 those changes through time.

7 BY MR. KAPLAN:

8 Q. You agree with me that sentence  
9 doesn't talk about various law firms, though,  
10 correct?

11 A. That does not. The reference to --  
12 if you're familiar with the Garlock record, I  
13 didn't try to rehash the entire Garlock record.  
14 There's a paragraph on that.

15 In Garlock, Claimants represented by  
16 about -- or law firms who represented about  
17 25 percent of the Claimants are the ones where  
18 there appeared to be -- you know, not all the  
19 exposures were being revealed, and for the other  
20 75 percent, they were.

21 So I wrote this assuming you had some  
22 knowledge of the case. I understand from this that



1 you, personally, do not, in terms of these details  
2 in the background, but with the -- with that  
3 knowledge, I didn't try to give the whole history  
4 again.

5 But if you're familiar with the  
6 process and you're an expert in this field:  
7 Controlling by law firm, controlling by  
8 jurisdiction are fundamental things. It's done  
9 routinely.

10 So I didn't state things that, to any  
11 expert or person who does this regularly, would  
12 seem obvious --

13 Q. You assumed?

14 A. -- it's very much in the Garlock  
15 record.

16 I didn't -- I didn't write it for a  
17 complete layperson who knew nothing about the  
18 context of estimation. That is correct. I did not  
19 write it for a person completely ignorant about  
20 that entire process.

21 MR. KAPLAN: All right. Let's  
22 take -- I don't know -- five or so minutes,

1 same as we did last time, and we'll come on  
2 back.

3 --oOo--

4 (Whereupon, a recess was taken from  
5 3:26 p.m. EDT to 3:39 p.m. EDT.)

6 --oOo--

7 BY MR. KAPLAN:

8 Q. Dr. Mullin, I just have a few more  
9 questions, and then I'm going to switch -- pass  
10 and -- and move on, which is, we were -- before the  
11 break, we were talking about the -- the  
12 subpopulations, and you pointed me to Paragraph 15.  
13 And then you spoke about Garlock and the  
14 assumptions you would make.

15 Where is it in your report that you  
16 talk about the gender subpopulations that you  
17 wanted to analyze?

18 A. I don't think I call out gender  
19 specifically. There's numerous subpopulations that  
20 could turn out to be relevant. It's not intended  
21 to be an itemized list of everything.

22 Q. All right. Let's turn to the --

1 the -- one of the questions you -- one of the areas  
2 you do talk about is Claimants that have multiple  
3 areas of exposure -- multiple potential exposure  
4 sources, correct? That's one of the issues, you  
5 said, and you talk about it in the context of  
6 Garlock also.

7 Am I right?

8 A. I'm in the wrong report. Give me a  
9 second.

10 Q. I'm sure Dr. Wyner's report has a lot  
11 of excellent information for you.

12 MR. ANSELM: If you want to adopt  
13 his findings, we'll be fine.

14 (Laughter.)

15 THE WITNESS: I'm going to have to  
16 ask you to repeat your question.

17 BY MR. KAPLAN:

18 Q. Yeah. It's not a problem. I'm just  
19 trying to bring us into -- in Paragraph 15, one of  
20 the things you talk about is the alternative  
21 exposure allegations. And that was one of the  
22 things you -- I believe that you criticized

1 Dr. Wyner for not talking about, was the  
2 alternative exposure sources.

3 Correct?

4 A. He talks about that in the sense of  
5 what proportion of them are disclosed, right.

6 What I was making reference to, in  
7 particular, was to the fact that the occupational  
8 industrial mix changes through time. So you  
9 actually need to estimate those by industry or  
10 occupational groups, and you can't just have one  
11 answer for the whole population.

12 So industry and occupation is going  
13 to create subpopulations of interest where you're  
14 going to need to estimate parameters for each of  
15 those subpopulations.

16 Q. I want to focus on something a little  
17 more narrow, which is we can agree, correct,  
18 because -- although I'm not an expert in this  
19 particular field -- that a mesothelioma Claimant  
20 likely has multiple sources of exposure?

21 A. Many do --

22 Q. Okay.

1           A.       -- those that have material exposure  
2           to gaskets typically do. In other settings, that  
3           may not be true, so I don't want to overgeneralize.  
4           But for these Debtors, I think, typically, a  
5           Claimant would have exposure to a multitude of  
6           products.

7           Q.       Okay. And one of the -- you've made  
8           the point of highlighting the Garlock matter, which  
9           is where, you know, as you stated, certain  
10          Claimants did not disclose all of their alternative  
11          sources of exposure, correct?

12          A.       That was ultimately the findings of  
13          Judge Hodges.

14          Q.       Sure.

15                 Let's -- I want to understand with  
16          this subset of data that you -- this set of data  
17          that we're looking at here with the 12,000  
18          Claimants, which is, how is it that you're counting  
19          it? And let me break that down for you, which is  
20          that if one Claimant has five sources of exposure,  
21          we agree that's five potential separate claims they  
22          could make, right?

1                   A.       It could be more than that depending  
2                   on what the exposure is to.

3                   Q.       I agree. I'm using five because  
4                   that's how many fingers I have on one hand.

5                               Okay?

6                   A.       Okay.

7                   Q.       It looked good when I held it up.

8                               How is it that you are counting that?  
9                   Because -- is that five separate claims for  
10                  estimation, or is that one Claimant?

11                  A.       So the unit of analysis is going to  
12                  be the Claimant. You're ultimately evaluating a  
13                  future Claimant or a pending Claimant's claim  
14                  against these Debtors. So it may be two claims in  
15                  that sense that you may value: one, their claim  
16                  against Aldrich; and, two, their claim against  
17                  Murray.

18                               But you want to know what are the  
19                  totality of exposures for that one individual. And  
20                  the breadth of alternative exposures is directly  
21                  relevant to the strength of their claim against  
22                  Aldrich or Murray.

1 Q. Okay. So we're -- the unit, then, is  
2 Claimant and not claim for estimation purposes?

3 A. To be clear, it's two distinct  
4 Debtors in a consolidated action. But as I  
5 understand my charge, I don't say, Here's their  
6 combined liability at the end of the day. At the  
7 end of the day, I may be asked to have one estimate  
8 for Aldrich and an alternative estimate for Murray.

9 So there's -- it's not -- if there's  
10 an individual that claimed against Aldrich but  
11 never filed a claim against Murray, that Claimant  
12 is not going to be informative about estimating  
13 Murray's future liability.

14 So I won't have all -- that's  
15 probably your most obvious two-set populations of  
16 interest, the two Debtors. Some Claimants sued --  
17 named both. Many Claimants named one but not the  
18 other.

19 Q. Where is that discussed in your  
20 report?

21 A. In the report?

22 Q. Yeah.

1           A.       That's -- that's not discussed. I  
2       mean, many things in this report -- this  
3       declaration is filed within the context of the case  
4       to the benefit of the judge, who actually confirmed  
5       the Garlock plan and has seen prior filings.

6                    So I'm not writing, as I said, to a  
7       lay audience that has zero context or knowledge.  
8       I'm writing to an individual that has a lot of  
9       context and knowledge. So many of those things  
10      aren't stated for a second time here.

11           Q.       How is it, then, that parties --  
12      excuse me -- nonparties to the case who aren't the  
13      judge, who didn't confirm the Garlock plan -- how  
14      are they supposed to know what the basis of your  
15      opinion are, then, if they're not stated?

16                   MR. EVERT: I'm going to object to  
17      the form of the question.

18                   THE WITNESS: Again, it's done  
19      within the context. There's a lot of other  
20      filings in the case. I think the -- the  
21      two -- I don't -- I would never assume -- I  
22      don't know why a party would assume you



1 estimate one number for two Debtors. That's  
2 a strange assumption, in my mind.

3 So if you're saying that's -- to  
4 me, that's obvious. So if that's not obvious  
5 to a reading audience, okay. I didn't call  
6 out that particular item. I don't really  
7 view that as fault, although it may be  
8 beneficial to some parties.

9 But, typically, I think you hire  
10 somebody who's familiar with the context who  
11 can fill you in on context. That's, in my  
12 experience, what my clients do. If something  
13 comes in their lap that they don't have  
14 firsthand knowledge of, they gain that  
15 knowledge through who they hire to advise  
16 them.

17 BY MR. KAPLAN:

18 Q. Okay. You've talked a few times  
19 today about tripling your uncertainty or  
20 quadrupling your uncertainty or doubling your  
21 uncertainty.

22 We've had a few of those exchanges,

1 correct?

2 A. Correct.

3 Q. When you say "tripling your  
4 uncertainty," what number is it that you're  
5 starting from?

6 A. So we've gone around this barn two or  
7 three times now, at least.

8 Q. I'm aware. Yeah.

9 A. Do you want me to say asked and  
10 answered, or -- I mean, you're saying you're aware  
11 --

12 MR. ANSELM: That's his --

13 THE WITNESS: -- okay. I don't  
14 understand your question because it seems to  
15 be identical to what you've already asked me  
16 three times. And if you are asking me the  
17 same thing again, I stand by my answer.

18 If you intend a different meaning  
19 than what you asked me before, I don't  
20 understand your question, and please clarify.

21 BY MR. KAPLAN:

22 Q. Excellent. I enjoy when experts play

1 lawyer. It looks great.

2 The -- my question for you is this:  
3 If you start with an uncertainty of, let's say, for  
4 instance, 1 percent uncertainty and you're tripling  
5 that, you're now at 3 percent uncertainty, correct?

6 A. Correct.

7 Q. So my question for you is -- and you  
8 have said -- you have said 50 million, 100 million,  
9 150 million. You've said 400,000 today. You've  
10 said a lot of big numbers, but what -- what you  
11 haven't said to me is what level -- what is the --  
12 the uncertainty associated with using 1,200  
13 Claimants for this sample.

14 MR. EVERT: I think this is when  
15 I'm supposed to say asked and answered.

16 MR. KAPLAN: Okay. That's fine.  
17 That's good. You say whatever you want.  
18 You're fine.

19 BY MR. KAPLAN:

20 Q. You answer the questions.

21 MR. EVERT: I think he's said,  
22 Michael, a number of times --

1 MR. ANSELM: Let him say it.

2 MR. EVERT: Okay.

3 THE WITNESS: Again, I believe  
4 I've addressed this at least two if not three  
5 times. I believe those answers were  
6 complete. I will try this one more time for  
7 you.

8 You can't know the answer to how  
9 much uncertainty you have before you have the  
10 data in front of you. That is impossible.  
11 So nobody can tell you -- and this is true of  
12 every single sampling exercise that's done  
13 when it has a discovery component leading to  
14 an analysis not estimating a proportion for  
15 the historical population but an actual  
16 estimation component to it, particularly out  
17 of sample, like this would be done. You  
18 don't know that ahead of time. It's -- it's  
19 an infeasible question to give a precise  
20 number to.

21 That said, based on my experience  
22 doing this, if I'm going to look at something

1           like but-for tort spend, which is typically  
2           the plaintiff theory in these cases -- and  
3           I'm probably going to have to address that at  
4           some point -- the uncertainty -- if we had --  
5           the baseline uncertainty is very likely  
6           initially in the tens of millions. Whether  
7           that's 15 million, 30 million, I don't know,  
8           but it's -- it's very likely in the tens of  
9           millions, not single-digit millions, not  
10          hundreds. That's just based on having done  
11          this exercise across numerous entities  
12          through time.

13                   Now, if I triple that, I'm adding  
14          30 to maybe 200 million of uncertainty,  
15          depending on where we are initial -- our  
16          initial uncertainty may be 20. If our  
17          initial uncertainty was 10 -- I don't think  
18          we're going to be that low -- you would be  
19          adding plus or minus 20 million. If the  
20          initial uncertainty was 70 million, now  
21          you're at plus or minus 210 million.

22                   It's going to have an effect in

1           that range. I don't know where, but it's  
2           almost assuredly going to fall somewhere in  
3           that range, based on historical experience.

4                     But I can't give you a precise  
5           number. I can only give you that kind of  
6           general guidance because no one can answer  
7           the question you're actually asking.

8                     BY MR. KAPLAN:

9                     Q.       Okay. Last question is, Is the sort  
10          of mathematical extrapolation we did from the  
11          400,000 down to the 12,000 -- where is that in your  
12          declaration?

13                    You can phone a friend, and he's  
14          shaking his head.

15                   MR. EVERT: Yeah. I'm just going  
16          to interrupt. You're thinking of your  
17          earlier declaration -- it was in your initial  
18          declaration; it wasn't in this the sample  
19          declaration.

20                   THE WITNESS: I was going to say  
21          that information is in the record; it's not  
22          in this declaration. So that information has

1           been provided and at least -- I guess not the  
2           Trust, but the FCR, the ACC have all had  
3           access to that underlying database for a long  
4           time.

5                       MR. KAPLAN: Okay. That's all the  
6           questions I have for now. I'm going to step  
7           aside to whoever -- Mr. Guerke.

8                       MR. GUERKE: I will go next.

9                               --oOo--

10                      EXAMINATION BY COUNSEL FOR DCPF

11                               --oOo--

12                      BY MR. GUERKE:

13                      Q.       Good afternoon, Dr. Mullin.

14                      A.       Good afternoon.

15                      Q.       My name is Kevin Guerke.

16                               I represent the Delaware Claims  
17           Processing Facility, sometimes referred to as  
18           "DCPF."

19                               Are you familiar with that?

20                      A.       I am.

21                      Q.       If -- if I ask you questions and  
22           refer to "DCPF," will you know what I'm talking

1 about?

2 A. Yes.

3 Q. You just were discussing that 400,000  
4 Claimants with -- with counsel.

5 And I think, earlier today, you  
6 testified that there were roughly 400,000 Claimants  
7 that submitted claims to the two Debtor entities;  
8 is that correct?

9 A. I said there's more than 400,000.

10 Q. More than 400,000?

11 A. Claimants?

12 Q. Yeah. Is that your testimony?

13 A. Across the two, that's my  
14 recollection, sitting here. I think there's an  
15 exact tabulation somewhere.

16 Q. And of those 400,000 or so, roughly  
17 25- to 50,000 were mesothelioma Claimants, correct?

18 A. That was -- I hadn't looked at the  
19 exact number, but it's likely in that range.

20 Q. How many of those 25- to 50-  
21 mesothelioma Claimants also submitted claims to one  
22 of the DCPF Trusts?



1                   A.       I don't know the answer to that.  
2       It's a high proportion, I think, as we've gone  
3       through the reconciliation -- we've done some of  
4       the claims reconciliation process, but I don't  
5       remember what the number is, sitting here.

6                   Q.       Can you quantify any better what you  
7       mean by "high proportion"?

8                   MR. EVERT: I'm sorry. I want to  
9       make sure -- he's asking, of the 25- to  
10      50,000 mesothelioma Claimants in total, what  
11      proportion. I just want to make sure -- that  
12      is the question, right?

13                  MR. GUERKE: I mean, the question  
14      is what I asked him, and he gave an answer.

15                  BY MR. GUERKE:

16                  Q.       Did you understand my question, and  
17      was your answer responsive to my question?

18                  A.       I was answering with regard to the  
19      12,000 because those are the only ones I directly  
20      see any information on that were in the request.  
21      Any claims outside of that request, I could make  
22      inferences or draw from experience and other

1 places, but I don't have knowledge of within this  
2 case.

3 Q. Are there more than 12,000 Claimants  
4 who have submitted claims to the Debtor entities  
5 and also have submitted claims to DCPF Trusts?

6 A. Yes.

7 Q. So there's more than 12,000?

8 A. Who have submitted claims to the  
9 Debtor entities and submitted a claim to one or  
10 more of the Trusts, yes, there's more than 12,000.

11 Q. Are there more than 12,000  
12 mesothelioma claims that both submitted claims to  
13 the Debtor entities and also one of the DCPF  
14 Trusts?

15 A. Almost assuredly, but I haven't read  
16 an exact number. But almost assuredly.

17 Q. In relation to the 12,000 that have  
18 been requested, how many more, roughly?

19 A. It's going to double or triple the  
20 number because there's all the dismissed claims.  
21 And just because they were dismissed against  
22 Aldrich or Murray doesn't mean they would be

1 dismissed against all the predecessor entities that  
2 could file against the Trust.

3 There would also be a number of  
4 mesothelioma claims that predate 2005 that could  
5 have submitted claims against those Trusts. I  
6 haven't sought discovery on those, so there's no  
7 reconciliation process. I can't -- I haven't seen  
8 data that will give a precise qualification for  
9 those.

10 But those two populations of claims  
11 would produce a material number of additional  
12 mesothelioma Claimants against the two Debtors that  
13 would file one or more claims against entities in  
14 the Delaware facility.

15 Q. I'm eliminating dismissed claims,  
16 focusing only on mesothelioma claims.

17 Do you know how many more than the  
18 12,000 Claimants submitted claims to the Debtor  
19 entities and also the DCPF Trusts?

20 MR. EVERT: Object to the form of  
21 the question because I don't understand --  
22 there are dismissed mesothelioma claims you

1           said you're eliminating, right?

2                       THE WITNESS: I ask a couple of  
3           clarifying questions.

4                       BY MR. GUERKE:

5                       Q.       Sure.

6                       A.       There's two Debtors --

7                       Q.       Two Debtors.

8                       A.       -- one fact pattern is Aldrich paid a  
9           claim. The same Claimant had a claim against  
10          Murray, and the claim against Murray was dismissed.  
11          So they both have a paid claim against one Debtor  
12          and a dismissed claim against the other Debtor.

13                      When you say I can differentiate the  
14          two claims -- but the Claimant was paid by one  
15          Debtor, right? So the Claimant's neither dismissed  
16          nor paid; they're both, right? We have two  
17          individual claims.

18                      So when you say "dismissed," I need a  
19          little more clarity as to what you mean because I  
20          have two Debtors involved, when you asked the  
21          questions, to be precise, so we don't commingle  
22          terms.

1 Q. The subpoena that's directed at DCPF  
2 seeks information on 12,000 Claimants, correct?

3 A. Yes.

4 Q. What I'm trying to get at is -- is,  
5 for the subject of the subpoena, how many more  
6 Claimants are out there beyond the 12,000?

7 A. Well, the subpoena constrains itself  
8 to a Claimant who was paid by one or both Debtors  
9 where that payment occurred 2005 or later, all  
10 right -- it's got a date cutoff for the date of the  
11 payment -- and it has to be mesothelioma. All the  
12 mesothelioma Claimants that don't fit one of those  
13 three criteria have been excluded.

14 So that's if you were dismissed  
15 against -- if neither Debtor paid you, if you were  
16 paid earlier in time than the temporal cutoff or if  
17 you were not nonmesothelioma, you've been excluded  
18 from the data request.

19 Q. So the 12,000 Claimants -- the entire  
20 population has been included?

21 A. Well, it's got a definition --

22 Q. Using that definition --

1                   A.       -- so the definition -- it is the --  
2                   it is a census or the total population of Claimants  
3                   who resolved after the cutoff date, who had  
4                   mesothelioma and one or both Debtors made a  
5                   positive payment. That's the definition of what  
6                   went in. So by construct, it's 100 percent of that  
7                   definition.

8                   Q.       All right. When did you start  
9                   working on this bankruptcy case?

10                          Based on -- and I'll just tell you,  
11                   based on the docket, Bates White was formally  
12                   retained August 18th, 2020.

13                   A.       I mean, we were working for the  
14                   Debtors as of the petition date. I think the  
15                   retention went through subsequent to that. There's  
16                   a lag between when -- typically in a bankruptcy  
17                   when you first start doing work for a client and  
18                   when all the paperwork goes through the bankruptcy  
19                   court.

20                   Q.       How about you, personally? When did  
21                   you, personally, start working on this bankruptcy  
22                   case?

1                   A.       For the Debtors as clients, it would  
2       have been roughly contemporaneous with that.

3                   Q.       Bates White is also involved in  
4       Bestwall and DBMP, correct?

5                   A.       Correct.

6                   Q.       What's your personal involvement in  
7       those two cases?

8                   A.       I advise on those at times. There's  
9       select issues where my colleagues, counsel or  
10      client seek me out on certain topics.

11                          I don't think I'm at liberty to  
12      disclose what those topics are at the current time,  
13      particularly in the context of this case, but it's  
14      been constrained to advising on select issues at  
15      the moment.

16                   Q.       Do you anticipate using sampling in  
17      either Bestwall or DBMP?

18                   A.       At the moment, I don't anticipate  
19      testifying in either of those cases. So if you're  
20      asking am I, personally, going to do that, I don't  
21      anticipate testifying in either of those cases.

22                   Q.       Do you know if Bates White

1 anticipates using sampling in either Bestwall or  
2 DBMP?

3 MR. KAPLAN: Kevin, I'm going to  
4 object.

5 Is that appropriate for this  
6 setting? He said he's not a testifying  
7 expert in those cases or the fact that his  
8 firm is.

9 Do you know?

10 THE WITNESS: I mean, I'm going to  
11 stick to what's in the public record, because  
12 it's -- I don't think I should talk in the  
13 context of Aldrich/Murray about anything  
14 that's not in the public record for Bestwall  
15 or DBMP.

16 There's been back-and-forth in  
17 Bestwall about what sample of historical  
18 claim files to take. The fact that there's  
19 back-and-forth on that is in the public  
20 record. So the fact that they're looking at  
21 various samples of claim files in the same  
22 way that that issue is being looked at in



1           this case, that's true.

2                   I don't know the DBMP public  
3           record well enough to know what's in it or  
4           not, so I'm not going to say anything because  
5           I just don't have confidence as to what's in  
6           the public domain.

7                   BY MR. GUERKE:

8                   Q.       You testified earlier that you -- you  
9           anticipate that sampling will be used in the  
10          Aldrich Pump case, in some respect, right?

11                  A.       With regard to the historical claim  
12          files, I suspect that's correct. It's also -- I  
13          mean, with regard to Trust data, I would say that's  
14          exactly what we're doing here, too. We didn't ask  
15          for all the claims; we asked for a subset. So it's  
16          a version of sampling.

17                  Q.       That's what I was getting at earlier  
18          about the -- the 12,000 Claimants.

19                          What's the -- what are the 12,000  
20          Claimants that you seek in the subpoena -- or  
21          your -- your attorneys seek in the subpoena -- what  
22          is that a sample of?

1 A. The over 400,000 historical claims.

2 Q. But modified based on the parameters  
3 of the -- of the subpoena, correct?

4 A. Well, I -- I did not feel I needed  
5 all 400,000 claims to do my work, information from  
6 the Trusts. I reduced that down. So it's -- we're  
7 not requesting a census from the Trusts of every  
8 historical claim to merge to the claims database of  
9 all of the Claimants. That's not what we're doing.

10 We're taking a very select  
11 subpopulation that's about 3 percentage of the  
12 total population of Claimants and asking for the  
13 data for that 3 percent of the subpopulation --  
14 that subpopulation. We're asking for 100 percent  
15 of that subpopulation.

16 So it's a census of that  
17 subpopulation, which is 3 percent of the total  
18 data.

19 Q. And other than sampling for  
20 historically -- historical claim files, do you  
21 anticipate any other sampling in the Aldrich Pump  
22 or Murray bankruptcy case?

1           A.       We're likely to rely on various  
2       historical samples. So, for example, prior to  
3       2001, there's not a census of historical  
4       mesothelioma diagnoses in the United States. So  
5       what's available is a sample by the Survey of  
6       Epidemiological End Results.

7                   2001 forward, we have census. So we  
8       use the census for 2001 forward, but when we're  
9       looking at things of forecasting future disease  
10      incidents in the population, we'll rely on samples,  
11      but we're not -- that's because it's a constraint;  
12      it's what's -- the only thing that was available.  
13      You can't go back to 1995 and complete that sample  
14      any longer.

15           Q.       The subpoena that was issued to DCPF  
16      and, I think, all of them go back to 2005 -- seek  
17      data that goes back to 2005; is that correct?

18           A.       Correct.

19           Q.       Why do you need data going back to  
20      2005?

21           A.       So part of this is you do have  
22      changing demographics through time. So, ideally,

1 you don't just look at a snapshot of the most  
2 current. You want to be able to see if there's  
3 trends or changes, and you want to be able to model  
4 those changes.

5 So for questions such as Dr. Wyner  
6 focused on are all the disclosures being revealed.  
7 2005 is not particularly important to my analysis.  
8 The more recent data is going to be much more  
9 important because it's really what's happening more  
10 recently in the tort system.

11 In contrast, for controlling for  
12 industry and occupational group mixes and seeing  
13 how those are evolving through time, you need a  
14 time series of data. So the reason to reach back  
15 further is so, as opposed to getting a snapshot at  
16 a moment in time, you can see the underlying trends  
17 in data, line that up with large government  
18 datasets that are informative and create a more  
19 reliable forecast.

20 So the reaching back further has a  
21 lot more to do with accurately estimating the  
22 number of future Claimants than the questions

1 related to are the totality of exposures being  
2 contemporaneously revealed.

3 Q. Doesn't Bates White already have the  
4 Garlock database?

5 A. So there's a public version of the  
6 Garlock database that any party who cares to get,  
7 can have it. And Bates White has a copy of those  
8 data.

9 Q. Does Bates White have a copy of a  
10 nonpublic version of the Garlock database?

11 A. No. That was destroyed at the  
12 conclusion of the bankruptcy, which is why I made  
13 the distinction. There was another version of that  
14 database that had more information in it than the  
15 public version, which no longer exists.

16 Q. Garlock filed bankruptcy in 2010,  
17 right?

18 A. June 2010.

19 Q. Why wouldn't going back only to 2010  
20 be sufficient for your purposes, considering  
21 Bates White already has the Garlock database?

22 MR. EVERT: I'll just object to

1 the form of the question because no sample  
2 back to 2010 has been proposed.

3 Go ahead.

4 THE WITNESS: The Garlock database  
5 is constrained to individuals -- at least on  
6 Trust discovery aspect of it, is Claimants  
7 against Garlock who were resolved prior to  
8 their bankruptcy. So in all the pending  
9 claims, that database -- there's not the  
10 Trust discovery on -- it's similar to this  
11 one, resolved claims.

12 And not every Claimant who names  
13 Aldrich or Murray named Garlock back then.  
14 So that would be a nonrandom subset of the  
15 data.

16 And then you'd introduce all sorts  
17 of questions about what biases have you  
18 brought in by using this nonrandom subset,  
19 requiring it to be in the Garlock data and be  
20 resolved by Garlock prior to bankruptcy, as  
21 opposed to being able to take the universe of  
22 claims and not have any of those biases enter

1 the analysis.

2 BY MR. GUERKE:

3 Q. Couldn't -- wouldn't it be sufficient  
4 for your purposes to use the -- the Garlock  
5 database -- the information you have and supplement  
6 it with the subpoenaed information from 2010  
7 forward?

8 MR. EVERT: Objection: asked and  
9 answered.

10 THE WITNESS: So there's going to  
11 be a few issues with that. You could  
12 potentially make some progress on that route  
13 with regard to the Delaware facility. There  
14 was no discovery on the Verus facility in the  
15 Garlock matter, so there is no data in the  
16 Garlock record of Trusts related to that  
17 facility. So any of this would apply only to  
18 the Delaware facility as a starting point.

19 Two, to the degree Claimants in  
20 Garlock have filed Trust claims post the  
21 Garlock discovery, because not all of those  
22 claims were resolved at the time -- there's a

1           number of claims that were pending -- you  
2           would want to learn the status of those  
3           pending claims.

4                       So you would need to go back  
5           and -- if there was a single pending claim to  
6           figure out what was the resolution of that.  
7           So it's not as simple as if you got the  
8           discovery before, what's the ultimate  
9           resolution.

10                       BY MR. GUERKE:

11                       Q.       Can you use for your purposes the  
12           data that was produced in Bestwall and DBMP from  
13           DCPF and the DCPF Trusts?

14                       A.       I believe that would violate numerous  
15           confidentiality orders and be illegal for us to do.  
16           So I don't think, legally, we could do that.

17                       If that issue were solved,  
18           statistically, it has a similar issue. DBMP is a  
19           fundamentally different product than Aldrich. You  
20           could see Claimants who were dismissed against DBMP  
21           who might be a high-value claim against Aldrich, or  
22           vice versa.



1                   So -- and they won't be in Claimants  
2                   who named Aldrich that never named one of those two  
3                   entities.

4                   So, again, you would have these  
5                   selection effects you're layering over. It  
6                   wouldn't be a representative sample. And that's  
7                   going to create potential biases, and then we would  
8                   be litigating over those biases.

9                   Q.       I don't want to go through all the  
10                  questions and answers you gave prior counsel on  
11                  this subject. And I -- am I correct that -- strike  
12                  that.

13                  In your declaration in Paragraph 9,  
14                  you discuss the decrease in precision. You had  
15                  several questions with Mr. Kaplan about decrease in  
16                  precision.

17                  My question is, Specifically, what is  
18                  the decrease in precision referenced in  
19                  Paragraph 9? And if -- if your answer is, I  
20                  already explained that for half an hour, that's  
21                  fine.

22                  But is there a way for you to answer

1 that question?

2 A. You're asking specifically about kind  
3 of Romanette i, Decreased precision of the ultimate  
4 analysis?

5 Q. Yes.

6 A. I believe -- that's focusing probably  
7 on the most salient issue, which is the ultimate --  
8 the final design of the CRB, the final estimate of  
9 liability in an estimation proceeding.

10 When I say "the ultimate," it's  
11 not what's the precision of an intermediate number  
12 that then feeds in, but "the ultimate" in that is  
13 referring to the final opinions of interest of  
14 which the sample is providing inputs into.

15 Q. And -- and the final opinion, is  
16 that -- is what you mean the value -- the estimated  
17 claim value that you would present to the Court of  
18 the ultimate analysis you were referring to?

19 A. It could be the final claim -- the  
20 estimate of total value of pending and future  
21 claims against Aldrich. It could be the final TDP  
22 that's filed where you've used these data to help

1 you structure that TDP. So as opposed to  
2 intermediate steps that are building up to  
3 something like that, it's these final documents or  
4 these final high-level opinions.

5 Q. But a final high-level opinion on  
6 estimating present and future claim value, not  
7 TDPs, can you tell us specifically what the  
8 decrease in precision is that you're referencing in  
9 Paragraph 9?

10 A. So one issue in the case, as I  
11 understand it, is the parties disagree about what  
12 it is we're supposed to be estimating there, which  
13 if you want me to get into that, I can, but I'm not  
14 really intending to in this answer.

15 The Plaintiffs' theory of what would  
16 the Claimants have received in the tort system is  
17 likely to have a larger aggregate estimate than the  
18 Defendant theory of what's kind of the intrinsic or  
19 underlying legal liability. Those two numbers are  
20 going to differ.

21 So while the percentage of  
22 uncertainty may be the same, suppose they're both

1 plus or minus 15 percent, clearly that's going to  
2 be more dollars of uncertainty on something that's  
3 at a higher baseline number.

4 So it's going to have a bigger dollar  
5 impact under the Plaintiffs' theory than under the  
6 Debtors' theory. It's going to approximately, on  
7 many of the parameters, triple the uncertainty.

8 But the rest is similar to the answer  
9 I gave before, right? I think that uncertainty is  
10 probably on the order of tens of millions of  
11 dollars as a baseline. Until I do the work and  
12 I've seen the data, I can't tell you something more  
13 precise than that.

14 Q. Do you expect your final estimated  
15 claim number, present and future claims, the  
16 ultimate analysis that you're referencing in  
17 Paragraph 9 -- will that be in the form of a range?

18 A. These have been presented in  
19 different ways in different estimation proceedings,  
20 so I don't know if we're at that point.

21 There's -- many times, that's  
22 presented as a scenario and a point estimate, but

1 then analyses around that to describe the amount of  
2 uncertainty -- you could present that as a range,  
3 but likely, if you were to present a range, you  
4 would give the Court some indication about what  
5 area within that range you find more likely.

6 So I don't view those as too  
7 different, but the one may not go all the way to a  
8 point estimate. You may say, I'm very confident  
9 it's in this \$50 million or most confident it's  
10 most likely in a \$50 million range, but maybe it  
11 has this broader range that's feasible for  
12 uncertainty.

13 So which of those is a better form of  
14 exposition depends a little bit on the types of  
15 uncertainty and what you learn as you go through  
16 the process.

17 Q. You don't anticipate providing the  
18 Court with a single final number, correct?

19 A. If I concluded there was a scenario  
20 that I found most likely, I will probably present  
21 that number but then characterize the uncertainty  
22 about that number. If I don't have one scenario

1           that I think is more likely, there may be a range  
2           that I think is most likely but within that range,  
3           I can't differentiate, and then there's uncertainty  
4           about that range.

5                     You know, until you do all the  
6           analysis, which of those is going to be where I  
7           ultimately present opinions, I don't know, sitting  
8           here today.

9                     Q.       You reference in your declaration the  
10          legal liability analysis that you're performing in  
11          this case.

12                    Are you familiar with that?

13                    A.       Yes.

14                    Q.       The legal liability analysis that you  
15          will go through includes multiple steps, correct?

16                    A.       It does.

17                    Q.       Do you agree that legal liability is  
18          not a mathematical equation?

19                    MR. EVERT: Let me ask, How is  
20          that relevant to sampling?

21                    MR. GUERKE: It's a foundational  
22          question.

1 MR. EVERT: Okay. If you know the  
2 answer, if you can answer it.

3 THE WITNESS: So as an empirical  
4 exercise, you ultimately reduce these  
5 questions to a mathematical model. Whether  
6 you're doing legal liability, but-for tort  
7 spend, ultimately these become reduced to  
8 mathematical models of every expert I've ever  
9 seen do it. So the model, like all models,  
10 is a simplification of the real world. Every  
11 single model simplifies that on some  
12 dimension. But, ultimately, they will be  
13 expressed as a form of mathematics.

14 BY MR. GUERKE:

15 Q. Along the way in the legal liability  
16 process, there will be subjective determinations  
17 that are made by Bates White, correct?

18 MR. EVERT: Object to the form of  
19 the question.

20 THE WITNESS: There may be.  
21 Again, I haven't done all that work.

22 As much as possible, I try to root

1 things in data and empirical analyses, but,  
2 at times, there are -- things can arise where  
3 that's not feasible. And then you start --  
4 you invoke some assumptions and usually do  
5 scenario analysis.

6 BY MR. GUERKE:

7 Q. Some of the steps in the legal  
8 liability analysis include estimates, right?

9 A. Every estimate of future liability  
10 includes estimates. That's correct.

11 Q. And also includes forecasts, correct?

12 A. I don't know what distinction you're  
13 drawing between the word "estimate" and "forecast."  
14 If you intend those to mean something different,  
15 tell me.

16 Q. For the legal liability analysis that  
17 you're going through, the -- the end game is for  
18 the Debtors to estimate the value of claims,  
19 correct?

20 A. Correct, the value of pending and  
21 future claims. That's correct.

22 Q. Why is estimating sufficient for the



1 analysis but sampling within the analysis is not?

2 A. I don't agree with the predicate. I  
3 am sampling. So certain -- there's a cost-benefit  
4 analysis as to when you should sample and when you  
5 should use the totality of the available data.

6 So on certain aspects where the cost  
7 of producing the data is relatively small, I use  
8 the -- I intend to use the totality of the data,  
9 like, I will use the entire claims history from the  
10 Debtor. I won't take a 10 percent sample of the  
11 Debtors' claim history in their settlements.

12 Okay?

13 So things that are already in  
14 electronic format, you tend to use all the data;  
15 things that aren't already in electronic format,  
16 you tend to use the sample.

17 It doesn't always have to work out  
18 that way. I've done cases where we took a census  
19 of everything that was not in electronic format,  
20 too, so it -- it's a cost-benefit analysis that's  
21 specific. And I've done ones where I've taken a  
22 sample where everything was in electronic format

1 because it was still too large to work with.

2 So it's -- there's no absolutes  
3 there, but that's how it generally breaks down. So  
4 I'm using the census at times for certain  
5 questions; I'm using a sample for other questions,  
6 and it's that cost-benefit analysis.

7 Q. Whether DCPF produces 100 percent of  
8 the information requested or 10 percent of the  
9 information requested, will Bates White review  
10 every single document that DCPF produces?

11 A. We will use the totality of the  
12 electronic information to the degree that it's  
13 populated, so we will review it, but if -- if a  
14 record was produced and all the fields were empty,  
15 we probably wouldn't incorporate that record into  
16 our analysis, because it actually had no data. But  
17 we -- the intent is to pull all of that into the  
18 analysis. Which of it will ultimately be germane  
19 at the end is an empirical question, but I'm  
20 expecting in terms of these trends for future  
21 Claimants to use all of it.

22 Q. And how will Bates White go about its

1 review of the DCPF-produced information to fulfill  
2 its obligation to redact PII that's in the  
3 subpoena?

4 A. So I'm not personally in charge of  
5 doing that review at the moment, but the -- we do a  
6 lot of document review in different settings. This  
7 really isn't documents. It's electronic.

8 So I would have to go and ask to see  
9 the exact specifics. But we've done similar  
10 exercises in the past. We typically will do a  
11 review conceptually. There will be a first pass.  
12 We'll see what it flags. There will be a second  
13 pass to get an error rate. That second pass may  
14 not be for the totality of the claims. It may be  
15 for a subset to see what the error rate is, how  
16 many claims are you missing, if at all, right?

17 And you're really assessing are you  
18 getting the vast majority of them, as you're going  
19 on, and will determine some acceptable error rate  
20 at the end of the day in the same sense that the  
21 data being produced to us probably, despite DCPF  
22 going through it, will still have missed a few. So

1 we will go through a similar process of quality  
2 controlling, quantifying our error rate and then  
3 being able to say what's the maximum number of  
4 claims statistically where there is remaining PII.

5 Q. Forgive me if this was embedded in  
6 your answer, but that first pass and the second  
7 pass you just testified about, is that -- is that  
8 100 percent review of all the data on a first pass  
9 and then a 100 percent review of all the data on a  
10 second pass?

11 A. The second pass is likely to be a  
12 subset where you're doing a quality control. If  
13 you determine that your error rate is too high, you  
14 would actually do a full second pass, because  
15 you've determined your error rate is too high.

16 So it's -- when you do the quality  
17 control pass, if you learn you're missing -- you're  
18 getting 99.9 percent of them, you would probably  
19 say, We've done a good job, and we're done.

20 If you found that you're only getting  
21 80 percent of them, you would probably do a second  
22 pass on all the data, because missing 20 percent is

1 not an acceptable error rate.

2 So it's -- the extent of the second  
3 pass is a function of what is your effective rate  
4 of capturing the information.

5 Q. If a sample is ordered, a 10 percent  
6 sample, Bates White would end up reviewing  
7 90 percent fewer claims that were produced from  
8 DCPF, right?

9 A. I think, yes.

10 Q. That's the extent of my math right  
11 there.

12 (Pause.)

13 BY MR. GUERKE:

14 Q. Forgive the pause. I'm trying not to  
15 ask you questions that have been asked.

16 MR. EVERT: Much appreciated.

17 BY MR. GUERKE:

18 Q. Can you take a look at the subpoena  
19 that I believe is --

20 MR. EVERT: CM-2, I think.

21 BY MR. GUERKE:

22 Q. -- which is Exhibit 2?

1 Paragraph 10 of the subpoena lists  
2 data fields that's being requested from the  
3 recipient of the subpoena.

4 Do you agree with that?

5 A. It's a list of the requested  
6 information; that's correct.

7 Q. And this isn't the DCPF subpoena, but  
8 they're all very similar, with the same paragraph  
9 and the same request.

10 Part g, 10, requests information for  
11 all exposure-related fields.

12 Do you see that?

13 A. I do.

14 Q. Why does Bates White need all  
15 exposure-related fields for its analysis?

16 A. That's going to enter the analysis in  
17 a couple different ways: One, it's going to allow  
18 us to get a much more complete picture of people --  
19 the nature of Claimants' exposure. So that will go  
20 directly to, for example, what share of their  
21 exposure would be derivative of Aldrich or Murray  
22 as opposed to alternative exposures.

1 It will also be directly relevant to  
2 what type of actuarial curve the claim should be  
3 mapped to for projecting the number of future  
4 claims, so doing this industry/occupation, what  
5 trades are they in, what industries are they in for  
6 figuring out how to extrapolate to get the best  
7 estimate you can of the number of future claims.

8 So it's going to enter into that type  
9 of analysis. It will also be direct in terms of  
10 what exposures were disclosed at the time -- by the  
11 time of the Debtors' settlement versus what had  
12 been disclosed in totality across the multitude of  
13 Trusts.

14 Q. Is it the -- is it this all-exposure  
15 related fields where Bates White will use to  
16 compare claims information submitted to the  
17 Debtors?

18 A. On the questions that were, if I'm  
19 remembering right, Paragraphs 16 and 17 in my  
20 declaration, yes.

21 Q. Do you intend to look at every  
22 historical claim submitted to the Debtors in the

1 tort system for that comparison process?

2 A. No. We're intending to use a sample  
3 for that comparison, but to the extent we can, the  
4 totality of claims in terms of these industry and  
5 occupational trends for forecasting the counter  
6 future claims, so it depends on the -- which  
7 analysis you're referring to.

8 Q. And that sample is what you're  
9 referring to earlier that's being negotiated with  
10 the ACC and the FCR; is that right?

11 A. Correct.

12 Q. So for the -- the 12,000 Claimants  
13 that are being requested in the subpoena directed  
14 to DCPF, are the Debtors providing Bates White with  
15 all the claim files?

16 A. No.

17 Q. Why not?

18 A. So producing a claim file -- it's a  
19 set of documents that are typically not in  
20 electronic format, and even if the documents  
21 themselves are in electronic format, the  
22 information you want out of, say, an answer to an



1           interrogatory or out of the deposition haven't been  
2           culled from that.

3                       So turning a claim file into usable  
4           data for analyses is very expensive on a  
5           file-by-file basis because it's not already in  
6           electronic format to be used, so the cost  
7           associated with each datum that you want to pick up  
8           is relatively high. And so in the cost-benefit  
9           analysis, we have gotten comfortable that looking  
10          at the 1,200 claims for that will be sufficient for  
11          some of these questions from a cost-benefit  
12          perspective.

13                      That's around the point benefit where  
14          the cost benefits are, as best you can tell -- you  
15          don't know for sure -- but as best as you can tell,  
16          getting close to even.

17                      In contrast, the Trust data is  
18          already in electronic format, so the -- compared to  
19          a claim file, the ability to turn that exposure  
20          history into a -- basically combining that  
21          information across Trusts to characterize an  
22          exposure history for a Claimant is relatively

1 inexpensive compared to reviewing a claim file and  
2 trying to review depositions and Answers to  
3 Interrogatories and pull all of that information  
4 out. So it goes back to that fundamental  
5 cost-benefit analysis.

6 Q. So for that comparison or that  
7 evidence suppression analysis, don't you need to  
8 have the same Claimants from the Debtors' sample  
9 matched up with the same Claimants in the DCPF  
10 subpoena?

11 A. Yes.

12 Q. And how are you doing that?

13 A. So for the 1,200 that are in the paid  
14 claims sample, those same 1,200 would be in the --  
15 would be in the Trust data because it's a subset of  
16 the 12,000. So for those 1,200, we can make that  
17 comparison.

18 If we were constrained to a  
19 10 percent sample from the Trusts, we would want  
20 that sample to be identical to the claim file  
21 sample so you can make the comparison on all 1,200.

22 For the other aspects, like

1 controlling for industry and occupations to  
2 forecast the number of future claim counts, that's  
3 about getting the totality of the exposure history  
4 and that, we would use all 12,000 Claimants for.  
5 So there's certain exercises where we would only  
6 use the 1,200 Claimants' information that overlaps  
7 with the 1,200 for which we went through the claim  
8 file exercise. And for other aspects of the  
9 estimation, we would use all 12,000 Claimants'  
10 information.

11 Q. So if you're ultimately constrained  
12 to a 10 percent sample in this case for Trust  
13 information, you don't know yet whether that  
14 10 percent sample will match up with the sample  
15 that you're working on right now with the ACC and  
16 the FCR, right?

17 A. So there's no agreement at the moment  
18 as to what the sample of claim files will be.  
19 There's been back-and-forth. The concept is that  
20 it will be the same. If they weren't the same and  
21 they were both 10 percent samples, then you would  
22 only have on average 1 percent; you would be down

1 to 120 claims which would be in both, which would  
2 be insufficient to do almost anything with.

3 Q. You can't use it for the intended  
4 purpose unless the two samples line up, right?

5 MR. EVERT: Object to the form of  
6 the question.

7 THE WITNESS: If I want to look at  
8 a comparison, I need both points in the  
9 comparison, for when -- for that exercise, I  
10 need both sets of data.

11 BY MR. GUERKE:

12 Q. So before you can determine a  
13 sufficient sample for the Trust information, you  
14 would first need to know what the agreement is on  
15 the sample for the -- the Debtor historical files,  
16 right?

17 A. No.

18 Q. What -- why is that "no"?

19 A. So the fact that the historical files  
20 are not already in an electronic format means that  
21 each Claimant you sample there comes at a  
22 materially higher cost, thousands of dollars, if

1 not 10,000, to collect all that information and  
2 process it.

3 So there's a substantial cost for  
4 each data point you're taking in.

5 So that data, the review of the claim  
6 file data and the cost associated with it becomes  
7 the binding constraint for doing the comparison  
8 because it's the higher cost source of data. So  
9 what I need to determine for this comparison is the  
10 higher cost source, which is the claim files.

11 I'm using the Trust data for multiple  
12 purposes, not just that comparison. The other  
13 purposes are what apply to the 90 percent of the  
14 sample that doesn't overlap with the 10 percent  
15 that would line up with the claim files.

16 So when I'm talking about asking for  
17 the 12,000 and constraining myself to 100 percent  
18 of that subpopulation, it's because that's the  
19 subpopulation that's going to inform me about, in  
20 particular, future claim counts, controlling for  
21 industry and occupation, potentially controlling  
22 for gender, controlling for different demographic

1 characteristics as we go forward.

2 So they're serving -- the binding  
3 constraint differs between the two, so in that  
4 sense, they don't overlap. I'm going to have a  
5 broader sample ideally of Trust data because it's  
6 less expensive to produce than claim files, and I'm  
7 going to have the claim file sample be a strict  
8 subset of the Trust sample.

9 Q. In Paragraph 21 of your declaration,  
10 you state that DCPS -- DCPF has already produced  
11 the same or substantially similar information for  
12 similarly sized and likely substantially  
13 overlapping claims population in response to nearly  
14 identical subpoenas from DBMP and Bestwall.

15 Do you see that part of your  
16 declaration?

17 A. Which paragraph?

18 MR. EVERT: Twenty-one.

19 BY MR. GUERKE:

20 Q. Twenty-one.

21 A. Yes.

22 Q. So what of the 12,000 Claimants' data

1 in this case overlap with the -- the Bestwall and  
2 DBMP case?

3 A. I'm not allowed to nor have I merged  
4 those databases. They're two separate cases.

5 What I know about each of them that I  
6 am allowed to use is that each of them receives  
7 about three-quarters of the claims that are filed  
8 in the tort system. So if I have two defendants  
9 that each are receiving 75 percent of the claims,  
10 50 percentage points of that has to overlap because  
11 there's only 25 percent left that could go to the  
12 other Debtor that's not in the prior one.

13 So I know there's substantial  
14 overlap. I know it's at least 50 percent of their  
15 claims. It might be much higher. I don't know the  
16 exact number. That's why it's written the way it  
17 is. I'm not allowed to merge those. They're two  
18 separate cases.

19 You know, if parties waived and said,  
20 Go ahead and merge them, we could give you an exact  
21 answer. But that's not the status. They're --  
22 each case is in its own silo. And so I know it's

1 substantial, but I don't know the exact number.

2 Q. In Paragraph 22 of your declaration,  
3 you state that retrieving information for any  
4 specified Claimant should involve a relatively  
5 straightforward automated extraction of data as the  
6 match Claimants have already been identified.

7 Do you see that in Paragraph 22?

8 A. I do.

9 Q. What is your basis for that  
10 statement?

11 A. Well, as I understand the nature of  
12 the databases, there's a Claimant identifier. The  
13 crosswalk process of identifying which Claimants in  
14 the 12,000 actually filed a claim against any of  
15 the Trusts -- as I understand it, that process has  
16 been completed, because we've gone through a  
17 reconciliation process on the matches that were  
18 uncertain.

19 So there's already a mapping from  
20 that matching key to the records or at least the  
21 key identifier of each Claimant in the Trust data.

22 So now you're extracting specific



1 data fields from a data fact -- a database that's  
2 just a query from a database.

3 Any redaction the Trust wants to do  
4 after that query is a different question. All  
5 right? But the actual extraction of those fields  
6 is just a database query at this point.

7 Q. And the review-and-redaction process  
8 that DCPF goes through is separate and apart what  
9 you're saying in this paragraph, correct?

10 A. Correct.

11 This is just retrieving from the  
12 information from the field is straightforward.  
13 There is a redaction process that the Trust has  
14 stated it wants to do before producing the data.

15 Q. Do you -- do you dispute the fact  
16 that the -- that DCPF will do a  
17 review-and-redaction process for whatever  
18 information is required to be produced in response  
19 to these subpoenas?

20 A. They state they will do it. They did  
21 it in DBMP. I have no reason to question it.

22 Q. You have no firsthand knowledge of

1 DCPF's business, do you?

2 A. No.

3 Q. You don't know specifically what DCPF  
4 has to do in that review-and-redaction process,  
5 correct?

6 A. No, I don't know the specifics.

7 Q. And, similarly, you don't know the  
8 inner workings of DCPF, correct, on the business  
9 side?

10 A. No.

11 Q. And you don't know -- you don't have  
12 personal knowledge of DCPF's burden in responding  
13 to the subpoena, correct?

14 A. No.

15 Q. "No," you don't have personal  
16 knowledge, correct?

17 A. I don't have -- I've seen the bill  
18 from other cases. I don't have personal knowledge.

19 Q. Are you offering an expert opinion on  
20 DCPF's burden in responding to the subpoena?

21 MR. EVERT: I'll object to the  
22 form, actually, because I think that's a

1 legal question, are we offering him to have  
2 an opinion. So to the extent, yes, he's  
3 going to testify about the fact of what it  
4 costs DCPF to do it and DBMP, then I think,  
5 yes, we are offering him.

6 BY MR. GUERKE:

7 Q. You can answer.

8 A. The opinions in my report, if I'm  
9 asked, I'm going to give. Whether they fall under  
10 that definition, I don't know.

11 Q. What are your qualifications for  
12 offering an opinion on DCPF's burden?

13 A. I think if the opinions in the report  
14 talk about doing an extract from a relational  
15 database, once you've completed the matching, that  
16 is simple. That takes almost no time to write a  
17 query, to take an extract from a relational  
18 database.

19 I work with relational databases all  
20 the time. You know, that -- if you consider that  
21 as following as an expert opinion on their burden,  
22 it's one aspect of looking at what's the actual

1 cost, given they've already done the matching  
2 exercise, to extract the fields. That's minimal.

3 Otherwise, in terms of the redaction,  
4 the evidence I have as an economist to look at is  
5 the bill that got in the public for what that cost  
6 in DBMP, so that gives us a benchmark of what it  
7 may cost here to put a dollar figure on that  
8 burden.

9 Q. Is there anything else -- any other  
10 information you're relying on to offer an opinion  
11 on DCPF's burden in this case?

12 A. Not beyond anything that's in my  
13 report.

14 Q. You rely on the Richard Wyner  
15 declaration in your declaration, correct?

16 A. On the -- if you can point me to  
17 where.

18 Q. The Richard -- Richard Wyner is the  
19 DCPF COO, and there was a declaration submitted.  
20 It's cited in your report.

21 I can --

22 A. I'm just asking you to reference --

1 where in my report do I rely on it?

2 I'm not -- I don't have that mapping  
3 at the tip of my fingertips.

4 If you point me to where, that's --

5 Q. Sure.

6 It's Footnote 16 -- 13 and 16.

7 A. Okay.

8 Q. You are relying on the Richard Wyner  
9 declaration in forming your opinions related to  
10 DCPF's burden in this case, correct?

11 A. I'm relying on the specific statement  
12 that the data all resides in electronic format.

13 Q. Any other part of the declaration  
14 that you're relying on?

15 A. I'm looking at these two sentences in  
16 the footnotes therein and that it's organized by  
17 Claimant.

18 Q. Anything else?

19 A. Without reviewing the totality, I'm  
20 not sure it relates to anything else. The two  
21 sentences of those two footnotes -- that's what the  
22 footnotes are supporting.

1 Q. Have you reviewed the entirety of  
2 Richard Wyner's deposition -- declaration submitted  
3 in this case?

4 A. I did read that at one point in time.

5 Q. Do you dispute any part of it?

6 A. I don't recall, one way or the other,  
7 sitting here.

8 Q. Sitting here today, do you dispute  
9 any statement made in Mr. Wyner's declaration?

10 A. I don't -- to the degree he has a  
11 statement that any of my opinions are contradictory  
12 of, then the answer to that would be yes, but I  
13 haven't tried to map specifically his statements to  
14 my opinions.

15 Q. In Paragraph 22 of your declaration,  
16 you state, In fact, I would expect the  
17 Aldrich/Murray data production process would be  
18 even less burdensome than the Bestwall and DBMP  
19 process because DCPF -- DCPF has already developed  
20 applicable algorithms through responding to similar  
21 requests for the Bestwall and DBMP Debtors.

22 Did I read that part of your

1 declaration correctly?

2 A. You did.

3 Q. Specifically, what are the algorithms  
4 DCPF has already developed that are referenced in  
5 that declaration?

6 A. Extracting the data fields would be  
7 an almost identical query to the query that was run  
8 in the other, particularly DBMP. The review for  
9 looking for whatever protocols -- I don't know what  
10 protocols they used -- but whatever protocols they  
11 developed to review and remove any PII or PHI that  
12 might be in the fields. They've already developed  
13 those protocols and applied them before. So they  
14 have the benefit of that experience to work on when  
15 they do it again. And so almost always, your  
16 second time doing that exercise is less expensive  
17 than your first time because you have the benefit  
18 of that experience.

19 Q. So -- so the benefit of the  
20 experience, is that what you're referring to as an  
21 algorithm?

22 A. Writing the algorithm and then the

1 protocols, the processes they put in place. They  
2 had to develop some process for reviewing and  
3 redacting. And the other piece that's in there  
4 because of the likely overlap, if they chose to  
5 cross-reference with the records that they already  
6 produced in DBMP in their production process, the  
7 ones that had information that needed to be  
8 redacted from DBMP, they could bring over the  
9 redacted field and not have to redo the redaction.

10 So the overlap should make it less  
11 expensive because they've already done it for  
12 subpopulation, and the fact that they have the  
13 experience of having done it before and they aren't  
14 developing the protocols should make it less  
15 expensive.

16 Q. Do you have any firsthand knowledge  
17 of the process that DCPF employs to review and  
18 redact these records?

19 MR. EVERT: Objection: asked and  
20 answered.

21 THE WITNESS: No.  
22



1 BY MR. GUERKE:

2 Q. Even though the subpoena doesn't  
3 specifically request personal identifying  
4 information, you agree that it would capture  
5 certain personal identifying information, right?

6 A. That is the allegation by the Trusts.  
7 I understand their allegation. You know, it is  
8 not -- there's traces when you build a database and  
9 the exposure fields. If they've chosen to include  
10 that type of information in an exposure field, then  
11 it could be there.

12 They assert that some of those  
13 exposure fields contain that information. So  
14 that's -- their position is it does.

15 You could imagine a database about  
16 exposure that doesn't have PII in because that's  
17 really not relevant to the exposure.

18 So if you had a clean exposure field,  
19 then you wouldn't have that issue. Right? So it's  
20 the fact that their exposure field isn't clean,  
21 it's contaminated with PII, that creates this  
22 issue. It wasn't obvious at the time of issuing,

1 seeking the data that that would be the case.

2 Q. But you don't dispute that that is  
3 the case, right?

4 A. I -- I don't dispute the assertion.

5 Q. Are you measuring DCPF's burden by  
6 using the \$86,000 billed in production costs in  
7 DBMP?

8 A. I view it as a relevant data point.  
9 I don't think they're going to be at the exact same  
10 number next time.

11 I mean, from a burden perspective,  
12 it's more about the hours, because that's --  
13 ultimately, that was paid by the Debtors and DBMP,  
14 as I understand it. So the financial burden was  
15 borne by the Debtors, but it's the scope of the  
16 exercise.

17 Q. You don't know what the per record  
18 review costs for these Debtors' subpoenas will be  
19 for DCPF, right?

20 A. So you can get a rough estimate. And  
21 if -- you can look at things like the Garlock data  
22 and estimate how many Trusts a typical Claimant

1 goes -- would file a claim against. You can take  
2 the \$86,000, the number of claims that were  
3 reviewed, divide, and you're going to be on the  
4 order for that of about ten cents a record.

5 Now, that doesn't mean we will come  
6 in at exactly ten cents a record here, but it was  
7 kind of if you do that back-of-the-envelope math,  
8 you'll see it more on that order.

9 Q. You're speculating what -- what -- it  
10 would be speculation to try to determine what  
11 DCPF's costs would be to respond to these Debtors'  
12 subpoena, right?

13 A. I wouldn't go and say it's  
14 speculation. You have an estimate. You can look  
15 at what did it cost them to respond to the DBMP  
16 subpoena, which was substantively identical in  
17 nature. And so you have a very good benchmarking  
18 exercise.

19 It's not pure speculation. That  
20 would be -- you know, it is an estimate, but I  
21 wouldn't call that pure speculation. You know, the  
22 -- almost perfect comparable to gauge what the cost

1 would be.

2 Q. DBMP included roughly 9,000  
3 Claimants, right?

4 A. Correct.

5 Q. Aldrich and Murray include roughly  
6 12,000 Claimants, correct?

7 A. Correct.

8 Q. So there are 3,000 more Claimants in  
9 play in this case, right?

10 A. Correct.

11 Q. So you would expect the costs of  
12 production in this case to be greater than in DBMP,  
13 correct?

14 A. I don't think you can draw that  
15 conclusion. If there was zero overlap in the  
16 Claimants and your exercise is one-third larger,  
17 rough order, you would probably expect it to cost  
18 one-third more.

19 There may be some start-up costs, and  
20 so the start-up costs you have once, and then the  
21 per-claim file review. So maybe it's a little less  
22 than one-third more, because you don't have to do

1 the start-up costs an extra time. You still have  
2 that once, but that's ignoring the overlap in the  
3 Claimants.

4 So if, hypothetically, 6,000 of the  
5 Claimants overlapped and that redaction had already  
6 been completed, maybe you only have to look at  
7 6,000 Claimants, because those are the ones that  
8 haven't been done. And then you would expect it  
9 would be less expensive.

10 If only 2,000 overlapped and so you  
11 had to look at 10,000, you would expect it to be a  
12 little more expensive. I don't know the exact  
13 overlap, but I would think they would take  
14 advantage over that overlap because they could  
15 materially reduce their cost.

16 Q. Whatever the review costs would be,  
17 it would be less with a sample, correct?

18 A. Correct.

19 MR. EVERT: Kevin, let me  
20 interrupt you for a second.

21 He's available from 1:00 to 5:00,  
22 and it will be 5:00 -- it's four minutes to

1 5:00. We -- I know you got a little more to  
2 go, but I'm just wondering would it assist  
3 things if we can try to expedite to take  
4 five minutes and get organized, or are you  
5 close to finishing or just trying to get a  
6 sense --

7 MR. GUERKE: I'm using the  
8 5:00 p.m. as where I'm trying to finish.  
9 It's up to you. I will take five minutes and  
10 try to streamline it --

11 MR. EVERT: No. If you think  
12 you're there --

13 MR. GUERKE: -- I will go until  
14 you tell me to stop.

15 So you -- when are you going to  
16 tell me to stop?

17 MR. EVERT: I'm not going to tell  
18 you stop at dead 5:00 -- is he last? Anybody  
19 else?

20 MR. HOGAN: I have one -- I had  
21 one series of questions about Paragraph 16,  
22 and that will take me probably 10 minutes.

1 MR. GUERKE: Let me just go  
2 through --

3 MR. EVERT: You want to try to  
4 make it to 5:00, and then Dan will take it  
5 from there?

6 MR. GUERKE: I will go through  
7 this series of questions and hand it off.  
8 Thank you.

9 BY MR. GUERKE:

10 Q. Are you aware that November 30th, the  
11 Court ruled on DCPF and the DCPF's Trusts motion to  
12 quash?

13 A. I know there was such a ruling. I  
14 couldn't tell you the date.

15 Q. And it was a 10 percent sample  
16 ruling, right?

17 A. There -- I'm aware that -- his  
18 decision for 10 percent sample, yes.

19 Q. In December, after that -- that  
20 decision was rendered, the Debtors proposed a  
21 stratified random sampling protocol to the parties  
22 involved in -- in this case.

1 Are you familiar with that?

2 A. I'm very familiar with that.

3 Q. Were you involved in preparing that  
4 stratified random sample?

5 A. Yes.

6 Q. Were you in charge of that -- that  
7 process? Is that your work product?

8 A. I directed all the work on that;  
9 that's correct.

10 Q. The proposed sample that was  
11 circulated December 19th was sufficient for your  
12 purposes in this case, correct?

13 MR. EVERT: Object to the form of  
14 the question.

15 THE WITNESS: I would not describe  
16 it that way.

17 So given there's now external  
18 constraint, the most data you can have is  
19 10 percent. I want all 10 percent. That's  
20 the most I'm allowed to have, and I'm going  
21 to try to design a sample that will get me  
22 the greatest level of efficiency I can out of



1           those data.

2                   All right. But it's a constraint  
3           now. If the Court orders it, whether you  
4           like it or not, whether you think it's the  
5           right decision or not, you live with it.

6                   So it was going -- I just accepted  
7           that things weren't going to be as precise  
8           and I'd give less guidance to the Court than  
9           I believe was optimal given the cost-benefit  
10          analysis here.

11                   BY MR. GUERKE:

12                   Q.       And the sample that you prepared  
13          would have worked in your analysis, correct?

14                   MR. EVERT: Object to the form of  
15          the question.

16                   THE WITNESS: So the question I  
17          gave before to work could be the same answer  
18          now -- the answer I gave to the similar  
19          question would be the same now.

20                   BY MR. GUERKE:

21                   Q.       The -- are you finished with your  
22          answer? I didn't mean to interrupt you.

1 A. Yes.

2 Q. The proposed stratified random sample  
3 that -- that the Debtors circulated is a  
4 representative and efficient sample.

5 You would agree with that, correct?

6 A. That is its intent, is to be as  
7 efficient -- it is definitively representative.  
8 It's trying to squeeze as much efficiency out of  
9 the sample of 1,200 as one can.

10 Q. And the -- the -- the proposed  
11 stratified random sample would provide a reliable  
12 cross-section of Debtors' mesothelioma claims  
13 settlement history, correct?

14 A. Reliable? I can't go to that point  
15 at this. I haven't done the analysis.

16 This is where it goes back to the  
17 same as does it work. For certain questions, that  
18 is very likely to turn out to be enough. And for  
19 other questions, I think there's a very high  
20 probability that it's not sufficient and will end  
21 up with very broad confidence intervals.

22 Q. The sample that you prepared and was

1 circulated to the parties was seeking information  
2 for the period 2014 to the present, right?

3 A. Well, part of that negotiation was if  
4 we are going to be constrained to just 1,200  
5 Claimants, the more recent Claimants are -- answer  
6 more questions than the ones further back. I gave  
7 some answers before about the further back ones are  
8 to get demographic trends. The more recent ones  
9 contribute both to the demographic trends and to  
10 this question of were all the exposures disclosed.  
11 So there's more information for the purpose of  
12 estimation.

13 So I made the determination that  
14 dropping all the earlier claims and losing that  
15 information on trend was better than risking not  
16 being able to answer the questions on full  
17 disclosure. It's a trade-off. It may render,  
18 being able to control for the trends properly,  
19 impossible. But I'm now facing an external  
20 constraint, and I'm trying to do the best I can  
21 within that constraint.

22 Q. And you could have performed your

1 analysis with Trust data from 2014 to the present,  
2 right?

3 MR. EVERT: I object.

4 And, Kevin, I've got to say I  
5 object to this entire line of questioning,  
6 because that was a 408 effort to compromise a  
7 disputed issue in the case. And I think it's  
8 inappropriate to use an e-mail that a lawyer  
9 wrote to cross-examine him about what --  
10 about what the lawyer's intent was in trying  
11 to get the case settled.

12 MR. GUERKE: This was after the  
13 ruling --

14 MR. EVERT: I understand, but we  
15 still had a disputed issue about how to draw  
16 the sample.

17 But I just -- I'm sorry. Note --  
18 note for the record my objection to the -- to  
19 the entire line of questioning. I think it's  
20 inappropriate.

21 But you're welcome to have the  
22 question read back or ask it again.

1 THE WITNESS: I, as a person who  
2 is going to ultimately potentially file an  
3 estimation report, made the judgment call  
4 that I'd rather risk not being able to -- I'd  
5 rather risk not being able to control for the  
6 industry and occupation mix of Claimants and  
7 those trends demographically than not being  
8 able to reliably quantify the number of  
9 exposures that were being disclosed.

10 I was forced into having to make a  
11 trade-off I would not want to make that I  
12 don't think the cost-benefit analysis  
13 supports. But I'm very much putting at risk  
14 being able to properly control for the  
15 demographic trends by constrained 2014.

16 But I had to give something up. I  
17 had a Court order. So I decided what would  
18 create an expectation the least harmful  
19 within that month.

20 MR. GUERKE: Based on the time,  
21 Dr. Mullin, I'm going to pass the witness.  
22 Thank you very much.

1 THE WITNESS: Thank you.

2 --oOo--

3 EXAMINATION BY COUNSEL FOR  
4 CERTAIN MATCHING CLAIMANTS

5 --oOo--

6 BY MR. HOGAN:

7 Q. Good afternoon, Dr. Mullin. It's  
8 Daniel Hogan on behalf of the Certain Matching  
9 Claimants. I will try not to take too much of your  
10 time, but I appreciate your time today.

11 A. Good afternoon.

12 Q. I'd ask you to direct your attention  
13 to Paragraph 16 of your declaration. I'm going to  
14 attempt to endeavor to limit it -- my questions to  
15 this paragraph.

16 If you would, the first sentence  
17 provides that The Trust data are also needed to  
18 assess whether the Debtors entered into settlements  
19 aware of the totality of alternative exposures.

20 Would you agree with me that that's a  
21 temporal exercise?

22 A. What do you mean by "temporal

1 exercise"?

2 Q. Well, the statement, in -- in and of  
3 itself, is a statement about what the Debtors were  
4 aware of.

5 An awareness is a state of mind.

6 Would you agree?

7 A. "Knowledge" in this sense is probably  
8 the word I would use.

9 Q. Okay. And from a temporal aspect,  
10 there's a point in time at which somebody is either  
11 aware or has knowledge of something or they don't  
12 have knowledge of something.

13 Would you agree?

14 A. Correct.

15 Q. Okay. And so from -- from this  
16 statement's standpoint, at some point in the  
17 Trust -- or in -- in the Debtors' database, there  
18 is a determination about what the Debtor knew and  
19 when they knew it.

20 Would you agree?

21 MR. EVERT: Object to the form of  
22 the question.

1 THE WITNESS: I don't think, in  
2 their database, that information is there. I  
3 think that's something, generally, you have  
4 to go to underlying claim records for.  
5 That's not, in general, available in their  
6 claims database in electronic form.

7 BY MR. HOGAN:

8 Q. Okay. So your statement is that the  
9 Trust data from DCPF from Verus is needed to assess  
10 whether the Debtors entered into settlements aware  
11 of the totality of alternative exposures.

12 So let's just break it down.

13 At some point, there's a -- there's a  
14 state of mind of the Debtors about what they knew  
15 about alternative exposures. And if you look at  
16 that on a timeline, there's some point at which  
17 they didn't know it. And somewhere along that  
18 continuum up till now, they became aware.

19 Would you agree?

20 MR. EVERT: Object to the form of  
21 the question.

22 THE WITNESS: I don't agree with



1 the temporal part. I don't know if they're,  
2 even as of today, aware of the totality of  
3 the exposures. So I don't -- I can't agree  
4 that as of -- at some point in time, they  
5 became aware of the totality.

6 This sentence is very much looking  
7 at the time of settlement.

8 BY MR. HOGAN:

9 Q. At the time of what settlement?  
10 Maybe that'll help.

11 A. When the Debtors entered into a  
12 settlement with a given Claimant.

13 Q. Okay. So you would agree with me, I  
14 hope, that at the time that the Debtors entered  
15 into a settlement with any particular matching  
16 Claimant or any Claimant that they settled with,  
17 that they -- they either knew or didn't know of  
18 alternative exposures?

19 A. There would be a set of alternative  
20 exposures they would be aware of, typically, and  
21 there may be zero or multiple exposures they're not  
22 aware of.

1 Q. Okay. And how they came to that  
2 awareness is critical.

3 Yes or no?

4 MR. EVERT: Object to the form of  
5 the question.

6 Critical to what?

7 BY MR. HOGAN:

8 Q. Critical to their understanding and  
9 determination about whether to make the settlement.

10 A. So it's -- the -- that is not the  
11 only determinant that goes into a settlement  
12 decision --

13 Q. I understand that --

14 A. -- so --

15 Q. -- but it is --

16 A. -- context --

17 Q. -- but it is one -- pardon me.

18 A. -- it is one -- it is one element  
19 that goes into a settlement. It's not the only  
20 element. So context of many other things could  
21 matter.

22 Q. But you state that, Specifically, the

1 data would also allow us to compare exposure  
2 allegations to the products of the reorganized  
3 entities for which the Trusts were established with  
4 exposure -- with exposure those same Claimants  
5 disclosed in their tort litigation against the  
6 Debtors.

7 Is that a fair statement?

8 Did I read that correctly?

9 A. Pretty close, I think.

10 Q. You had testified earlier that you  
11 largely have a mathematical model for everything;  
12 isn't that right?

13 A. Ultimately, you're going to reduce  
14 things to computations if you're doing a damages  
15 analysis, which is what I'm doing.

16 Q. So have you reduced the Debtors'  
17 knowledge as it relates to settlements about what  
18 their knowledge of other alternative exposures  
19 were?

20 MR. EVERT: Object to the form of  
21 the question.

22 THE WITNESS: Not at this stage.

1 BY MR. HOGAN:

2 Q. Will you?

3 A. Ultimately, my task is to give a  
4 numerical quantification, so I have to reduce  
5 everything to numbers eventually. So that's  
6 mathematics. So, ultimately, I will be doing that  
7 through mathematics.

8 Q. So the answer is yes, you will be  
9 doing that? You will be reducing the Debtors'  
10 knowledge of alternative exposures at the time of  
11 settlement?

12 MR. EVERT: Object to the form of  
13 the question.

14 BY MR. HOGAN:

15 Q. Is that a correct answer -- is that a  
16 correct question -- do you understand the question?

17 A. No. I think you needed another  
18 phrase at the end of it for it to make sense.

19 Q. My apologies. I'll rephrase the  
20 question. I'll strike that.

21 You testified that there is a  
22 mathematical model that you will reduce information

1 to.

2 And I'm asking you about -- with  
3 regard to settlements that the Debtor entered into,  
4 you're going to make a determination in a  
5 mathematical model which will address whether or  
6 not they were aware of alternative exposures when  
7 they made that settlement?

8 A. Well, there's a factual question of  
9 what fraction of them they're aware of. That's a  
10 ratio --

11 Q. Sure.

12 A. -- so the impact of that on the  
13 settlement is really going to Paragraph 17.

14 So if we're transitioning to  
15 Paragraph 17, which I didn't think we were doing,  
16 we're getting into the impact. The -- Paragraph 16  
17 is just if you're exposed to 38 products and the  
18 Debtor only knew about three of those at the time  
19 they settled or maybe the Debtor knew about 38 at  
20 the time they settled, that's a factual question --

21 Q. Sure.

22 A. -- that's all Paragraph 16 is talking

1 about, that factual question.

2 How that enters into an estimate --  
3 estimate of future liability becomes a modeling  
4 question, which is moving into Paragraph 17.

5 Q. Okay. Before we do that, let's talk  
6 about what you just said about the mathematical  
7 aspect of that.

8 If I take that calculus that you just  
9 undertook and overlay an administrative settlement  
10 on top of it, how does that factor into that  
11 calculation?

12 MR. EVERT: Object to the form of  
13 the question.

14 THE WITNESS: It depends on the  
15 nature of the administrative settlement. It  
16 becomes fact-specific.

17 BY MR. HOGAN:

18 Q. Okay. And you understand generally  
19 how administrative settlements work?

20 A. There's a whole range of them --

21 Q. I --

22 A. -- I understand generally the range

1 of administrative settlements in the asbestos  
2 environment.

3 Q. Okay. So you understand that in a  
4 large share of those administrative settlement  
5 constructs, that there weren't questions asked  
6 about alternative exposures.

7 Do you understand that?

8 A. I am aware that there are  
9 administrative settlements where that information  
10 is not exchanged.

11 Q. You're aware that there's  
12 administrative settlements where that information  
13 is not requested?

14 A. I believe that's true as well.

15 MR. HOGAN: All right. I don't  
16 have anything else. Thanks for your time.

17 MR. EVERT: All right. Thanks,  
18 everybody.

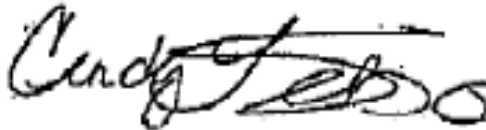
19 (Witness excused.)

20

21 (Deposition concluded at  
22 approximately 5:11 p.m. EDT.)

C E R T I F I C A T E

I, Cindy L. Sebo, Nationally Certified Court Reporter herein do hereby certify that the foregoing continued deposition of CHARLES HENRY MULLIN, PH.D. was taken before me pursuant to notice, at the time and place indicated; that said witness was previously duly sworn remotely by a certified stenographer to tell the truth, the whole truth, and nothing but the truth under penalty of perjury; that the testimony of said witness was correctly recorded to the best of my ability in machine shorthand and thereafter transcribed under my supervision with computer-aided transcription; that the deposition is a true and accurate record of the testimony given by the witness; and that I am neither of counsel nor kin to any party in said action, nor interested in the outcome thereof.



Cindy L. Sebo, RMR, CRR, RPR, CSR, CCR,  
CLR, RSA, NYRCR, NYACR, CA CSR #14409,  
NJ CCR #30XI00244600, NJ CRT  
#30XR00019500, Washington CSR  
#23005926, Oregon State #230105,  
TN #CSR 998, Remote Counsel Reporter,  
LiveLitigation Authorized Reporter



1 C. Michael Evert, Jr., Esq.

2 cmevert@ewhlaw.com

3 May 9, 2023.

4 RE: Armstrong World Industries, Inc., et al. v. Aldrich Pump  
5 LLC, et al.

5 5/8/2023, Charles Henry Mullin , Ph.D. (#5905066)

6 The above-referenced transcript is available for  
7 review.

8 Within the applicable timeframe, the witness should  
9 read the testimony to verify its accuracy. If there are  
10 any changes, the witness should note those with the  
11 reason, on the attached Errata Sheet.

12 The witness should sign the Acknowledgment of  
13 Deponent and Errata and return to the deposing attorney.  
14 Copies should be sent to all counsel, and to Veritext at  
15 cs-ny@veritext.com.

16 Return completed errata within 30 days from  
17 receipt of testimony.

18 If the witness fails to do so within the time  
19 allotted, the transcript may be used as if signed.

20  
21 Yours,

22 Veritext Legal Solutions

E R R A T A

WITNESS: CHARLES HENRY MULLIN, PH.D.

DATE: May 8, 2023

CAPTION: Armstrong World Industries v. Aldrich,  
et al., In Re; Aldrich Pump, LLC

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

Page 220

E R R A T A

WITNESS: CHARLES HENRY MULLIN, PH.D.

DATE: April 28, 2023

CAPTION: Armstrong World Industries v. Aldrich,  
et al., In Re; Aldrich Pump, LLC

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

PAGE LINE REASON FOR CHANGE:

\_\_\_\_\_

DATE CHARLES HENRY MULLIN, PH.D.

ACKNOWLEDGMENT OF WITNESS

I, CHARLES HENRY MULLIN, PH.D., do hereby  
certify that I have read the foregoing pages herein,  
and that the same is a correct transcription of the  
answers given by me of the proceedings taken remotely  
to the questions therein propounded under penalty of  
perjury, except for the corrections or changes in form  
or substance, if any, noted in the attached errata  
sheet.

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE

Subscribed and sworn to before me  
this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My Commission expires:

\_\_\_\_\_  
Notary Public

[& - 15th]

Page 1

<b>&amp;</b>	126:2 140:12	<b>100</b> 7:16 35:8	111:7 125:21
<b>&amp;</b> 3:3,16 4:4 6:3 7:13 8:10 8:13	178:10 179:13 179:14,16,21 180:6,7 203:9 204:4	44:8 47:20 48:3 82:1 100:22 101:4 108:12 140:8 151:6 155:14 171:7 173:8,9 182:17	126:13,20,21 126:22 127:3,5 134:17 143:11 146:19 147:3,7 147:10,11,17 148:18 150:2,6 150:19 154:18 154:19 177:12 179:16 180:4,9 182:17 183:22 185:14 197:6
<b>0</b>	<b>1.5</b> 114:1,4,12	<b>1000</b> 6:5	<b>12,000th</b> 89:7
<b>0</b> 109:13 111:4 113:15,16,18 127:2,12	<b>10</b> 15:9,9 31:3 38:4,16 40:6 40:21 41:1,3,5 41:6,14 43:3 43:12 56:3,6 56:17 57:5,10 58:3 59:17,20	<b>10013</b> 8:14 <b>101</b> 8:12 10:18 <b>10th</b> 74:17	<b>12,001</b> 97:3,6
<b>01</b> 96:21 111:4	60:1,4,13 61:1	<b>11</b> 1:10 9:9 89:11 111:1	<b>120</b> 181:1
<b>02108</b> 3:6	61:2,22 62:6	<b>11,000</b> 89:11	<b>1240</b> 52:6,8
<b>07068</b> 8:6	63:3,18 65:10	<b>11,999</b> 89:7	<b>13</b> 112:3 190:6
<b>07102</b> 7:17	77:1 78:3 79:1	111:7	<b>1311</b> 4:15
<b>1</b>	81:8,22 84:4	<b>110</b> 7:6	<b>1372</b> 217:18
<b>1</b> 10:9 17:5,7 17:16 18:20 20:15 26:22 32:11 37:18 72:18 87:15 109:13 111:11 113:18 140:4 180:22	89:12 95:18	<b>1100</b> 3:18	<b>14</b> 117:19
<b>1,200</b> 47:20,22 48:7,13 56:14 63:22 73:14,17 73:19 74:2 75:4 76:7,15 76:20,22 77:6 77:9 79:2 83:3 83:9,12 84:4 85:10 86:19 90:7,16,18,22 91:10,13 92:1 93:5 95:19 103:18 114:11	103:18 104:6 104:10,10,14 106:20 107:19 110:14,21 112:12 113:11 127:1 142:17 170:10 171:8 174:5 175:1,10 179:19 180:12 180:14,21 182:14 199:22 200:15,18 201:19,19	<b>111</b> 5:11 <b>1152</b> 4:7 <b>11th</b> 6:13 <b>12</b> 48:1 58:4 111:17 <b>12,000</b> 15:12 40:12,16 42:3 44:4 61:16 69:18 70:9,13 71:9 73:15,17 73:18 74:2 75:2,5 76:15 85:20 86:6,15 88:2,17 89:6 89:10 96:17 97:1,2,4,6	<b>144</b> 9:10 <b>14409</b> 1:19 2:9 217:19 <b>15</b> 38:9 48:21 49:2 60:14 72:18 73:2 113:8 119:6 128:16 131:12 132:19 142:7 165:1 <b>150</b> 87:9,17 140:9 <b>1550</b> 5:5 <b>15th</b> 4:7

[16 - 302.252.4447]

Page 2

<p><b>16</b> 48:21 49:2 82:17 85:4 91:14 119:8,9 176:19 190:6,6 199:21 207:13 214:16,22 <b>1650</b> 3:11 <b>17</b> 10:10 25:20 83:19 85:7 91:9 119:8 176:19 214:13 214:15 215:4 <b>1735</b> 6:19 <b>18</b> 27:8 38:13 <b>18th</b> 151:12 <b>19</b> 28:7 92:21 <b>1910</b> 5:11 <b>19103</b> 3:12 <b>19103-7599</b> 6:20 <b>19801</b> 6:6 <b>19801-3034</b> 6:14 <b>19806</b> 4:16 <b>1995</b> 156:13 <b>19th</b> 201:11 <b>1:00</b> 198:21 <b>1:06</b> 1:15 2:16 11:6 <b>1:59</b> 65:14</p>	<p><b>2,000</b> 198:10 <b>2,400</b> 74:6 77:6 77:8 <b>20</b> 28:19 46:18 61:22 76:13,16 76:17 77:8 87:18 113:8 114:1 142:16 142:19 173:22 221:14 <b>20-30608</b> 1:11 <b>200</b> 142:14 <b>20001</b> 2:3 <b>20005</b> 3:19 <b>20005-1706</b> 4:8 <b>2001</b> 156:3,7,8 <b>2005</b> 42:4 148:4 150:9 156:16,17,20 157:7 <b>2010</b> 158:16,18 158:19 159:2 160:6 <b>2014</b> 204:2 205:1 206:15 <b>202.339.8567</b> 4:9 <b>202.862.5069</b> 3:20 <b>2020</b> 151:12 <b>2023</b> 1:15 9:5 10:5 11:6 17:12 22:11 218:3 219:3 220:3</p>	<p><b>207</b> 9:11 <b>21</b> 183:9 <b>210</b> 142:21 <b>212.308.0070</b> 8:15 <b>21202</b> 5:12 <b>215.398.0554</b> 3:13 <b>215.864.8265</b> 6:21 <b>217</b> 9:15 <b>218</b> 9:16 <b>219</b> 9:17 <b>22</b> 185:2,7 191:15 <b>22-00303</b> 1:5 <b>221</b> 9:18 <b>23</b> 95:5 <b>23005926</b> 1:20 2:13 217:20 <b>230105</b> 1:20 2:13 217:20 <b>24</b> 71:18 115:8 <b>240</b> 76:15 <b>25</b> 68:19 69:13 70:4,14 84:12 84:15,21 119:1 129:17 145:17 145:20 146:9 184:11 <b>25,000</b> 66:18 69:21 70:2 71:8,11 <b>26</b> 119:19</p>	<p><b>26th</b> 3:5 <b>27</b> 80:15 120:11 <b>270</b> 80:22 <b>28</b> 121:4 220:3 <b>29</b> 122:8 <b>2:10</b> 65:14</p>
			<b>3</b>
			<p><b>3</b> 10:17 15:10 15:11 40:13,16 40:18,19,21,21 40:21 41:3,4,4 41:6,14,15 42:20 43:2,3,3 43:3,12,13 44:4,7,8 58:11 64:15 65:1,1,2 65:3,5 66:3,4,5 70:12,12 71:20 71:21 72:1 77:20 87:7,16 101:12,12,16 140:5 155:11 155:13,17 <b>3,000</b> 197:8 <b>30</b> 25:20 27:8 75:15,17 77:13 77:15 80:5,18 95:6 112:11 124:9 142:7,14 218:16 <b>300</b> 75:15 77:12,16,18 <b>302.252.4447</b> 6:15</p>
<b>2</b>			
<p><b>2</b> 10:12 35:19 51:7,11 71:18 174:20,22</p>			

[302.571.6616 - able]

Page 3

<b>302.571.6616</b> 6:7 <b>302.656.7540</b> 4:17 <b>3030</b> 3:11 <b>30326</b> 5:6 <b>30th</b> 22:11 200:10 <b>30xi00244600</b> 1:19 2:10 217:19 <b>30xr00019500</b> 1:19 2:11 217:20 <b>31</b> 124:10 <b>312.782.3939</b> 7:8 <b>32</b> 125:15 126:13 <b>3455</b> 5:5 <b>38</b> 214:17,19 <b>3:26</b> 131:5 <b>3:39</b> 131:5 <b>3m</b> 28:2	66:14 69:12 70:18 72:1,11 140:9 143:11 145:3,6,9,10,16 155:1,5 <b>408</b> 205:6 <b>435,000</b> 40:15 <b>443.573.8507</b> 5:13 <b>48</b> 71:10,15 <b>4800</b> 7:6	<b>5:00</b> 198:21,22 199:1,8,18 200:4 <b>5:11</b> 216:22	<b>9</b> <b>9</b> 110:5 162:13 162:19 164:9 165:17 218:3 <b>9,000</b> 197:2 <b>90</b> 65:2 80:19 80:21 104:3 126:20 174:7 182:13 <b>919</b> 6:13 <b>97</b> 64:20 <b>973.597.2302</b> 8:7 <b>973.849.4181</b> 7:18 <b>99</b> 96:19,20 109:11,12 <b>99.9</b> 173:18 <b>998</b> 1:20 2:14 217:21 <b>9th</b> 8:13 17:11
	<b>5</b>	<b>6</b>	<b>9,000</b> 197:2 <b>90</b> 65:2 80:19 80:21 104:3 126:20 174:7 182:13 <b>919</b> 6:13 <b>97</b> 64:20 <b>973.597.2302</b> 8:7 <b>973.849.4181</b> 7:18 <b>99</b> 96:19,20 109:11,12 <b>99.9</b> 173:18 <b>998</b> 1:20 2:14 217:21 <b>9th</b> 8:13 17:11
	<b>5</b> 52:18 59:20 59:22 60:3 63:20 96:18 109:10 113:10 <b>5'4</b> 111:12 <b>5/8/2023</b> 218:5 <b>50</b> 66:18 68:19 69:16 70:3,4 80:6 87:8,17 140:8 145:20 166:9,10 184:10,14 <b>50,000</b> 69:13 70:14 71:16 145:17 146:10 <b>500</b> 61:18 77:20 <b>51</b> 2:2 10:16 <b>51st</b> 6:19 <b>55</b> 17:11 18:7 <b>5905066</b> 1:22 218:5	<b>6</b> 103:14 111:11 128:5 <b>6,000</b> 86:20 198:4,7 <b>60</b> 63:22 64:1 87:18 <b>600</b> 64:3 <b>60606</b> 7:7 <b>617.557.5916</b> 3:7 <b>678.651.1250</b> 5:7 <b>6th</b> 20:18	<b>9,000</b> 197:2 <b>90</b> 65:2 80:19 80:21 104:3 126:20 174:7 182:13 <b>919</b> 6:13 <b>97</b> 64:20 <b>973.597.2302</b> 8:7 <b>973.849.4181</b> 7:18 <b>99</b> 96:19,20 109:11,12 <b>99.9</b> 173:18 <b>998</b> 1:20 2:14 217:21 <b>9th</b> 8:13 17:11
		<b>7</b>	<b>9,000</b> 197:2 <b>90</b> 65:2 80:19 80:21 104:3 126:20 174:7 182:13 <b>919</b> 6:13 <b>97</b> 64:20 <b>973.597.2302</b> 8:7 <b>973.849.4181</b> 7:18 <b>99</b> 96:19,20 109:11,12 <b>99.9</b> 173:18 <b>998</b> 1:20 2:14 217:21 <b>9th</b> 8:13 17:11
		<b>7.5</b> 114:4 <b>70</b> 142:20 <b>75</b> 84:18 129:20 184:9	<b>9,000</b> 197:2 <b>90</b> 65:2 80:19 80:21 104:3 126:20 174:7 182:13 <b>919</b> 6:13 <b>97</b> 64:20 <b>973.597.2302</b> 8:7 <b>973.849.4181</b> 7:18 <b>99</b> 96:19,20 109:11,12 <b>99.9</b> 173:18 <b>998</b> 1:20 2:14 217:21 <b>9th</b> 8:13 17:11
<b>4</b>		<b>8</b>	<b>a</b>
<b>4</b> 61:18 <b>40</b> 61:3,6,8 80:5 <b>400</b> 60:22 61:1 61:7,8,12,13 68:20 79:17 <b>400,000</b> 40:10 40:11 43:19,20 44:2,12,15,18 44:21 66:2,9		<b>8</b> 1:15 9:5 10:5 11:6 106:16 219:3 <b>80</b> 42:11 69:15 69:19 173:21 <b>86,000</b> 195:6 196:2 <b>8th</b> 8:13	<b>aanselmi</b> 8:16 <b>abbreviated</b> 12:12 <b>ability</b> 95:10 110:4 114:22 178:19 217:11 <b>able</b> 13:12 32:20 39:3 46:1 60:15 76:3 77:22 80:17 81:13 82:9 85:9 90:3 101:13 109:9

[able - agree]

Page 4

<p>129:4 157:2,3 159:21 173:3 204:16,18 206:4,5,8,14 <b>above</b> 119:2 218:6 <b>abraham</b> 10:17 101:17 <b>absence</b> 39:13 110:18 <b>absent</b> 40:3 <b>absolute</b> 103:11 <b>absolutes</b> 171:2 <b>academic</b> 121:19 <b>acands</b> 51:3 <b>acc</b> 3:2 144:2 177:10 180:15 <b>acceptable</b> 172:19 174:1 <b>accepted</b> 202:6 <b>access</b> 40:1 108:22 109:19 110:3 144:3 <b>accessed</b> 99:22 101:1 <b>accomplish</b> 118:12 <b>account</b> 82:8 <b>accuracy</b> 107:12 125:16 125:22 218:9 <b>accurate</b> 92:10 217:14</p>	<p><b>accurately</b> 48:15 110:9,17 157:21 <b>ace</b> 28:1 29:1 33:22 <b>acknowledges</b> 120:5,9 <b>acknowledging</b> 123:3 <b>acknowledg...</b> 9:18 218:12 221:1 <b>acllp.com</b> 8:16 <b>action</b> 21:5 34:6 136:4 217:16 <b>actions</b> 24:9 <b>actor</b> 99:22 <b>actual</b> 68:14 141:15 186:5 188:22 <b>actually</b> 56:6 59:11 65:9 72:9 74:11 78:10 83:7 91:15 92:10 96:9 107:1 108:20,21 109:15 111:15 112:4,4,15 113:1,18 117:8 118:11,17,20 120:14 121:1 133:9 137:4 143:7 171:16</p>	<p>173:14 185:14 187:22 <b>actuarial</b> 176:2 <b>add</b> 59:22 81:22 82:11 126:14,22 127:1,2 <b>adding</b> 81:18 127:1,2 142:13 142:19 <b>additional</b> 91:5 96:19 148:11 <b>address</b> 39:2,3 59:7 67:1 77:10 78:5 105:14 142:3 214:5 <b>addressed</b> 104:13 141:4 <b>addresses</b> 77:3 104:5 <b>addressing</b> 57:1 <b>adds</b> 80:20 <b>administrative</b> 68:4,6,9 215:9 215:15,19 216:1,4,9,12 <b>administrator</b> 2:8 <b>adopt</b> 132:12 <b>advance</b> 20:2 49:9 102:7 <b>advantage</b> 198:14</p>	<p><b>adversary</b> 10:16 51:15 <b>advise</b> 88:11 122:6 138:15 152:8 <b>advising</b> 152:14 <b>aearo</b> 26:21 32:6 <b>affect</b> 15:13 16:6 <b>affects</b> 45:15 <b>affiliated</b> 29:5 <b>afternoon</b> 11:22 144:13 144:14 207:7 207:11 <b>age</b> 112:10 <b>aggregate</b> 164:17 <b>ago</b> 52:20 68:18 86:1 98:7 <b>agree</b> 71:7 72:12 73:15 77:13,16 86:3 100:21 101:2 122:8,12 124:11 129:8 133:17 134:21 135:3 167:17 170:2 175:4 194:4 203:5 207:20 208:6 208:13,20</p>
--	---	--	--



[agree - answer]

Page 5

<p>209:19,22 210:3,13 <b>agreed</b> 21:16 <b>agreement</b> 180:17 181:14 <b>ahead</b> 78:16 94:10 141:18 159:3 184:20 <b>aided</b> 217:12 <b>aig</b> 34:20 <b>aiu</b> 28:14 34:14 <b>al</b> 1:5,8,11 9:4 9:4 10:4,4 218:4,4 219:4 220:4 <b>aldrich</b> 1:8,11 5:2 9:4 10:4 43:18 69:16 135:16,22 136:8,10 147:22 149:8 153:13 154:10 155:21 159:13 161:19,21 162:2 163:21 175:21 191:17 197:5 218:4 219:4,4 220:4 220:4 <b>algorithm</b> 192:21,22 <b>algorithms</b> 191:20 192:3 <b>aligned</b> 13:21</p>	<p><b>allan</b> 8:20 <b>allegation</b> 194:6,7 <b>allegations</b> 132:21 212:2 <b>alleged</b> 128:19 128:22 <b>allianz</b> 28:22 <b>allotted</b> 218:19 <b>allow</b> 39:1 83:20 175:17 212:1 <b>allowed</b> 26:7 184:3,6,17 201:20 <b>alternative</b> 50:6 82:20 90:15 113:9,22 115:10 132:20 133:2 134:10 135:20 136:8 175:22 207:19 209:11,15 210:18,19 212:18 213:10 214:6 216:6 <b>amanda</b> 3:4 <b>americas</b> 8:12 <b>amount</b> 62:11 113:13 115:20 116:17 127:9 166:1 <b>amounts</b> 83:22 91:10</p>	<p><b>analogy</b> 111:1 111:5,9,10 <b>analyses</b> 15:13 26:20 61:4 86:20 166:1 169:1 178:4 <b>analysis</b> 30:17 30:20 31:7 33:14 39:5 40:20 46:9 56:22 62:1,4 62:15 64:2 66:20 68:5 79:5 85:19 86:19 89:14 91:14 109:7 122:18 135:11 141:14 157:7 160:1 163:4,18 165:16 167:6 167:10,14 169:5,8,16 170:1,1,4,20 171:6,16,18 175:15,16 176:9 177:7 178:9 179:5,7 202:10,13 203:15 205:1 206:12 212:15 <b>analytical</b> 121:6 <b>analyze</b> 67:10 76:3 107:16 131:17</p>	<p><b>analyzing</b> 67:14 <b>andrew</b> 8:11 94:19 <b>anecdotes</b> 119:20,21 120:1,5 <b>ankara</b> 97:21 <b>anselmi</b> 8:10,11 54:7,17 69:7 132:12 139:12 141:1 <b>answer</b> 13:7,7 13:15,19 14:6 36:19 39:2,12 40:3 48:3 54:8 54:11 78:15 85:8 87:19 91:18 92:19 93:13 103:3,6 106:11 108:8 110:11 118:5 133:11 139:17 140:20 141:8 143:6 146:1,14 146:17 162:19 162:22 164:14 165:8 168:2,2 173:6 177:22 184:21 188:7 191:12 202:17 202:18,22 204:5,16 213:8 213:15</p>
--	--	--	--

[answerable - assume]

Page 6

<b>answerable</b> 62:15 <b>answered</b> 14:9 70:17 139:10 140:15 160:9 193:20 <b>answering</b> 13:8 21:21 50:20 88:8 146:18 <b>answers</b> 12:14 141:5 162:10 179:2 204:7 221:6 <b>ante</b> 86:11 93:14 107:14 <b>anticipate</b> 152:16,18,21 154:9 155:21 166:17 <b>anticipates</b> 153:1 <b>anybody</b> 101:2 199:18 <b>anybody's</b> 97:3 <b>apart</b> 186:8 <b>aphillips</b> 3:8 <b>apologies</b> 213:19 <b>apologize</b> 17:8 21:20 22:10 <b>apparently</b> 119:14 <b>appear</b> 120:13 <b>appeared</b> 129:18	<b>appears</b> 125:19 <b>applicable</b> 22:2 106:5 191:20 218:8 <b>applications</b> 16:9 <b>applied</b> 15:21 75:12 192:13 <b>applies</b> 113:6 118:3 126:8 <b>apply</b> 47:21 75:16,18 160:17 182:13 <b>applying</b> 118:21 <b>appreciate</b> 90:6 95:15 207:10 <b>appreciated</b> 174:16 <b>approach</b> 30:7 <b>appropriate</b> 39:13 49:19 153:5 <b>approximately</b> 2:16 56:14 66:13 72:1 81:8 83:9 165:6 216:22 <b>approximating</b> 68:18 <b>approximation</b> 66:17 <b>april</b> 220:3 <b>arbitration</b> 28:2	<b>area</b> 166:5 <b>areas</b> 16:11 53:12 58:5,9 132:1,3 <b>arguing</b> 73:12 <b>armstrong</b> 1:3 9:4 10:4 218:4 219:4 220:4 <b>array</b> 24:5 <b>asbestos</b> 1:4 51:3 53:5 55:2 56:2 57:4 216:1 <b>aside</b> 144:7 <b>asked</b> 15:8,12 40:10,12,15,16 40:18,20 42:3 42:16 45:5 64:15 66:5,16 66:19 67:10 70:19 136:7 139:9,15,19 140:15 146:14 149:20 154:15 160:8 174:15 188:9 193:19 216:5 <b>asking</b> 41:2 44:1 47:19 49:12 74:17,18 75:10 85:1 86:11 93:20 96:6 124:12 139:16 143:7 146:9 152:20	155:12,14 163:2 182:16 189:22 214:2 <b>aspect</b> 49:14 50:17 159:6 188:22 208:9 215:7 <b>aspects</b> 56:5,8 59:13 170:6 179:22 180:8 <b>assert</b> 49:20 121:10 194:12 <b>assertion</b> 195:4 <b>assertions</b> 58:20 <b>asserts</b> 106:16 <b>assess</b> 207:18 209:9 <b>assessing</b> 172:17 <b>assessment</b> 38:19 <b>assist</b> 16:12 40:12 199:2 <b>associated</b> 45:19 56:21 57:17 67:21,22 140:12 178:7 182:6 <b>association</b> 2:12 18:8 <b>assume</b> 13:15 115:18,21 137:21,22
---	---	---	---

[assumed - behalf]

Page 7

<p><b>assumed</b> 76:5 113:14 115:21 116:5 130:13 <b>assuming</b> 93:5 105:15 114:20 116:6 129:21 <b>assumption</b> 13:18 115:17 116:1 138:2 <b>assumptions</b> 16:4 93:21,21 131:14 169:4 <b>assuredly</b> 61:9 63:7 143:2 147:15,16 <b>atlanta</b> 5:6 <b>attached</b> 218:11 221:9 <b>attempt</b> 77:5 98:22 207:14 <b>attention</b> 207:12 <b>attorney</b> 218:13 <b>attorneys</b> 3:2 4:2,12 5:2 6:2 6:10 7:2,12 8:2 8:9 154:21 <b>attribute</b> 110:8 <b>audience</b> 137:7 138:5 <b>august</b> 151:12 <b>authorized</b> 1:20 2:15 217:21</p>	<p><b>automated</b> 185:5 <b>available</b> 26:14 26:15 32:19 41:3 61:16 113:10 124:18 124:20,21 156:5,12 170:5 198:21 209:5 218:6 <b>avenue</b> 2:3 4:15 8:12 <b>average</b> 48:7 115:14 180:22 <b>aware</b> 37:21 98:13 99:20 139:8,10 200:10,17 207:19 208:4 208:11 209:10 209:18 210:2,5 210:20,22 214:6,9 216:8 216:11 <b>awareness</b> 208:5 211:2 <b>awful</b> 62:6 81:18</p>	<p>121:21 126:10 131:2 153:16 153:19 156:13 156:16,17,19 157:14,20 158:19 159:2 159:13 161:4 179:4 180:19 196:7 203:16 204:6,7 205:22 <b>background</b> 23:10 130:2 <b>backgrounds</b> 45:14 <b>backing</b> 104:19 <b>bad</b> 21:1 120:3 <b>ball</b> 49:9 <b>ballard</b> 6:11 <b>ballardspahr....</b> 6:16,22 <b>baltimore</b> 5:12 <b>bank</b> 69:6,9 <b>bankruptcy</b> 1:1 10:15 26:22 51:15 151:9,16 151:18,21 155:22 158:12 158:16 159:8 159:20 <b>bar</b> 58:20 <b>bargain</b> 127:15 <b>barn</b> 139:6 <b>base</b> 95:10 <b>based</b> 82:3 90:7 106:2 120:14</p>	<p>123:2 141:21 142:10 143:3 151:10,11 155:2 206:20 <b>baseline</b> 62:12 62:14 142:5 165:3,11 <b>bases</b> 113:8 <b>basic</b> 74:12 <b>basically</b> 178:20 <b>basis</b> 55:11 56:1 107:5 137:14 178:5 185:9 <b>bates</b> 8:19 35:21 96:2,9 96:12,16,21 97:16,17 98:9 98:14 99:14,21 100:3,3 109:13 126:17 151:11 152:3,22 158:3 158:7,9,21 168:17 171:9 171:22 174:6 175:14 176:15 177:14 <b>bberens</b> 7:9 <b>beginning</b> 2:15 <b>behalf</b> 2:17 42:22 43:20 44:21 48:2 86:13 207:8</p>
	<p><b>b</b></p>		
	<p><b>b</b> 7:4 <b>back</b> 14:22 37:17 54:10,14 65:17 72:17 78:2 93:13 110:5 119:5</p>		

[behave - burdensome]

Page 8

<p><b>behave</b> 106:1</p> <p><b>behavior</b> 49:22 50:2</p> <p><b>believe</b> 18:9 28:18,21 51:1 52:16,19 53:2 69:12 88:15 94:4 102:6 132:22 141:3,5 161:14 163:6 174:19 202:9 216:14</p> <p><b>believes</b> 107:2 120:18</p> <p><b>benchmark</b> 189:6</p> <p><b>benchmarking</b> 196:17</p> <p><b>beneficial</b> 138:8</p> <p><b>benefit</b> 14:4 30:16,20 31:7 33:14 38:19 39:5,8 56:22 81:13 107:20 109:6 137:4 170:3,20 171:6 178:8,11,13 179:5 192:14 192:17,19 202:9 206:12</p> <p><b>benefits</b> 38:20 38:22 39:21 93:1 178:14</p>	<p><b>bermuda</b> 28:1 33:22 34:5</p> <p><b>best</b> 12:17 81:15 107:2 176:6 178:14 178:15 204:20 217:10</p> <p><b>bestwall</b> 27:17 33:17,20 110:7 152:4,17 153:1 153:14,17 161:12 183:14 184:1 191:18 191:21</p> <p><b>beth</b> 6:12</p> <p><b>better</b> 46:13 89:15 93:13 120:7 146:6 166:13 204:15</p> <p><b>beyond</b> 36:8 58:15 119:2,11 150:6 189:12</p> <p><b>bias</b> 112:5,22</p> <p><b>biases</b> 159:17 159:22 162:7,8</p> <p><b>big</b> 48:14 59:12 80:15 106:12 140:10</p> <p><b>bigger</b> 77:9 114:2 123:22 165:4</p> <p><b>biggest</b> 63:19</p> <p><b>bill</b> 187:17 189:5</p>	<p><b>billed</b> 195:6</p> <p><b>binding</b> 57:1 87:1 182:7 183:2</p> <p><b>bit</b> 20:12 42:10 49:13 74:22 94:12 122:18 166:14</p> <p><b>blanket</b> 103:21</p> <p><b>boiler</b> 5:2</p> <p><b>bold</b> 123:11</p> <p><b>borne</b> 195:15</p> <p><b>boston</b> 3:5,6</p> <p><b>bottom</b> 28:11 29:4 34:14</p> <p><b>brad</b> 7:4</p> <p><b>breach</b> 96:16 97:1,12 98:8 98:22 99:4,8 126:12,19 127:4,8</p> <p><b>breached</b> 98:14</p> <p><b>breadth</b> 135:20</p> <p><b>break</b> 14:15,21 21:15 45:17 61:20,22 62:3 62:18 65:18,21 127:22 131:11 134:19 209:12</p> <p><b>breakdown</b> 59:21</p> <p><b>breaking</b> 61:4</p> <p><b>breaks</b> 171:3</p> <p><b>brian</b> 6:18</p>	<p><b>briefly</b> 12:1</p> <p><b>bring</b> 132:19 193:8</p> <p><b>broad</b> 38:13 75:21,21 87:11 103:2 105:4 203:21</p> <p><b>broader</b> 57:11 90:9,11 124:20 126:4 166:11 183:5</p> <p><b>broken</b> 55:8</p> <p><b>brought</b> 25:15 43:22 44:9 70:5 72:10 159:18</p> <p><b>brush</b> 38:14</p> <p><b>bucket</b> 112:1</p> <p><b>build</b> 194:8</p> <p><b>building</b> 164:2</p> <p><b>bulk</b> 48:20 57:1 95:4</p> <p><b>bullet</b> 27:7 28:19</p> <p><b>bunch</b> 61:10</p> <p><b>bundle</b> 63:9</p> <p><b>burden</b> 121:6 187:12,20 188:12,21 189:8,11 190:10 195:5 195:11,14</p> <p><b>burdensome</b> 122:11 191:18</p>
--	--	--	---

[bureau - characterize]

Page 9

<b>bureau</b> 24:3 27:12 33:4 <b>business</b> 187:1 187:8	<b>career</b> 29:10 <b>cares</b> 158:6 <b>carolina</b> 1:1 <b>carpenters</b> 48:11 <b>carvelli</b> 8:10 <b>case</b> 1:11 10:15 18:6 23:14,15 24:7,15 25:10 25:14 26:3,5 26:18 27:12 30:6,21 31:1 31:10,14,16,19 32:6 33:4,8 34:4 49:9,14 51:15 52:9 81:15 94:7,7 98:1 129:22 137:3,12,20 147:2 151:9,22 152:13 154:1 154:10 155:22 164:10 167:11 180:12 184:1,2 184:22 189:11 190:10 191:3 195:1,3 197:9 197:12 200:22 201:12 205:7 205:11 <b>cases</b> 23:18 24:4,21,22 26:6,9,14,15 29:16,19 30:13 47:14 62:22	120:2 121:14 142:2 152:7,19 152:21 153:7 170:18 184:4 184:18 187:18 <b>categories</b> 105:4 <b>category</b> 104:22 <b>cause</b> 63:19 <b>ccr</b> 1:18,19 217:18,19 <b>census</b> 30:4,22 85:13,18,19 124:16,18 151:2 155:7,16 156:3,7,8 170:18 171:4 <b>center</b> 4:6 7:15 <b>cents</b> 196:4,6 <b>certain</b> 35:8 36:19 48:11 91:5 93:21 100:13,22 101:5 114:13 114:15 119:16 134:9 152:10 170:3,6 171:4 180:5 194:5 203:17 207:4,8 <b>certainly</b> 72:20 95:15 <b>certainty</b> 113:16	<b>certificate</b> 9:15 <b>certification</b> 35:18,19,20 <b>certifications</b> 35:22 36:12 <b>certified</b> 2:5,6 2:6,7,9,10,11 2:12 11:10,14 54:13 217:2,7 <b>certify</b> 217:3 221:4 <b>challenges</b> 122:21 <b>chancery</b> 34:15 <b>change</b> 72:5 114:22 219:5,7 219:9,11,13,15 219:17,19,21 220:5,7,9,11,13 220:15,17 <b>changes</b> 129:6 133:8 157:3,4 218:10 221:8 <b>changing</b> 98:6 114:22 127:8 128:22 156:22 <b>chapter</b> 1:10 <b>characteristics</b> 45:11 46:3 67:18,19,20,22 68:13,14 112:20 115:1 183:1 <b>characterize</b> 166:21 178:21
--	--	--	--

[charge - claims]

Page 10

<b>charge</b> 124:13 136:5 172:4 201:6 <b>charles</b> 1:14 2:1 9:3 10:3,9 11:9 17:17 217:4 218:5 219:2 220:2,22 221:3 <b>charlotte</b> 1:2 <b>chicago</b> 7:7 <b>choice</b> 71:5 <b>choosing</b> 114:7 <b>chose</b> 70:18,19 119:7 193:4 <b>chosen</b> 114:5 194:9 <b>cindy</b> 1:18 2:4 217:2,18 <b>circle</b> 3:18 <b>circuit</b> 22:7 <b>circulated</b> 201:11 203:3 204:1 <b>cited</b> 189:20 <b>citing</b> 125:4 <b>civil</b> 37:8,12 <b>claim</b> 8:9 31:10 31:11 44:19 47:22 56:12,13 56:19 63:14 71:1,1 73:14 73:15,17 83:7 83:14 84:9 89:8 90:19	91:6 125:8 135:13,15,16 135:21 136:2 136:11 147:9 149:9,9,10,11 149:12 153:18 153:21 154:11 155:8,20 161:5 161:21 163:17 163:19 164:6 165:15 170:11 176:2,22 177:15,18 178:3,19 179:1 179:20 180:2,7 180:18 182:5 182:10,15,20 183:6,7 185:14 196:1 197:21 209:4 <b>claimant</b> 56:11 74:7 83:3 98:19 133:19 134:5,20 135:10,12,13 136:2,11 149:9 149:14 150:8 159:12 178:22 181:21 185:4 185:12,21 190:17 195:22 210:12,16,16 <b>claimant's</b> 48:22 135:13 149:15	<b>claimants</b> 4:2 4:12 8:22 25:18 40:16 42:20 43:20,22 44:5,8,12,15 45:15,17 46:13 46:14 47:1,2 47:15 56:15 64:20 69:14 70:14,18,21 71:8 73:17,18 73:19,21 74:2 74:2 76:13,17 79:2,8 84:4,11 84:16,18 88:17 90:7,16 91:11 92:1 93:19 95:19,21 96:2 96:17,18 98:3 103:18 112:6,7 112:7,11,17 115:11 117:21 117:22 128:21 129:15,17 132:2 134:10 134:18 136:16 136:17 140:13 145:4,6,11,17 145:21 146:10 147:3 148:12 148:18 150:2,6 150:12,19 151:2 154:18 154:20 155:9 155:12 157:22	159:6 160:19 161:20 162:1 164:16 171:21 175:19 177:12 179:8,9 180:4 180:6,9 183:22 185:6,13 197:3 197:6,8,16 198:3,5,7 204:5,5 206:6 207:4,9 212:4 <b>claimed</b> 136:10 <b>claims</b> 15:11 24:9 31:2,8 40:10 41:18,22 42:7,8,12,15 43:19,22 44:6 44:9,16,21 46:5,8,16,18 47:8,9,21 48:7 48:13 53:5,15 56:1 57:14 58:7,12 59:6 59:14,17 60:22 61:1,13,16,18 63:13,20,22 66:2,9,10,11,14 66:20,22 67:1 67:3,5,5,7,7,10 67:14,16,18,18 67:20 68:1,2,3 68:13,14,16,19 69:12,13,14,16 69:17 70:8,10 70:22 71:22
---	---	---	--

[claims - complete]

Page 11

72:10,13,15 73:7 74:8 77:12,13,15 79:17,19 85:6 85:14 87:21 89:2,3,7 90:21 94:5 97:22 106:7,8,9 111:7 112:16 112:18,21 116:13 118:1,7 125:5,21 126:2 126:3,5 134:21 135:9,14 144:16 145:7 145:21 146:4 146:21 147:4,5 147:8,12,12,20 148:4,5,10,13 148:15,16,18 148:22 149:14 149:17 154:15 155:1,5,8 159:9,11,22 160:20,22 161:1,3 163:21 165:15 169:18 169:21 170:9 172:14,16 173:4 174:7 176:4,7,16 177:4,6 178:10 179:14 181:1 183:13 184:7,9 184:15 196:2	203:12 204:14 209:6 <b>clare</b> 5:10 <b>clarify</b> 19:13 40:9 139:20 <b>clarifying</b> 149:3 <b>clarity</b> 149:19 <b>classic</b> 116:22 <b>clause</b> 55:3 <b>clean</b> 194:18,20 <b>cleaned</b> 109:11 109:12 <b>clear</b> 13:19 41:8 72:2 100:15 106:19 136:3 <b>clearly</b> 106:17 165:1 <b>click</b> 99:11 <b>clicked</b> 99:4 <b>client</b> 70:20 108:19,22 109:6,19,20 114:7 151:17 152:10 <b>clients</b> 25:8 108:2,3,8 122:6 138:12 152:1 <b>close</b> 178:16 199:5 212:9 <b>closer</b> 70:3 <b>clr</b> 1:19 217:19	<b>clustered</b> 106:1 <b>cm</b> 10:8 17:5,7 17:16 18:20 20:15 37:18 51:7,11 72:18 101:16 174:20 <b>cmevert</b> 5:8 218:2 <b>cmmaisano</b> 5:14 <b>cole</b> 3:3 <b>colleagues</b> 152:9 <b>collect</b> 43:21 182:1 <b>collected</b> 56:11 <b>colon</b> 54:22 <b>columbia</b> 4:6 <b>combined</b> 43:19 136:6 <b>combining</b> 178:20 <b>come</b> 14:22 86:5 105:20 127:7 131:1 196:5 <b>comes</b> 23:21 62:14 138:13 181:21 <b>comfortable</b> 58:6 86:7,14 86:18 178:9 <b>coming</b> 109:16 <b>commingle</b> 149:21	<b>commission</b> 221:17 <b>common</b> 23:20 24:16 25:7 61:22 119:20 <b>companies</b> 25:2 25:3 <b>company</b> 7:12 36:6,9 <b>comparable</b> 196:22 <b>compare</b> 67:17 176:16 212:1 <b>compared</b> 178:18 179:1 <b>compares</b> 83:9 <b>comparing</b> 90:22 <b>comparison</b> 56:10,13 83:10 177:1,3 179:6 179:17,21 181:8,9 182:7 182:9,12 <b>compensable</b> 45:11,16 <b>compete</b> 122:10 <b>complain</b> 107:21 <b>complains</b> 107:10 <b>complaint</b> 104:22 <b>complete</b> 84:11 103:6 116:3
--	---	--	---

[complete - continues]

Page 12

130:17 141:6 156:13 175:18 <b>completed</b> 185:16 188:15 198:6 218:16 <b>completely</b> 33:11 50:10 115:6 117:8,16 130:19 <b>component</b> 141:13,16 <b>composure</b> 119:12 <b>compound</b> 123:18 <b>comprehensive</b> 33:13 <b>compromise</b> 205:6 <b>computational</b> 122:14 <b>computations</b> 122:14 212:14 <b>computer</b> 217:12 <b>conaway</b> 6:3 <b>concept</b> 180:19 <b>conceptually</b> 172:11 <b>conclude</b> 112:9 <b>concluded</b> 49:16 64:19 166:19 216:21 <b>concludes</b> 109:5	<b>concluding</b> 113:11 <b>conclusion</b> 107:18 108:1 111:15 112:2 113:2 119:18 120:20 158:12 197:15 <b>conclusions</b> 125:18 <b>concrete</b> 60:19 <b>condition</b> 105:8 <b>confidence</b> 58:10 75:18,20 81:11 82:14,16 90:9,12 113:13 113:15 114:16 154:5 203:21 <b>confident</b> 70:3 166:8,9 <b>confidential</b> 34:7 <b>confidentiality</b> 161:15 <b>confirm</b> 137:13 <b>confirmation</b> 47:10 53:6 54:5 <b>confirmed</b> 62:22 137:4 <b>confuses</b> 110:1 <b>connected</b> 34:18 <b>connection</b> 51:4 116:17	<b>consider</b> 35:16 188:20 <b>considering</b> 158:20 <b>consolidated</b> 136:4 <b>constant</b> 112:8 <b>constrain</b> 71:5 <b>constrained</b> 42:14 47:22 57:10 65:5 66:21 70:9 124:14,22 152:14 159:5 179:18 180:11 204:4 206:15 <b>constraining</b> 56:6 58:11 104:14 182:17 <b>constrains</b> 106:20 150:7 <b>constraint</b> 32:18 57:1 107:3 110:13 156:11 182:7 183:3 201:18 202:2 204:20 204:21 <b>construct</b> 151:6 <b>construction</b> 32:22 59:17 <b>constructs</b> 216:5 <b>consumer</b> 27:11 33:3	<b>consumers</b> 24:3 <b>contain</b> 38:3 42:10 68:12 194:13 <b>contained</b> 95:14,16 <b>contaminated</b> 194:21 <b>contemporan...</b> 58:22 152:2 <b>contemporan...</b> 91:16 158:2 <b>content</b> 21:7,8 95:13 <b>context</b> 19:14 23:22 24:1,19 34:3 55:12 59:15 64:17 68:9 73:13 78:17 98:3 108:9 130:18 132:5 137:3,7 137:9,19 138:10,11 152:13 153:13 211:16,20 <b>contexts</b> 24:21 24:22 25:8 42:9 <b>continue</b> 65:19 <b>continued</b> 4:1 5:1 6:1 7:1 8:1 217:4 <b>continues</b> 27:14,20 28:3
--	--	---	---



[continues - court]

Page 13

28:8,16 <b>continuum</b> 209:18 <b>contradictory</b> 191:11 <b>contrary</b> 64:22 <b>contrast</b> 31:9 59:4 64:3 157:11 178:17 <b>contrasted</b> 84:9 <b>contribute</b> 204:9 <b>control</b> 15:7 79:9,11,13 108:15 109:2 112:21 119:10 122:3 129:5 173:12,17 204:18 206:5 206:14 <b>controlling</b> 79:14 130:7,7 157:11 173:2 180:1 182:20 182:21,22 <b>conversation</b> 19:19 <b>coo</b> 189:19 <b>copies</b> 17:10,13 17:14 51:7 218:14 <b>copy</b> 158:7,9 <b>core</b> 38:8 <b>corner</b> 116:9	<b>correct</b> 12:7,8 12:16,22 13:1 13:17 18:21 19:21 25:10,11 30:16 32:7 33:18 34:2 36:21 43:13 53:7 55:3,4,8 67:8,9 69:11 70:8,10 71:20 72:14,15 73:15 74:3,4 80:2 85:15,20,21 88:3 93:22 95:10 100:4 101:1,12 102:4 102:5 122:11 122:17 123:5 123:10,15 129:10 130:18 132:4 133:3,17 134:11 139:1,2 140:5,6 145:8 145:17 150:2 152:4,5 154:12 155:3 156:17 156:18 162:11 166:18 167:15 168:17 169:10 169:11,19,20 169:21 175:6 177:11 186:9 186:10 187:5,8 187:13,16 189:15 190:10	197:4,6,7,10,13 198:17,18 201:9,12 202:13 203:5 203:13 208:14 213:15,16 221:5 <b>corrected</b> 37:20 <b>correction</b> 117:18 118:2 <b>corrections</b> 221:8 <b>correctly</b> 75:12 192:1 212:8 217:10 <b>cost</b> 30:16,20 31:7,17 33:14 38:19 39:5,8 39:15 40:1 56:22 83:14,18 88:10 92:22 107:20,20 108:2,22 109:6 124:19 125:1,2 125:12 170:3,6 170:20 171:6 178:6,8,11,14 179:5 181:22 182:3,6,8,10 189:1,5,7 196:15,22 197:17 198:15 202:9 206:12 <b>costs</b> 38:21,22 39:14 40:17	57:17 81:12 188:4 195:6,18 196:11 197:11 197:19,20 198:1,16 <b>counsel</b> 1:20 2:14 8:20 11:19 13:4 19:8 20:2,6 40:11,18 42:17 84:12,12 86:12 144:10 145:4 152:9 162:10 207:3 217:15 217:21 218:14 <b>counsel's</b> 95:15 <b>count</b> 23:19 66:15 <b>counter</b> 177:5 <b>counting</b> 134:18 135:8 <b>counts</b> 180:2 182:20 <b>couple</b> 19:9 61:17,18 62:19 65:22 79:16 85:17 94:11 127:21 149:2 175:17 <b>course</b> 26:5 114:21 <b>coursework</b> 36:10 <b>court</b> 1:1 2:4,7 2:9 14:8 57:12
---	---	---	--

[court - database]

Page 14

74:22 79:1 80:7,9,16 81:15 87:2,7,9 89:15 92:12,15 92:18 93:6 106:20 151:19 163:17 166:4 166:18 200:11 202:3,8 206:17 217:2 <b>court's</b> 87:2 94:12 <b>courts</b> 75:22 <b>cover</b> 52:1 111:21 <b>coverage</b> 23:20 24:8 34:11,21 <b>covered</b> 110:22 <b>covering</b> 52:20 <b>covers</b> 104:1 <b>crb</b> 163:8 <b>create</b> 91:8,22 113:12 133:13 157:18 162:7 206:18 <b>created</b> 125:16 <b>creates</b> 81:4 194:21 <b>credentials</b> 36:7 <b>criteria</b> 150:13 <b>critical</b> 211:2,6 211:8 <b>criticized</b> 132:22	<b>critique</b> 59:9 104:8 124:8,10 <b>cross</b> 39:5 193:5 203:12 205:9 <b>crosswalk</b> 185:13 <b>crp</b> 63:14 <b>crr</b> 1:18 217:18 <b>crt</b> 1:19 217:19 <b>cs</b> 218:15 <b>csr</b> 1:18,19,20 1:20,20 2:13 2:13,13 217:18 217:19,20,21 <b>culled</b> 178:2 <b>cumbo</b> 8:19 <b>current</b> 53:4 67:2 152:12 157:2 <b>currently</b> 66:21 83:9 <b>curve</b> 59:16 176:2 <b>custom</b> 4:12 <b>cutoff</b> 150:10 150:16 151:3	<b>daniel</b> 4:14 207:8 <b>dark</b> 108:6 <b>data</b> 15:11 16:5 31:4,8,20,22 33:1 35:12,15 36:10,13,16 38:13 39:16,16 39:19,22 40:1 40:11,19 41:3 41:21 45:20 50:12,12 53:14 56:10,13 57:18 58:16 59:6,8 60:6,15 62:14 63:19 64:16 65:6 73:5 78:1 79:5,21 82:9 83:17 84:20 86:13 88:10,22 89:17 91:1,7 91:19 96:16 97:1,12 98:7 99:3,7,14 100:11,12,22 101:3 104:3,7 105:2,22 106:7 106:11 107:14 108:21 109:6 116:7 117:7 118:13,17 120:16 121:2 121:11 122:18 122:19 126:12 126:15,19	127:4,8,9 134:16,16 141:10 148:8 150:18 154:13 155:13,18 156:17,19 157:8,14,17 158:8 159:15 159:19 160:15 161:12 163:22 165:12 169:1 170:5,7,8,14 171:16 172:21 173:8,9,22 175:2 178:4,17 179:15 181:10 182:4,5,6,8,11 183:5,22 185:5 185:21 186:1,1 186:14 190:12 191:17 192:6 195:1,8,21 201:18 202:1 205:1 207:17 209:9 212:1 <b>database</b> 31:3 97:22 98:2 125:5 144:3 155:8 158:4,6 158:10,14,21 159:4,9 160:5 186:1,2,6 188:15,18 194:8,15 208:17 209:2,6
	<b>d</b>		
	<b>d</b> 11:2 <b>d.c.</b> 2:3 3:19 4:8 11:4 70:7 <b>damages</b> 212:14 <b>dan</b> 200:4		

[databases - defendant's]

Page 15

<b>databases</b> 184:4 185:12 188:19 <b>datasets</b> 157:18 <b>date</b> 17:19 22:15 51:17 101:19 150:10 150:10 151:3 151:14 200:14 219:3 220:3,22 221:12 <b>datum</b> 178:7 <b>daubert</b> 92:7 <b>day</b> 2:2 7:3 70:6 99:1 136:6,7 172:20 221:14 <b>days</b> 218:16 <b>dbmp</b> 152:4,17 153:2,15 154:2 161:12,18,20 183:14 184:2 186:21 188:4 189:6 191:18 191:21 192:8 193:6,8 195:7 195:13 196:15 197:2,12 <b>dcpf</b> 6:2,10 144:10,18,22 145:22 147:5 147:13 148:19 150:1 156:15 161:13,13 171:7,10 172:1	172:21 174:8 175:7 177:14 179:9 183:10 186:8,16 187:3 187:8 188:4 189:19 191:19 191:19 192:4 193:17 195:19 200:11 209:9 <b>dcpf's</b> 187:1,12 187:20 188:12 189:11 190:10 195:5 196:11 200:11 <b>dcps</b> 183:10 <b>dead</b> 199:18 <b>dealt</b> 26:22 <b>debra</b> 4:5 <b>debtor</b> 41:11 46:16,18 47:4 48:19 145:7 147:4,9,13 148:18 149:11 149:12,15 150:15 170:10 181:15 184:12 208:18 214:3 214:18,19 <b>debtors</b> 1:12 5:2 7:2,2 23:5 31:2 38:5 40:9 41:17 42:22 43:18 44:1,5,9 44:18 45:2,5 45:12 48:22	49:7 53:4 55:2 56:2 57:4 58:12 68:10 82:21 88:18 90:15 97:18 98:2 103:19 111:19 125:4 128:20 134:4 135:14 136:4 136:16 138:1 148:12 149:6,7 149:20 150:8 151:4,14 152:1 165:6 169:18 170:11 176:11 176:17,22 177:14 179:8 191:21 195:13 195:15,18 196:11 200:20 203:3,12 207:18 208:3 208:17 209:10 209:14 210:11 210:14 212:6 212:16 213:9 <b>debts</b> 72:10 <b>december</b> 200:19 201:11 <b>decide</b> 38:19 <b>decided</b> 206:17 <b>decides</b> 92:12 <b>decision</b> 200:18 200:20 202:5 211:12	<b>declaration</b> 10:9 16:13 17:11,17 18:6 18:7,8 20:15 20:21 21:1,4 21:13,18 25:22 37:18 38:2 49:2 72:18 92:22 94:16,20 110:7,10,12,15 110:19 128:10 137:3 143:12 143:17,18,19 143:22 162:13 167:9 176:20 183:9,16 185:2 189:15,15,19 190:9,13 191:2 191:9,15 192:1 192:5 207:13 <b>declarations</b> 22:1 33:19 <b>decrease</b> 46:5,6 162:14,15,18 164:8 <b>decreased</b> 163:3 <b>deemed</b> 92:18 <b>default</b> 89:19 89:20,22 <b>defendant</b> 164:18 <b>defendant's</b> 129:2
--	--	--	--

[defendants - different]

Page 16

<p><b>defendants</b> 1:9 5:2 68:10 120:2 184:8 <b>define</b> 99:9 104:17 111:21 120:12 <b>defined</b> 55:15 <b>defines</b> 103:20 103:21 123:12 <b>definitely</b> 24:11 123:10 124:13 <b>definition</b> 150:21,22 151:1,5,7 188:10 <b>definitively</b> 74:10 203:7 <b>degrade</b> 82:15 <b>degree</b> 90:12 120:5 160:19 171:12 191:10 <b>delaware</b> 1:6 4:15,16 6:6,14 34:15 96:11,15 96:20 97:18 101:4 144:16 148:14 160:13 160:18 <b>demographic</b> 46:3 115:1,4 182:22 204:8,9 206:15 <b>demographic...</b> 206:7</p>	<p><b>demographics</b> 112:7 115:2 156:22 <b>denominator</b> 72:4 <b>department</b> 35:18 <b>depending</b> 47:12 99:9 135:1 142:15 <b>depends</b> 69:7 75:8 91:14 166:14 177:6 215:14 <b>deponent</b> 218:13 <b>deposed</b> 12:6 <b>deposing</b> 218:13 <b>deposition</b> 1:14 2:1 10:8 14:8 17:16 19:4,5,8 20:3,13 22:4 51:11 77:14 101:7,16 178:1 191:2 216:21 217:4,13 <b>depositions</b> 179:2 <b>deputy</b> 8:20 <b>derivative</b> 175:21 <b>describe</b> 166:1 201:15</p>	<p><b>described</b> 103:16 111:18 <b>description</b> 10:8 <b>design</b> 27:3 47:8 55:15 67:4 77:2 78:4 78:9,18 93:13 93:16 106:21 118:14 163:8 201:21 <b>designed</b> 27:12 33:8 <b>designing</b> 39:10 54:3 70:22 116:19 <b>desires</b> 114:7 <b>despite</b> 70:21 172:21 <b>destroyed</b> 158:11 <b>detail</b> 103:16 <b>details</b> 130:1 <b>determinant</b> 211:11 <b>determination</b> 55:22 204:13 208:18 211:9 214:4 <b>determinations</b> 168:16 <b>determine</b> 172:19 173:13 181:12 182:9 196:10</p>	<p><b>determined</b> 173:15 <b>determining</b> 55:6 <b>develop</b> 45:10 193:2 <b>developed</b> 191:19 192:4 192:11,12 <b>developing</b> 120:1 193:14 <b>development</b> 62:20 <b>dfelder</b> 4:10 <b>diagnoses</b> 156:4 <b>differ</b> 164:20 <b>difference</b> 15:8 60:16 74:1 76:4 89:6 111:3,4,13,13 111:14 114:3 <b>differences</b> 112:22 122:3 <b>different</b> 16:3 24:5 30:12,13 37:5 45:8,19 46:2,3 48:10 48:12 55:9 56:20,22 66:1 80:13 88:19 93:9 95:12 98:3 108:4 112:20 125:4 139:18 161:19</p>
--	---	---	---

[different - doing]

Page 17

165:19,19 166:7 169:14 172:6 175:17 182:22 186:4 <b>differentiate</b> 149:13 167:3 <b>differently</b> 92:4 <b>differs</b> 76:11 183:3 <b>difficult</b> 34:13 68:8 <b>digit</b> 142:9 <b>dimension</b> 168:12 <b>direct</b> 176:9 207:12 <b>directed</b> 150:1 177:13 201:8 <b>direction</b> 16:22 111:16 113:2 114:6,9 <b>directionally</b> 93:22 <b>directly</b> 50:17 50:20 109:21 135:20 146:19 175:20 176:1 <b>disagree</b> 74:12 75:9 113:7 121:14 127:11 164:11 <b>disagreement</b> 12:13 <b>disagrees</b> 102:16	<b>disclose</b> 26:7,15 91:16 108:10 134:10 152:12 <b>disclosed</b> 23:7 82:20 84:17,19 90:15 94:15 95:20 105:16 113:22 115:20 116:17 133:5 176:10,12 204:10 206:9 212:5 <b>disclosure</b> 79:11 83:20 85:5 204:17 <b>disclosures</b> 157:6 <b>disconnected</b> 117:15 <b>discovery</b> 22:3 34:22 68:11 89:1 117:1,10 121:8 141:13 148:6 159:6,10 160:14,21 161:8 <b>discuss</b> 25:16 91:8 121:7 162:14 <b>discussed</b> 78:4 86:9 90:20 110:6 119:2 128:1 136:19 137:1	<b>discussing</b> 66:6 94:17 102:7 128:6 145:3 <b>discussion</b> 51:9 102:1 119:13 <b>discussions</b> 21:20 27:17 <b>disease</b> 156:9 <b>diseases</b> 72:3 <b>dismissal</b> 42:13 69:18 <b>dismissed</b> 42:7 42:8 58:7 67:8 67:11,14,16,18 68:2 69:16,17 147:20,21 148:1,15,22 149:10,12,15 149:18 150:14 161:20 <b>displaying</b> 118:16 <b>dispute</b> 186:15 191:5,8 195:2 195:4 <b>disputed</b> 205:7 205:15 <b>distinct</b> 123:13 136:3 <b>distinction</b> 158:13 169:12 <b>distribution</b> 53:16 62:21 112:11	<b>district</b> 1:1,6 <b>dive</b> 37:20 <b>divide</b> 196:3 <b>division</b> 1:2 <b>dkhogan</b> 4:18 <b>dkhogan.com</b> 4:18 <b>docket</b> 17:11 18:6,7 52:6,8 151:11 <b>doctor</b> 15:5 73:1 84:1 100:21 <b>document</b> 18:1 18:15 20:14,17 20:20 26:2 52:13,15 171:10 172:6 <b>documents</b> 10:12 51:12 164:3 172:7 177:19,20 <b>doing</b> 22:13 32:18 45:13,16 47:13 58:6 61:4 74:20 94:9 125:1 141:22 151:17 154:14 155:9 168:6 172:5 173:12 176:4 179:12 182:7 188:14 192:16 212:14,15 213:6,9 214:15
---	--	--	---

[dollar - emphasizes]

Page 18

<p><b>dollar</b> 87:6 165:4 189:7 <b>dollars</b> 60:3 165:2,11 181:22 <b>domain</b> 26:21 35:7 154:6 <b>doors</b> 107:6 <b>double</b> 69:17 74:15 147:19 <b>doubling</b> 138:20 <b>downloaded</b> 97:22 <b>dpmp</b> 108:9 <b>dr</b> 11:22 17:10 18:1,16 19:15 19:20 21:13 22:2,10 38:2 52:14 59:9 65:17 74:12 75:9 76:4 77:13 101:10 102:4,8 104:9 106:15,16 107:5,11 111:19 119:3 121:5 128:11 131:8 132:10 133:1 144:13 157:5 206:21 207:7 <b>draft</b> 16:19 <b>dramatically</b> 114:2 124:5</p>	<p>125:13 <b>draw</b> 112:6,17 146:22 197:14 205:15 <b>drawing</b> 110:18 169:13 <b>drawn</b> 12:3 27:1 116:12 122:4 <b>draws</b> 125:18 <b>drill</b> 41:10 54:19 <b>drilling</b> 43:12 <b>drive</b> 7:6 8:5 127:12 <b>drop</b> 58:6 <b>dropped</b> 58:7 <b>dropping</b> 204:14 <b>drops</b> 58:22 <b>drysdale</b> 3:16 <b>due</b> 123:14 <b>duly</b> 11:10 217:7</p>	<p>204:14 212:10 <b>early</b> 128:1 <b>easier</b> 122:20 <b>easiest</b> 91:21 <b>easily</b> 59:22 105:20 <b>easy</b> 46:17 <b>ecf</b> 25:21 <b>econometrics</b> 15:20 <b>economic</b> 15:21 <b>economist</b> 15:19 189:4 <b>edit</b> 16:20 <b>edt</b> 1:15 2:16 11:6 65:14,14 131:5,5 216:22 <b>effect</b> 142:22 <b>effective</b> 174:3 <b>effectively</b> 30:10 <b>effects</b> 162:5 <b>efficiency</b> 94:9 121:12 201:22 203:8 <b>efficient</b> 30:5 30:14,15 94:1 106:22 110:12 203:4,7 <b>effort</b> 205:6 <b>eight</b> 19:6 <b>either</b> 29:20 108:9 113:10 120:6,19,21 152:17,19,21</p>	<p>153:1 208:10 210:17 <b>electric</b> 29:5 34:15 <b>electricians</b> 48:10 <b>electronic</b> 17:9 31:4,6,15 45:21 56:20 73:16 83:15,16 125:2,7,9,12,14 170:14,15,19 170:22 171:12 172:7 177:20 177:21 178:6 178:18 181:20 190:12 209:6 <b>electronically</b> 10:7 124:18,20 124:21 <b>element</b> 107:22 211:18,20 <b>elements</b> 79:13 <b>eliminate</b> 78:19 <b>eliminated</b> 42:7 42:13 67:7 86:15 108:16 <b>eliminating</b> 86:14 109:3 148:15 149:1 <b>embedded</b> 173:5 <b>emphasis</b> 25:19 <b>emphasizes</b> 123:15</p>
	<p><b>e</b></p>		
	<p><b>e</b> 3:1,1 4:1,1 5:1 5:1 6:1,1 7:1,1 8:1,1,11 11:2,2 205:8 217:1,1 219:1 220:1 <b>earlier</b> 29:10 94:20 101:10 105:7 143:17 145:5 150:16 154:8,17 177:9</p>		

[empirical - evert]

Page 19

<b>empirical</b> 50:9 50:16 168:3 169:1 171:19 <b>employees</b> 99:11 <b>employs</b> 193:17 <b>empty</b> 171:14 <b>enable</b> 39:22 82:19 120:7 <b>endeavor</b> 207:14 <b>ends</b> 113:11 <b>english</b> 7:13 <b>enjoy</b> 139:22 <b>enter</b> 50:20 159:22 175:16 176:8 <b>entered</b> 207:18 209:10 210:11 210:14 214:3 <b>enters</b> 215:2 <b>entire</b> 31:2 35:17 39:6 41:20 76:7 105:16 119:13 125:20 129:13 130:20 150:19 170:9 205:5,19 <b>entirely</b> 104:2 106:3 119:6 125:19 <b>entirety</b> 125:6 191:1 <b>entities</b> 44:16 44:20 142:11	145:7 147:4,9 147:13 148:1 148:13,19 162:3 212:3 <b>entity</b> 99:10 <b>envelope</b> 196:7 <b>environment</b> 121:6 216:2 <b>envisioned</b> 56:12 83:11 <b>envisioning</b> 92:1 <b>epidemiologi...</b> 156:6 <b>equation</b> 167:18 <b>erens</b> 7:4 <b>ergo</b> 104:11 <b>errata</b> 9:17 218:11,13,16 221:9 <b>erroneously</b> 112:9 <b>error</b> 23:7 94:14 114:10 115:12,14 123:18,20 124:1 172:13 172:15,19 173:2,13,15 174:1 <b>errors</b> 25:5 122:10 <b>especially</b> 122:20	<b>esq</b> 218:1 <b>esquire</b> 3:4,10 3:17 4:5,14 5:4 5:10 6:4,12,18 7:4,5,14 8:4,11 <b>essence</b> 76:16 <b>established</b> 212:3 <b>estimate</b> 46:7 46:11 47:15 48:1,15 57:9 57:11 59:20 60:2 62:1 64:21 80:10,17 80:19 81:20 82:10,10,15 87:5 90:7,11 90:13 92:9 115:2,18 116:2 117:20 118:3,4 126:4 133:9,14 136:7,8 138:1 163:8,20 164:17 165:22 166:8 169:9,13 169:18 176:7 195:20,22 196:14,20 215:2,3 <b>estimated</b> 163:16 165:14 <b>estimates</b> 115:3 169:8,10 <b>estimating</b> 16:2 45:7 53:22	54:3 56:2 59:13 68:7 115:9 116:6 118:1,8 125:20 129:1 136:12 141:14 157:21 164:6,12 169:22 <b>estimation</b> 15:14 16:4,8 39:1 42:18 50:15,21 53:4 55:2 57:4 59:1 66:21 67:3 73:6 74:7 80:14 105:4 130:18 135:10 136:2 141:16 163:9 165:19 180:9 204:12 206:3 <b>estimations</b> 118:18 <b>et</b> 1:5,8,11 9:4 9:4 10:4,4 218:4,4 219:4 220:4 <b>evaluating</b> 135:12 <b>evaluation</b> 62:20 <b>eventually</b> 67:4 213:5 <b>evert</b> 5:3,4 17:6 18:2,12 20:19
---	---	---	---

[evert - experience]

Page 20

21:14 22:18 23:14,16 28:13 49:10 52:4,8 53:8 64:7 88:4 94:18 100:10 100:16 102:10 102:21 127:17 137:16 140:14 140:21 141:2 143:15 146:8 148:20 158:22 160:8 167:19 168:1,18 174:16,20 181:5 183:18 187:21 193:19 198:19 199:11 199:17 200:3 201:13 202:14 205:3,14 208:21 209:20 211:4 212:20 213:12 215:12 216:17 218:1 <b>everybody</b> 18:4 35:20 51:8 115:19 216:18 <b>everyone's</b> 100:19 <b>everything's</b> 84:19 <b>evidence</b> 52:21 179:7 189:4 <b>evolving</b> 157:13	<b>ewhlaw.com</b> 5:8,14 218:2 <b>ex</b> 86:11 93:12 93:14 107:14 121:10 <b>exacerbate</b> 123:6,8 <b>exacerbating</b> 123:4 <b>exact</b> 66:15 67:22 111:15 113:20 145:15 145:19 147:16 172:9 184:16 184:20 185:1 195:9 198:12 <b>exactly</b> 59:8 60:7 63:17 108:22 154:14 196:6 <b>examination</b> 9:2,8 11:19 144:10 207:3 <b>examine</b> 205:9 <b>example</b> 26:12 26:18 31:1 42:12 56:9 58:4,18 59:16 60:21 61:19 71:8 84:10 94:4 114:5,7 119:7,8 156:2 175:20 <b>examples</b> 40:14 113:9	<b>excellent</b> 22:6 22:21 37:22 52:17 71:19 127:14 132:11 139:22 <b>except</b> 221:8 <b>exchanged</b> 216:10 <b>exchanges</b> 138:22 <b>excluded</b> 150:13,17 <b>excuse</b> 24:21 45:2 137:12 <b>excused</b> 216:19 <b>exemplar</b> 51:1 <b>exercise</b> 39:19 45:13 47:12 50:16 89:1 107:14 108:3 108:20 117:1 117:10,15 123:17,21 126:11 141:12 142:11 168:4 180:8 181:9 189:2 192:16 195:16 196:18 197:16 207:21 208:1 <b>exercises</b> 22:13 172:10 180:5 <b>exhaustive</b> 68:11	<b>exhibit</b> 10:8 17:16 51:11 101:16 174:22 <b>exhibits</b> 10:2,7 <b>exist</b> 82:13 121:22 123:6 <b>exists</b> 54:2 97:6 158:15 <b>expand</b> 82:14 82:15,16 <b>expands</b> 95:5 <b>expect</b> 50:15 61:3 62:2,3,4 105:8,18,22 165:14 191:16 197:11,17 198:8,11 <b>expectation</b> 206:18 <b>expecting</b> 63:16 171:20 <b>expedite</b> 199:3 <b>expense</b> 56:21 <b>expensive</b> 31:12 122:4 178:4 183:6 192:16 193:11 193:15 198:9 198:12 <b>experience</b> 26:1 75:21 80:8 82:4 93:17 119:20 138:12 141:21 143:3 146:22 192:14
---	---	---	---



[experience - feasible]

Page 21

192:18,20 193:13 <b>expert</b> 10:17 15:6 23:11 26:4 35:11 36:16 101:17 109:20 130:6 130:11 133:18 153:7 168:8 187:19 188:21 <b>expertise</b> 15:18 15:20 16:2,10 <b>experts</b> 121:10 121:13 122:12 139:22 <b>expires</b> 221:17 <b>explain</b> 15:8 41:13 82:6 <b>explained</b> 162:20 <b>explicit</b> 107:1 <b>explicitly</b> 107:9 <b>exposed</b> 214:17 <b>exposition</b> 166:14 <b>exposure</b> 50:6 59:16 82:20 96:10 108:7 126:16 132:3,3 132:21 133:2 133:20 134:1,5 134:11,20 135:2 175:11 175:15,19,21 176:14 178:19	178:22 180:3 194:9,10,13,16 194:17,18,20 212:1,4,4 <b>exposures</b> 48:22 56:9 58:21 59:19 84:16 90:15 91:16 113:10 113:22 115:10 116:18 128:19 128:22 129:19 135:19,20 158:1 175:22 176:10 204:10 206:9 207:19 209:11,15 210:3,18,20,21 212:18 213:10 214:6 216:6 <b>expressed</b> 168:13 <b>extensive</b> 15:20 <b>extent</b> 86:4 128:21 174:2 174:10 177:3 188:2 <b>external</b> 99:22 107:2 201:17 204:19 <b>extra</b> 57:16 198:1 <b>extract</b> 188:14 188:17 189:2	<b>extracting</b> 185:22 192:6 <b>extraction</b> 185:5 186:5 <b>extrapolate</b> 121:17 176:6 <b>extrapolating</b> 49:18 121:20 <b>extrapolation</b> 121:12 143:10 <b>extrapolations</b> 106:2 <b>eyes</b> 87:2 <b>f</b> <b>f</b> 217:1 <b>faced</b> 41:17 44:18 <b>facility</b> 96:11 96:15 97:19 101:4 109:11 144:17 148:14 160:13,14,17 160:18 <b>facing</b> 204:19 <b>fact</b> 30:3,21 50:14,16 60:8 63:15 70:21 78:15 89:18 115:6 124:3 133:7 149:8 153:7,18,20 181:19 186:1 186:15 188:3 191:16 193:12 194:20 215:16	<b>factor</b> 68:5 117:19 118:2 215:10 <b>factors</b> 82:7,7 113:19 <b>facts</b> 32:1 118:21 <b>factual</b> 214:8 214:20 215:1 <b>failed</b> 96:14,15 126:16 <b>failing</b> 91:15 <b>fails</b> 126:17 218:18 <b>fair</b> 95:1 102:12 212:7 <b>fairly</b> 36:18 51:2 100:13 <b>fall</b> 56:17 57:2 143:2 188:9 <b>falls</b> 55:7,13 <b>false</b> 99:11 <b>familiar</b> 43:7 129:12 130:5 138:10 144:19 167:12 201:1,2 <b>fan</b> 100:19 <b>faster</b> 46:5 <b>fault</b> 138:7 <b>fcr</b> 144:2 177:10 180:16 <b>feasibility</b> 71:1 <b>feasible</b> 47:10 54:4 57:19 90:8 91:13
--	---	---	---

[feasible - focus]

Page 22

<p>166:11 169:3  <b>federal</b> 37:8,12  40:15  <b>feeds</b> 163:12  <b>feel</b> 72:20 155:4  <b>felder</b> 4:5  <b>felt</b> 58:9  <b>female</b> 76:18  <b>females</b> 76:12  77:6,7  <b>fewer</b> 125:2  174:7  <b>field</b> 96:10,14  96:18 126:15  130:6 133:19  186:12 193:9  194:10,18,20  <b>fields</b> 108:7  109:10 126:16  171:14 175:2  175:11,15  176:15 186:1,5  189:2 192:6,12  194:9,13  <b>fight</b> 122:14,14  <b>figure</b> 68:1  161:6 189:7  <b>figured</b> 66:17  <b>figuring</b> 176:6  <b>file</b> 22:4 44:19  56:13,19 126:3  148:2,13  177:18 178:3,5  178:5,19 179:1  179:20 180:8</p>	<p>182:6 183:7  196:1 197:21  206:2  <b>filed</b> 17:11 18:5  18:8 22:2  33:19 44:15  52:1,3 136:11  137:3 158:16  160:20 163:22  184:7 185:14  <b>files</b> 31:10,11  56:12 73:14,15  73:17 74:7  76:8 83:8,14  84:9 90:19  91:6 98:20  125:8 153:18  153:21 154:12  155:20 177:15  180:18 181:15  181:19 182:10  182:15 183:6  <b>filings</b> 137:5,20  <b>fill</b> 84:22  138:11  <b>filter</b> 42:2  <b>final</b> 163:8,8,13  163:15,19,21  164:3,4,5  165:14 166:18  <b>finalized</b> 90:19  <b>finally</b> 36:18  <b>finance</b> 24:3  27:11</p>	<p><b>financial</b> 33:4  61:21 79:11  195:14  <b>find</b> 58:17  166:5  <b>findings</b> 132:13  134:12  <b>finds</b> 92:15  <b>fine</b> 14:12 17:6  87:7 132:13  140:16,18  162:21  <b>fingers</b> 135:4  <b>fingertips</b>  190:3  <b>finish</b> 103:5,9  199:8  <b>finished</b> 202:21  <b>finishing</b> 199:5  <b>finite</b> 117:18  118:2  <b>firm</b> 47:18  60:22 61:4,5,8  61:15 62:4,10  63:8 75:14,14  77:11,12,19  79:9,15 105:8  105:19 106:8  126:7 130:7  153:8  <b>firms</b> 61:11,12  61:19,22 79:16  84:15,17 91:5  129:9,16</p>	<p><b>first</b> 11:10 12:4  19:13 23:3  29:16 53:3  55:21 57:2  85:4 109:14  115:10 122:13  127:7 128:5  151:17 172:11  173:6,8 181:14  192:17 207:16  <b>firsthand</b>  138:14 186:22  193:16  <b>fit</b> 150:12  <b>fitting</b> 63:15  <b>five</b> 19:6 65:8,9  108:17 130:22  134:20,21  135:3,9 199:4  199:9  <b>fivefold</b> 114:3  <b>fixed</b> 112:20  <b>flags</b> 118:20  172:12  <b>flaw</b> 111:17  113:5  <b>flip</b> 25:20 37:17  <b>floor</b> 3:5 6:13  6:19  <b>floors</b> 8:13  <b>fly</b> 71:11,17  <b>focus</b> 21:9  22:22 23:3  52:13,18 72:21  87:20 133:16</p>
---	--	---	--

[focused - gallardo]

Page 23

<b>focused</b> 125:19 157:6 <b>focusing</b> 82:18 148:16 163:6 <b>fold</b> 81:5 <b>follow</b> 84:22 103:4,8 104:12 115:16 <b>following</b> 41:15 188:21 <b>follows</b> 11:12 115:12 <b>foot</b> 111:11 <b>footnote</b> 190:6 <b>footnotes</b> 190:16,21,22 <b>forced</b> 206:10 <b>forcing</b> 107:3 <b>forecast</b> 45:17 46:1,15 47:3 79:7,8 90:7 157:19 169:13 180:2 <b>forecasting</b> 46:15,17 53:15 73:7 74:8 156:9 177:5 <b>forecasts</b> 169:11 <b>foregoing</b> 217:3 221:4 <b>forgive</b> 173:5 174:14 <b>form</b> 31:6 34:5 45:21 49:11	88:4 98:17 102:10 121:10 125:7,10,12,14 137:17 148:20 159:1 165:17 166:13 168:13 168:18 181:5 187:22 201:13 202:14 208:21 209:6,20 211:4 212:20 213:12 215:12 221:8 <b>formally</b> 151:11 <b>format</b> 31:4,16 56:20 83:15,16 170:14,15,19 170:22 177:20 177:21 178:6 178:18 181:20 190:12 <b>forming</b> 190:9 <b>formula</b> 75:12 75:16,19 <b>formulas</b> 74:13 77:18 114:19 <b>formulation</b> 53:6 <b>forth</b> 153:16,19 180:19 <b>forward</b> 105:3 115:5 122:3 156:7,8 160:7 183:1	<b>found</b> 49:15 166:20 173:20 <b>foundational</b> 167:21 <b>four</b> 7:15 198:22 <b>fourth</b> 27:7 28:18 <b>fraction</b> 48:21 84:16 214:9 <b>framework</b> 40:4 116:12 123:2 <b>free</b> 72:20 <b>frequently</b> 15:22 23:21 63:12 68:8 105:9 120:1 <b>friday</b> 20:11 <b>friend</b> 143:13 <b>front</b> 59:12 65:4 141:10 <b>fulfill</b> 103:19 172:1 <b>full</b> 85:5 121:1 122:19 128:21 173:14 204:16 <b>fulsome</b> 59:22 <b>function</b> 174:3 <b>fundamental</b> 39:9 67:15 107:15 116:15 117:9 118:10 126:10 128:2 130:8 179:4	<b>fundamentally</b> 98:5 127:8 161:19 <b>funds</b> 57:14 <b>further</b> 46:20 48:18 59:17 88:11 128:18 157:15,20 204:6,7 <b>future</b> 16:2 45:7,9 46:8,13 46:20 47:1 48:16 49:19 53:5 57:14 68:15 78:1 79:12 82:10 112:7,18,21 115:5 118:1 126:5 135:13 136:13 156:9 157:22 163:20 164:6 165:15 169:9,21 171:20 176:3,7 177:6 180:2 182:20 215:3 <b>g</b> <b>g</b> 11:2 175:10 <b>gain</b> 123:19 138:14 <b>gaining</b> 40:1 57:16 <b>gallardo</b> 106:15,16 107:5
--	--	--	--

[game - going]

Page 24

<p><b>game</b> 169:17  <b>gamesmanship</b>  122:7  <b>garcia</b> 106:15  106:16 107:5  <b>garlock</b> 42:9  49:14,21 50:11  50:15 53:17  54:1 55:7,13  58:19 129:12  129:13,15  130:14 131:13  132:6 134:8  137:5,13 158:4  158:6,10,16,21  159:4,7,13,19  159:20 160:4  160:15,16,20  160:21 195:21  <b>gaskets</b> 134:2  <b>gateway</b> 7:15  <b>gauge</b> 196:22  <b>gender</b> 76:11  76:14 105:20  106:8 131:16  131:18 182:22  <b>general</b> 8:20  26:6 28:5  34:17 48:8  79:6 98:4  143:6 209:5  <b>generally</b> 53:17  171:3 209:3  215:18,22</p>	<p><b>georgia</b> 5:6  <b>germane</b> 16:1  171:18  <b>getting</b> 30:1,5  36:6 41:14  47:1 63:18  74:6 126:18  154:17 157:15  172:18 173:18  173:20 178:16  180:3 214:16  <b>give</b> 12:11  16:16 19:14  23:19 26:12,17  39:1,17 42:5  48:15 57:19  78:21 79:3  81:14 86:4  87:5 89:6,14  90:3,10 92:10  103:6 130:3  132:8 141:19  143:4,5 148:8  166:4 184:20  188:9 202:8  206:16 213:3  <b>given</b> 24:12  30:3,10 58:13  79:15 81:13  102:3 105:4  109:17 110:2  110:13 189:1  201:17 202:9  210:12 217:14  221:6</p>	<p><b>gives</b> 46:10  114:22 189:6  <b>go</b> 24:16 34:13  40:20 42:5  43:2 45:5  46:20 48:1,18  48:19 55:16  65:11 69:22  70:1 76:9  77:11 89:10  92:19 93:13  97:11 99:6  105:3 106:18  111:8 114:8  119:5 126:3  128:16 144:8  156:13,16  159:3 161:4  162:9 166:7,15  167:15 171:22  172:8 173:1  175:19 183:1  184:11,20  196:13 199:2  199:13 200:1,6  203:14 209:4  <b>goal</b> 12:19  <b>goes</b> 35:22 36:6  59:17 70:1  89:21 125:17  126:9 151:18  156:17 179:4  186:8 196:1  203:16 211:11  211:19</p>	<p><b>going</b> 12:4,11  13:4,15 14:8  15:1 17:1  21:14,16,17  22:4,4 23:22  29:10,12 30:5  30:9,20 31:6  36:20 39:1  40:22 41:5,8  42:4,19 49:10  50:13,13,20  55:16 57:20  58:17 60:7  61:6,9 62:6,7  62:11 63:9,19  64:1,7 74:21  75:2,16,17  76:1 77:21  80:16 81:10,16  81:17,21 82:14  83:8 84:7,8  86:2,4 87:15  87:15,17,17  89:11,22 91:17  94:19 95:17  96:11 97:2,6  97:13 102:17  102:18 103:1,4  103:6 104:9  105:1,3 106:10  106:21 107:21  110:5 112:9  115:4 117:15  121:21 122:3  126:7,14,19,21</p>
--	---	---	---

[going - high]

Page 25

126:22 127:6 127:15 131:9 132:15 133:12 133:14 135:11 136:12 137:16 141:22 142:3 142:18,22 143:2,15,20 144:6 147:19 152:20 153:3 153:10 154:4 156:19 157:8 158:19 160:10 162:7 164:20 165:1,4,6 167:6 169:17 172:18,22 175:16,17 176:8 182:19 183:4,7 188:3 188:9 195:9 196:3 199:15 199:17 201:20 202:6,7 204:4 206:2,21 207:13 212:13 214:4,13 <b>good</b> 11:22 22:7 33:21 37:1 59:19 94:3 120:4 135:7 140:17 144:13,14 173:19 196:17 207:7,11	<b>goodness</b> 71:12 <b>goodrich</b> 29:7 <b>gotten</b> 178:9 <b>government</b> 100:11 157:17 <b>granting</b> 52:5 <b>great</b> 140:1 <b>greater</b> 78:14 78:20 82:11 94:9 197:12 <b>greatest</b> 201:22 <b>greatly</b> 38:21 108:13 <b>grier</b> 4:3 8:22 <b>ground</b> 12:12 <b>group</b> 59:14 63:21 112:19 112:20 123:5 157:12 <b>grouped</b> 51:4 <b>groups</b> 45:18 46:2,4,10 63:6 63:10,11,12 105:21 106:1 115:4 119:11 126:6 133:10 <b>guarantee</b> 91:3 <b>guerke</b> 6:4 9:10 144:7,8,12,15 146:13,15 149:4 154:7 160:2 161:10 167:21 168:14 169:6 174:13 174:17,21	181:11 183:19 188:6 194:1 199:7,13 200:1 200:6,9 202:11 202:20 205:12 206:20 <b>guess</b> 24:2 80:1 144:1 <b>guidance</b> 57:13 81:14 89:15 90:4 92:8,17 143:6 202:8 <b>guide</b> 93:17 <b>h</b> <b>h</b> 10:9 17:17 <b>hack</b> 100:9 <b>hacked</b> 100:4 <b>hacks</b> 98:17 <b>half</b> 20:9 61:6 69:18,19 71:9 108:16 113:21 162:20 <b>halfway</b> 103:7 <b>hand</b> 32:1 75:13 135:4 200:7 <b>handful</b> 61:12 61:14 109:16 127:5 <b>hang</b> 18:2 <b>happen</b> 39:20 115:22 123:3 <b>happened</b> 113:14	<b>happening</b> 157:9 <b>happens</b> 59:3,4 59:5 89:2 105:13 106:4 <b>happy</b> 103:3 <b>hard</b> 58:15 <b>harmful</b> 206:18 <b>head</b> 75:19 143:14 <b>hear</b> 54:9 94:22 95:1 102:18 <b>heard</b> 100:16 <b>hearing</b> 20:18 22:12,14 73:13 <b>height</b> 111:4 <b>held</b> 2:2 135:7 <b>help</b> 26:2 42:10 47:7 49:8 163:22 210:10 <b>helpful</b> 71:2 <b>helps</b> 46:13 47:9 <b>henry</b> 1:14 2:1 9:3 10:3 11:9 217:4 218:5 219:2 220:2,22 221:3 <b>herrington</b> 4:4 <b>high</b> 63:14 94:5 146:2,7 161:21 164:4,5 173:13 173:15 178:8 203:19
---	---	--	--

[higher - include]

Page 26

<p><b>higher</b> 57:13 69:22 70:15 83:18 89:3 91:12 125:1 165:3 181:22 182:8,10 184:15 <b>highest</b> 104:21 116:13 <b>highlighting</b> 134:8 <b>highly</b> 63:13 <b>hinge</b> 91:17 <b>hire</b> 138:9,15 <b>hirst</b> 7:5 <b>historical</b> 31:2 31:8,11 40:10 41:18,21 42:20 43:21 44:5 49:18 58:11 82:3 84:15 93:17 112:6,14 112:15,17 117:21,22 118:7 125:5 128:20 141:15 143:3 153:17 154:11 155:1,8 155:20 156:2,3 176:22 181:15 181:19 <b>historically</b> 72:10 125:21 155:20</p>	<p><b>history</b> 45:22 49:14,17 130:3 170:9,11 178:20,22 180:3 203:13 <b>hitrust</b> 35:18 36:2 <b>hodes</b> 49:15 134:13 <b>hogan</b> 4:13,14 9:11 199:20 207:6,8 209:7 210:8 211:7 213:1,14 215:17 216:15 <b>hold</b> 14:8 <b>home</b> 111:8 <b>hope</b> 18:11 109:17 210:14 <b>hopefully</b> 14:16 109:22 <b>houff</b> 5:3 <b>hour</b> 20:8,8 162:20 <b>hours</b> 18:22 19:6 20:5 195:12 <b>huge</b> 118:20 <b>human</b> 23:6 94:14 <b>hundreds</b> 41:17,21 60:3 142:10 <b>hypothetical</b> 84:11 109:10</p>	<p><b>hypothetically</b> 198:4 <b>i</b> <b>idea</b> 92:9 105:1 114:10 <b>ideally</b> 156:22 183:5 <b>identical</b> 50:10 139:15 179:20 183:14 192:7 196:16 <b>identification</b> 17:18 51:17 101:18 <b>identified</b> 29:16 185:6 <b>identifier</b> 185:12,21 <b>identify</b> 110:8 <b>identifying</b> 185:13 194:3,5 <b>ignorance</b> 118:16 <b>ignorant</b> 130:19 <b>ignored</b> 106:3 119:6,12 <b>ignores</b> 104:2 <b>ignoring</b> 115:6 127:9 198:2 <b>illegal</b> 161:15 <b>illinois</b> 7:7 <b>imagine</b> 194:15 <b>impact</b> 75:3 83:21 91:9</p>	<p>113:18 115:9 115:14,17,21 115:22 116:2,5 117:20 165:5 214:12,16 <b>implicitly</b> 76:5 <b>important</b> 47:3 49:4 61:5 71:3 93:19 105:10 120:6 121:3 129:1 157:7,9 <b>importantly</b> 13:10 46:12 <b>imposing</b> 93:20 <b>impossibility</b> 107:17 <b>impossible</b> 39:18 100:8 141:10 204:19 <b>improperly</b> 101:1 <b>improve</b> 73:5 74:7 121:11 <b>improvement</b> 74:11 <b>improving</b> 47:2 123:20 <b>inappropriate</b> 205:8,20 <b>inches</b> 111:4,11 <b>incidents</b> 156:10 <b>include</b> 169:8 194:9 197:5</p>
---	---	---	--

[included - interest]

Page 27

<b>included</b> 150:20 197:2	46:10 47:17 59:14 105:21	95:11 96:8,10 99:21 108:4	<b>inputs</b> 16:5 54:1 80:13
<b>includes</b> 167:15 169:10,11	119:10 126:6 129:4 133:9,12	109:1,4,8,21 112:16 117:13	81:9 163:14 <b>insinuate</b> 120:3
<b>including</b> 35:21	157:12 176:4	121:8 132:11	<b>inspection</b> 10:14 51:14
<b>incomplete</b> 120:19,22	177:4 180:1 182:21 206:6	143:21,22 146:20 150:2	<b>instance</b> 43:6 140:4
<b>inconsistent</b> 96:1 120:16	<b>inexpensive</b> 179:1	155:5 158:14 160:5,6 171:8	<b>instructions</b> 9:16
<b>incorporate</b> 171:15	<b>infallible</b> 98:10 98:12	171:9,12 172:1 174:4 175:6,10	<b>instructs</b> 13:6
<b>incorrect</b> 112:4	<b>infeasible</b> 117:9,17	176:16 177:22 178:21 179:3	<b>insufficient</b> 63:7 181:2
<b>increase</b> 97:7	141:19	180:6,10,13 181:13 182:1	<b>insurance</b> 23:20 24:8,18
<b>increases</b> 124:5	<b>inference</b> 110:18	183:11 185:3 186:12,18	25:2 28:1,14 29:9 34:5,10
<b>increasing</b> 97:5	<b>inferences</b> 112:6,17	189:10 193:7 194:4,5,10,13	<b>insurers</b> 25:4
<b>incremental</b> 96:8,22	146:22	204:1,11,15 209:2 213:22	<b>intend</b> 37:6,9 139:18 169:14
<b>indemnity</b> 28:19	<b>inform</b> 108:13 182:19	216:9,12	170:8 176:21
<b>index</b> 9:2 10:2	<b>information</b> 10:13 42:5,10	<b>informative</b> 42:19 136:12	<b>intended</b> 131:20 181:3
<b>indicated</b> 217:6	42:21 43:10,21 44:13 45:5	157:18	<b>intending</b> 110:15 164:14
<b>indication</b> 166:4	46:1 47:5,7 48:19 49:3,6	<b>initial</b> 44:10 142:15,16,17	177:2 <b>intent</b> 13:21
<b>individual</b> 135:19 136:10	49:16 50:4,7 51:13 56:11	142:20 143:17	41:7 91:2 104:6 171:17
137:8 149:17	58:10 62:7 68:12 70:7,13	<b>initially</b> 84:6 142:6	203:6 205:10
<b>individuals</b> 44:22 159:5	70:20 73:18,19 78:11 83:16,21	<b>injury</b> 1:4 <b>inner</b> 187:8	<b>interact</b> 124:6 <b>interacts</b> 81:1
<b>industrial</b> 59:18 133:8	84:22 91:10 93:15,18 95:5	<b>input</b> 27:16,19 80:14,20	<b>interest</b> 47:21 48:9 76:20
<b>industries</b> 1:3 176:5 218:4			106:5 114:18
219:4 220:4			
<b>industry</b> 45:14 45:18,22 46:2			

[interest - kevin]

Page 28

119:4,16 133:13 136:16 163:13 <b>interested</b> 77:4 217:16 <b>interesting</b> 123:1 <b>intermediate</b> 163:11 164:2 <b>interrogatories</b> 179:3 <b>interrogatory</b> 178:1 <b>interrupt</b> 127:16 143:16 198:20 202:22 <b>interval</b> 90:9 90:12 113:13 113:15 114:17 <b>intervals</b> 75:18 75:20 203:21 <b>intimate</b> 119:3 119:15 <b>intrinsic</b> 78:12 164:18 <b>introduce</b> 61:10 123:13 159:16 <b>invoke</b> 169:4 <b>involve</b> 24:9 76:10 185:4 <b>involved</b> 25:9 94:8 149:20 152:3 200:22 201:3	<b>involvement</b> 152:6 <b>involves</b> 33:10 <b>iphones</b> 71:13 <b>irony</b> 107:10 107:18 110:3 <b>irreducible</b> 123:14,20 124:1,4 <b>irs</b> 124:10,11 <b>issue</b> 14:21 15:1 22:3 32:2 49:3 55:7 58:22 102:9,20 103:12 123:9 153:22 161:17 161:18 163:7 164:10 194:19 194:22 205:7 205:15 <b>issued</b> 51:3 156:15 <b>issues</b> 132:4 152:9,14 160:11 <b>issuing</b> 194:22 <b>item</b> 57:2 138:6 <b>itemized</b> 131:21 <b>ivory</b> 121:18	<b>jersey</b> 2:9,10 7:17 8:6 21:5 51:5 <b>jkoski</b> 3:21 <b>job</b> 1:22 173:19 <b>jones</b> 2:2 7:3 <b>jonesday.com</b> 7:9,10 <b>jorge</b> 106:15 <b>joseph</b> 4:3 8:22 <b>jr</b> 5:4 218:1 <b>judge</b> 14:11 49:15 86:1,4,7 134:13 137:4 137:13 <b>judge's</b> 23:4 88:15 <b>judgment</b> 206:3 <b>jumping</b> 21:20 <b>june</b> 20:18 158:18 <b>jurisdiction</b> 47:18 79:10,16 105:9,19 106:9 126:7 130:8 <b>jurisdictions</b> 48:11 59:5 79:17 <b>justified</b> 109:7 <b>justifying</b> 81:13 <b>juxtapose</b> 83:8	<b>k</b> <b>k</b> 4:14 <b>kaplan</b> 8:4 9:9 11:17,21 12:1 15:4 17:4,7,21 18:11,13,14 20:22 21:11 22:6,9,19,20 23:15,17 27:9 29:13 38:10 50:1 51:6,19 51:22 52:6,10 52:11 53:10,13 54:18 64:13 65:7,16 69:8 88:13 95:7 100:13,18,20 101:11,21 102:2,15 103:10 127:19 127:20 129:7 130:21 131:7 132:17 138:17 139:21 140:16 140:19 143:8 144:5 153:3 162:15 <b>kearney</b> 6:18 <b>kearneyb</b> 6:22 <b>keep</b> 29:12 101:13 <b>kept</b> 127:15 <b>kevin</b> 6:4 144:15 153:3 198:19 205:4
--	--	---	--



[key - lawyers]

Page 29

<b>key</b> 49:14 81:9 105:20 185:20 185:21 <b>kguerke</b> 6:8 <b>kidding</b> 69:10 <b>kin</b> 217:15 <b>kind</b> 21:12 25:5 93:3,6 143:5 163:2 164:18 196:7 <b>king</b> 6:5 <b>knew</b> 117:11 130:17 208:18 208:19 209:14 210:17 214:18 214:19 <b>know</b> 12:10,14 13:7 14:18 18:4,22 21:2,5 23:19 24:17 31:9 34:17 35:16 36:19 41:12 51:20 54:2 58:6,17 59:12,15,22 60:5,6,8 61:19 61:21 62:14 63:9 66:15 69:5 75:2 76:1 77:16 78:16 82:1 85:18,22 87:6,15,16,18 89:21,22 91:21 93:12 95:22 96:4,5 97:12	97:21 99:8 101:21 102:15 102:19 105:2 105:21 106:12 107:6,7 108:11 108:22 109:3,4 109:15 111:9 111:22,22 113:15 114:9 114:13 115:4 116:20 117:4,6 117:11 118:14 118:15,19,21 120:3,14,15,17 121:1 127:10 129:18 130:22 134:9 135:18 137:14,22 141:8,18 142:7 143:1 144:22 146:1 148:17 152:22 153:9 154:2,3 165:20 167:5,7 168:1 169:12 178:15 180:13 181:14 184:5,13,14,15 184:19,22 185:1 187:3,6 187:7,11 188:10,20 192:9 194:7 195:17 196:20 196:21 198:12 199:1 200:13	209:17 210:1 210:17 <b>knowable</b> 109:15 <b>knowing</b> 13:21 59:21 85:8 123:19 <b>knowledge</b> 129:22 130:3 137:7,9 138:14 138:15 147:1 186:22 187:12 187:16,18 193:16 208:7 208:11,12 212:17,18 213:10 <b>known</b> 48:22 49:6 78:15 79:4 89:16 <b>knows</b> 107:13 108:8 120:14 <b>koski</b> 3:17 <b>krepto</b> 3:10 <b>I</b> <b>I</b> 1:18 2:4 4:5 217:2,18 <b>labor</b> 31:17 <b>lack</b> 117:9 126:10 <b>lacking</b> 92:6 <b>lag</b> 151:16 <b>lap</b> 138:13 <b>large</b> 31:16 59:1 75:17	76:2 91:15 111:12 114:16 157:17 171:1 216:4 <b>largely</b> 110:21 212:11 <b>larger</b> 81:6 120:6,10 123:21,22 164:17 197:16 <b>las</b> 97:22 <b>lastly</b> 13:9 14:15 <b>late</b> 25:13 <b>laughter</b> 100:17 132:14 <b>laurie</b> 3:10 <b>law</b> 2:2 37:4 47:17 60:21 61:4,5,8,11,12 61:15,19,22 62:4,10 63:8 75:14,14 77:11 77:12,19 79:9 79:15,16 84:14 84:17 91:5 105:8,19 106:7 126:7 129:9,16 130:7 <b>lawyer</b> 36:21 140:1 205:8 <b>lawyer's</b> 205:10 <b>lawyers</b> 71:13
---	---	--	---

[lay - looking]

Page 30

<b>lay</b> 137:7	<b>liability</b> 46:12	220:5,7,9,11,13	<b>llc</b> 1:8,11 5:2,2
<b>layering</b> 162:5	53:4,22 54:3	220:15,17	7:12 8:9 9:4
<b>layers</b> 99:5	55:2 56:2 57:4	<b>link</b> 99:5,11	10:4 218:4
<b>layperson</b>	68:7 76:11	<b>list</b> 16:16 25:22	219:4 220:4
130:17	79:7 129:2	26:10,16 29:11	<b>llp</b> 3:3 4:4 6:3
<b>lead</b> 94:5	136:6,13 163:9	120:19,22	6:11 7:13 8:3
<b>leading</b> 141:13	164:19 167:10	121:2,3 131:21	8:10
<b>learn</b> 77:14	167:14,17	175:5	<b>logic</b> 113:5
84:10 121:8	168:6,15 169:8	<b>listen</b> 33:12	<b>long</b> 29:11
161:2 166:15	169:9,16 215:3	<b>lists</b> 175:1	144:3
173:17	<b>liberty</b> 152:11	<b>literally</b> 33:10	<b>longer</b> 48:13
<b>learning</b> 117:2	<b>likely</b> 56:14	116:5	114:2 126:8
<b>leave</b> 58:13	81:8 93:18	<b>litigating</b>	156:14 158:15
<b>left</b> 65:22	105:12 123:7	121:16 162:8	<b>look</b> 24:16
184:11	133:20 142:5,8	<b>litigation</b> 8:20	30:22 31:9
<b>legal</b> 21:22	145:19 156:1	25:4 34:21	32:3 44:14
37:3,7 129:2	164:17 166:3,5	119:21 121:6	48:12,13 50:12
164:19 167:10	166:10,20	122:2 123:7	51:20 54:22
167:14,17	167:1,2 173:11	212:5	63:6 67:19
168:6,15 169:7	183:12 193:4	<b>little</b> 15:15	72:17,20 76:12
169:16 188:1	203:18	20:12 34:12	77:22 79:15
218:22	<b>limit</b> 207:14	42:10 49:13	82:17 101:14
<b>legally</b> 161:16	<b>limitation</b>	55:8 69:15	105:18 106:6
<b>level</b> 56:21	43:17	74:22 94:12	116:19 141:22
62:10,12 74:19	<b>limited</b> 40:19	120:4 122:17	157:1 174:18
75:6 82:14	66:3	133:16 149:19	176:21 181:7
85:18 92:3,13	<b>limits</b> 94:22	166:14 197:21	189:4 195:21
104:21 106:12	<b>linchpin</b> 89:8	198:12 199:1	196:14 198:6
129:5 140:11	<b>line</b> 25:6	<b>live</b> 202:5	198:11 209:15
164:4,5 201:22	102:19,19	<b>livelitigation</b>	<b>looked</b> 135:7
<b>levels</b> 45:19	157:17 181:4	1:20 2:14	145:18 153:22
97:11	182:15 205:5	217:21	<b>looking</b> 26:16
<b>liabilities</b> 16:3	205:19 219:5,7	<b>livenote</b> 2:7	30:19 38:1
45:8	219:9,11,13,15	<b>lkrepto</b> 3:14	43:10,16 70:13
	219:17,19,21		71:13 76:5,19

[looking - mathematics]

Page 31

78:6 79:12 83:12 94:18 95:11 105:15 109:16 114:14 114:15 134:17 153:20 156:9 178:9 188:22 190:15 192:9 210:6 <b>looks</b> 140:1 <b>lose</b> 62:6 <b>losing</b> 204:14 <b>loss</b> 62:16 99:3 99:7,15 107:12 108:1 125:16 125:22 <b>lost</b> 64:17 <b>lot</b> 16:10 21:7 29:9 42:11 54:1 57:20 59:6 60:4 62:6 73:8 81:18 97:10 114:12 116:7 122:7 132:10 137:8 137:19 140:10 157:21 172:6 <b>lots</b> 59:18 121:13 127:10 <b>louisiana</b> 2:2 <b>lovely</b> 70:6 <b>low</b> 114:6 116:8 125:12 127:12 142:18	<b>lowenstein</b> 8:3 8:5 <b>lowenstein.c...</b> 8:8 <b>lower</b> 69:15,21 72:13 125:3 <b>lying</b> 12:9 <b>m</b> <b>m</b> 5:10 <b>machine</b> 217:11 <b>made</b> 71:5 103:21 105:5 134:7 151:4 158:12 168:17 191:9 204:13 206:3 214:7 <b>mail</b> 205:8 <b>main</b> 19:19 52:9 76:4 125:11 <b>maintain</b> 95:11 <b>maisano</b> 5:10 <b>majority</b> 79:20 172:18 <b>make</b> 16:20 18:3 31:7 41:6 41:8 45:11 60:11 65:9 68:7 77:9 78:1 78:13,19 86:12 99:17 127:6 131:14 134:22 146:9,11,21 160:12 179:16	179:21 193:10 193:14 200:4 206:10,11 211:9 213:18 214:4 <b>makes</b> 30:21 31:22 34:12 38:21 106:19 116:10 120:15 121:4 <b>making</b> 60:2 86:18 113:4 124:17 133:6 <b>males</b> 77:9 <b>mallinckrodt</b> 25:10 <b>manner</b> 58:22 59:22 <b>manual</b> 31:17 <b>map</b> 191:13 <b>mapped</b> 176:3 <b>mapping</b> 185:19 190:2 <b>march</b> 17:11 22:11 <b>mark</b> 17:1 51:6 101:11 <b>marked</b> 17:18 51:16 101:18 <b>market</b> 3:11 6:13,19 <b>maryland</b> 5:12 <b>mass</b> 15:21 24:6,9,11,14 94:8	<b>massachusetts</b> 3:6 <b>match</b> 115:5 180:14 185:6 <b>matched</b> 179:9 <b>matches</b> 185:17 <b>matching</b> 4:12 185:20 188:15 189:1 207:4,8 210:15 <b>material</b> 27:6 27:15,21 28:4 28:9,17 38:7 95:3 97:7,13 128:14 134:1 148:11 <b>materially</b> 62:5 62:8 83:18 91:12 97:5 181:22 198:15 <b>math</b> 71:11,17 90:8 92:5,14 92:14 113:8,20 174:10 196:7 <b>mathematical</b> 60:16 75:19 114:19 143:10 167:18 168:5,8 212:11 213:22 214:5 215:6 <b>mathematically</b> 92:2 122:1 <b>mathematics</b> 168:13 213:6,7
---	---	--	--

[matter - model]

Page 32

<p><b>matter</b> 28:6,20 29:1,7 30:2,3 62:4 72:5 134:8 160:15 211:21 <b>matters</b> 45:15 63:17 76:14 81:4 <b>maximum</b> 173:3 <b>mccarter</b> 7:13 <b>mccarter.com</b> 7:19 <b>mcdaniel</b> 4:13 <b>mdl</b> 27:1 32:12 <b>mean</b> 14:1 19:13 20:20 29:22 32:18 36:3 39:9 80:4 80:4 82:6 92:14 95:22 97:15 98:1 101:3 137:2 139:10 146:7 146:13 147:22 149:19 151:13 153:10 154:13 163:16 169:14 195:11 196:5 202:22 207:22 <b>meaning</b> 139:18 <b>means</b> 14:3 34:6 81:10 123:21 181:20</p>	<p><b>meant</b> 111:20 <b>measuring</b> 195:5 <b>meat</b> 37:17 <b>mechanically</b> 92:16 <b>meet</b> 20:2,5 <b>meeting</b> 20:11 <b>members</b> 19:9 <b>men</b> 112:10 <b>merge</b> 155:8 184:17,20 <b>merged</b> 184:3 <b>merit</b> 2:4 <b>mesothelioma</b> 42:12,14 45:10 56:1 58:8 66:11,14,22 67:3 68:19 69:13 70:8,8 70:10,13,14 71:4,6,8,22 72:13,16 87:21 106:7,8,9 133:19 145:17 145:21 146:10 147:12 148:4 148:12,16,22 150:11,12 151:4 156:4 203:12 <b>met</b> 12:1 <b>methodologi...</b> 122:13</p>	<p><b>methodology</b> 122:12,15 <b>mhirst</b> 7:10 <b>michael</b> 5:4 8:4 12:1 21:15 94:19 127:18 140:22 218:1 <b>middle</b> 127:16 128:17 <b>million</b> 80:18 82:1 87:8,9,17 87:18,18 140:8 140:8,9 142:7 142:7,14,19,20 142:21 166:9 166:10 <b>millions</b> 33:10 33:12 60:3 81:16,19,22 82:3 142:6,9,9 165:10 <b>mind</b> 138:2 208:5 209:14 <b>mine</b> 14:2 50:9 100:14 107:6 <b>minimal</b> 189:2 <b>minimize</b> 46:21 86:12 113:18 122:5 127:11 <b>minus</b> 80:17,19 80:21,22 87:6 87:7,8,9 142:19,21 165:1</p>	<p><b>minutes</b> 62:19 65:8,9 94:11 130:22 198:22 199:4,9,22 <b>miscellaneous</b> 1:4 <b>mischaracteri...</b> 106:14 <b>misleading</b> 110:20 111:2 <b>misrepresent...</b> 116:4 <b>missed</b> 79:22 96:20 109:12 172:22 <b>missing</b> 23:7 94:14 172:16 173:17,22 <b>misstate</b> 33:5 <b>misunderstan...</b> 116:15 118:11 128:2 <b>mitigate</b> 77:5 78:7,8,18 <b>mix</b> 115:2 133:8 206:6 <b>mixes</b> 157:12 <b>mkaplan</b> 8:8 <b>model</b> 81:9 83:21 91:8,22 91:22 92:16 157:3 168:5,9 168:11 212:11 213:22 214:5</p>
--	---	---	--

[modeling - never]

Page 33

<p><b>modeling</b> 15:21 215:3 <b>models</b> 168:8,9 <b>modified</b> 155:2 <b>mogul</b> 40:15 <b>moment</b> 52:20 59:11 68:18 86:1 98:7 152:15,18 157:16 172:5 180:17 <b>monday</b> 1:15 9:5 10:5 11:6 <b>money</b> 60:4 <b>montana</b> 28:20 <b>month</b> 206:19 <b>months</b> 121:15 <b>morgan</b> 7:5 <b>morning</b> 20:13 <b>moskow</b> 6:12 <b>moskowb</b> 6:16 <b>motion</b> 18:9 20:16 200:11 <b>motivated</b> 83:13 100:9 <b>mouth</b> 77:17 <b>move</b> 41:3 59:20 60:7 74:13 131:10 <b>movement</b> 74:16 <b>moving</b> 215:4 <b>mulberry</b> 7:16 <b>mullin</b> 1:14 2:1 9:3 10:3,10</p>	<p>11:9,22 17:17 18:1,16 22:2 22:10 38:2 52:14 65:17 102:4 107:11 111:19 119:3 128:11 131:8 144:13 206:21 207:7 217:4 218:5 219:2 220:2,22 221:3 <b>mullin's</b> 17:10 104:9 <b>multiple</b> 63:11 99:1 132:2,3 133:20 167:15 182:11 210:21 <b>multiplicative</b> 81:2 <b>multiply</b> 71:18 <b>multitude</b> 134:5 176:12 <b>murray</b> 5:2 42:12 43:18 69:15 135:17 135:22 136:8 136:11 147:22 149:10,10 153:13 155:22 159:13 175:21 191:17 197:5 <b>murray's</b> 136:13</p>	<p><b>n</b> <b>n</b> 3:1 4:1 5:1 6:1,18 7:1 8:1 11:2 <b>name</b> 96:5 144:15 <b>named</b> 136:17 136:17 159:13 162:2,2 <b>names</b> 159:12 <b>narrow</b> 133:17 <b>national</b> 28:19 <b>nationally</b> 217:2 <b>nature</b> 81:3 175:19 185:11 196:17 215:15 <b>nearly</b> 183:13 <b>necessarily</b> 14:1 119:22 122:16 <b>necessary</b> 33:14 91:7 <b>need</b> 14:15 40:9 42:1,5 45:2,4 48:1,12,14 59:1,6,9 61:20 64:20 69:17 77:18,21 78:11 79:9 85:10 88:22 91:5 92:10 97:12 103:5 105:14 107:16 112:21 114:18 115:3</p>	<p>115:18 116:7 117:12 118:4 118:15 119:10 119:11 122:3 123:16 125:7,9 125:17 133:9 133:14 149:18 156:19 157:13 161:4 175:14 179:7 181:8,10 181:14 182:9 <b>needed</b> 53:14 61:15 67:4 91:4 126:1 155:4 193:7 207:17 209:9 213:17 <b>needs</b> 37:19 47:5 103:19,20 111:19,21 120:12,18 121:1 128:7 <b>negotiated</b> 177:9 <b>negotiation</b> 53:6 204:3 <b>neither</b> 30:8 149:15 150:15 217:15 <b>nervous</b> 80:12 <b>never</b> 59:3 96:6 99:3,7,14 103:20,21 111:20 113:14 116:6,7 136:11</p>
---	--	---	--

[never - odds]

Page 34

<p>137:21 162:2  <b>new</b> 2:9,10,11  2:12 7:17 8:6  8:14,14 21:5  51:5 72:6  123:13  <b>newark</b> 7:17  <b>newco</b> 28:21  <b>nfl</b> 111:1  <b>nine</b> 108:17  <b>ninety</b> 108:17  108:17  <b>nj</b> 1:19,19  217:19,19  <b>nods</b> 122:17  <b>non</b> 8:2 11:19  41:12  <b>nondisclosed</b>  115:11  <b>nondisclosure</b>  115:9  <b>nonelectronic</b>  125:1  <b>nonmesotheli...</b>  66:20 70:20  150:17  <b>nonparties</b>  137:12  <b>nonparty</b> 12:2  <b>nonpublic</b>  158:10  <b>nonrandom</b>  159:14,18  <b>north</b> 1:1 6:5  6:13 7:6 72:11</p>	<p><b>northeast</b> 5:5  <b>northwest</b> 2:3  3:18 4:7  <b>notary</b> 1:21  2:15 221:22  <b>note</b> 205:17,18  218:10  <b>noted</b> 221:9  <b>notice</b> 217:5  <b>november</b>  200:10  <b>number</b> 10:8,9  10:12,17 17:16  46:8,15,18  51:11 63:15  68:15 69:21  73:12,14 79:4  80:3 85:22  86:5,6 88:2  89:1 92:15  96:5 97:13  101:16 126:4  126:14,15  138:1 139:4  140:22 141:20  143:5 145:19  146:5 147:16  147:20 148:3  148:11 157:22  161:1 163:11  165:3,15  166:18,21,22  173:3 176:3,7  180:2 184:16  185:1 195:10</p>	<p>196:2 206:8  <b>numbers</b> 25:21  69:1 87:3  109:14 140:10  164:19 213:5  <b>numerical</b>  213:4  <b>numerous</b> 26:9  131:19 142:11  161:14  <b>ny</b> 218:15  <b>nyacr</b> 1:19  217:19  <b>nyrcr</b> 1:19  217:19</p>	<p><b>obligation</b>  96:13 172:2  <b>observations</b>  114:11  <b>observe</b> 91:19  <b>obvious</b> 130:12  136:15 138:4,4  194:22  <b>obviously</b>  14:19 26:13  <b>occupation</b>  47:17 59:14  129:4 133:12  176:4 182:21  206:6  <b>occupational</b>  45:14,18,22  46:2,10 59:16  63:6 105:21  119:10 126:6  133:7,10  157:12 177:5  <b>occupations</b>  128:19 180:1  <b>occurred</b> 116:8  150:9  <b>occurring</b> 85:5  <b>occurs</b> 108:11  116:6  <b>ocean</b> 42:17  <b>odds</b> 45:15  89:7,13,20  90:1,3 92:18  127:11</p>
		<p><b>o</b></p>	
		<p><b>o</b> 11:2  <b>object</b> 13:4  49:10 64:8  88:4 94:21  102:10 137:16  148:20 153:4  158:22 168:18  181:5 187:21  201:13 202:14  205:3,5 208:21  209:20 211:4  212:20 213:12  215:12  <b>objection</b> 160:8  193:19 205:18  <b>objectors</b> 25:15  <b>objects</b> 10:13  51:13</p>	

[offer - originally]

Page 35

<p><b>offer</b> 32:21 33:18 37:3,6,7 37:9,11 88:1 95:17 189:10 <b>offered</b> 15:14 23:11 26:4,10 26:18 32:5 33:1,2,5 35:11 <b>offering</b> 36:9 187:19 188:1,5 188:12 <b>office</b> 107:5 <b>offices</b> 2:2 <b>oh</b> 108:11 111:10 <b>okay</b> 13:9 15:15 16:12,15 16:18 17:1,22 18:13,18,22 19:3,7,11,16,22 20:5,10 21:12 22:21 23:8,9 23:16 24:10,13 24:18 25:9,17 25:20 26:8 27:2 29:21 32:10 33:3,9 33:21 34:8,12 35:2 36:8,18 37:15 38:11,15 39:6 40:5 41:16 43:4,9 43:15 47:4 48:17 50:5,22 52:17 53:19</p>	<p>54:6,17 55:14 55:20 57:3 60:20 62:17 63:2 64:14 65:7,21 66:9 66:13,19 67:6 67:13 68:17 70:11 73:20 85:12,22 87:10 88:14 92:21 94:10 98:13 99:16 100:2,14 103:15 124:19 133:22 134:7 135:5,6 136:1 138:5,18 139:13 140:16 141:2 143:9 144:5 168:1 170:12 190:7 208:9,15 209:8 210:13 211:1 215:5,18 216:3 <b>once</b> 93:12 105:16 108:20 188:15 197:20 198:2 <b>ones</b> 44:19 67:16,17 81:2 84:8 95:12 129:17 146:19 170:21 193:7 198:7 204:6,7 204:8</p>	<p><b>ooo</b> 9:1,6 10:1 10:6 11:1,3,5,7 11:8,13,18,20 17:15,20 51:10 51:18 54:12,16 65:12,15 101:15,20 131:3,6 144:9 144:11 207:2,5 <b>open</b> 103:3 <b>operation</b> 31:12 <b>opining</b> 86:7 <b>opinion</b> 23:11 24:14 26:4,13 26:18 32:5,14 32:17,20 33:1 33:2,5,18 34:19 35:3,12 37:4,8,11 38:3 38:15,18 39:7 50:11 56:3 57:5,20,21 86:5 95:18 102:9 103:17 107:7 137:15 163:15 164:5 187:19 188:2 188:12,21 189:10 <b>opinions</b> 16:21 24:12 26:10 30:1 31:20 32:8 48:15 105:13,15</p>	<p>123:2 163:13 164:4 167:7 188:8,13 190:9 191:11,14 <b>opioid</b> 25:18 <b>opponent</b> 29:18 <b>opportunity</b> 102:18 <b>opposed</b> 31:7 85:1 114:7 123:8 157:15 159:21 164:1 175:22 <b>opposite</b> 64:12 107:22 111:16 113:2 <b>optimal</b> 202:9 <b>optimistic</b> 91:3 <b>option</b> 13:8 <b>order</b> 52:4,13 52:16,19 79:1 106:20 165:10 196:4,8 197:17 206:17 <b>ordered</b> 174:5 <b>orders</b> 161:15 202:3 <b>oregon</b> 1:20 2:13 217:20 <b>organization</b> 99:12 <b>organized</b> 190:16 199:4 <b>originally</b> 26:22</p>
--	---	---	---

[orrick - parts]

Page 36

<b>orrick</b> 4:4 <b>orrick.com</b> 4:10 <b>outcome</b> 50:15 114:6,16 217:16 <b>outcomes</b> 30:13 <b>outside</b> 26:4 34:10 95:14,16 104:16 121:20 146:21 <b>outweigh</b> 38:21 38:22 <b>overall</b> 115:14 <b>overarching</b> 106:13 <b>overgeneralize</b> 134:3 <b>overlap</b> 21:7 44:17,18 182:14 183:4 184:1,10,14 193:4,10 197:15 198:2 198:13,14 <b>overlapped</b> 198:5,10 <b>overlapping</b> 183:13 <b>overlaps</b> 180:6 <b>overlay</b> 215:9 <b>oversampling</b> 94:4 <b>own</b> 96:13 184:22	<p style="text-align: center;"><b>p</b></p> <b>p</b> 3:1,1 4:1,1 5:1,1 6:1,1 7:1 7:1 8:1,1 11:2 <b>p.m.</b> 1:15 2:16 11:6 65:14,14 131:5,5 199:8 216:22 <b>page</b> 9:8 10:8 25:20,21 27:8 28:7,12,19 29:2,8 34:14 52:1 88:20 90:6 219:5,7,9 219:11,13,15 219:17,19,21 220:5,7,9,11,13 220:15,17 <b>pages</b> 29:17 221:4 <b>paid</b> 47:1,16 61:1,13 63:13 67:17,18,20 68:1,2 106:7,8 106:8 118:9,9 125:21 149:8 149:11,14,16 150:8,15,16 179:13 195:13 <b>paperwork</b> 151:18 <b>paragraph</b> 38:3,9,13 52:18 72:18 73:2 82:17	83:19 85:4,7 91:9,14 92:21 94:22 95:6 102:14 103:14 106:16 110:5 110:21 111:17 112:3 114:1 115:8 117:5,19 119:1,6,8,8,9 119:19 120:11 121:4 122:8 123:11 124:9 124:10 125:15 126:13 128:5,5 128:16,17 129:14 131:12 132:19 162:13 162:19 164:9 165:17 175:1,8 183:9,17 185:2 185:7 186:9 191:15 199:21 207:13,15 214:13,15,16 214:22 215:4 <b>paragraphs</b> 38:3 48:21 49:2 95:5,8,17 113:8 119:17 176:19 <b>parameter</b> 81:4 116:20 119:4 <b>parameters</b> 119:2,4,15 133:14 155:2	165:7 <b>pardon</b> 211:17 <b>part</b> 21:19 35:19 54:15 55:13 95:13 102:8 110:1 126:12 156:21 175:10 183:15 190:13 191:5 191:22 204:3 210:1 <b>partial</b> 83:21 91:9 <b>participated</b> 33:16 <b>particular</b> 25:19 47:13 59:15 68:10 128:16 133:7 133:19 138:6 182:20 210:15 <b>particularly</b> 79:7 97:7 122:11 124:19 141:16 152:13 157:7 192:8 <b>parties</b> 2:17 30:2 41:20 98:1,4 121:16 137:11 138:8 164:11 184:19 200:21 204:1 <b>partner</b> 106:15 <b>parts</b> 102:8



[party - ph.d.]

Page 37

<p><b>party</b> 8:2 11:19 41:12 100:9 110:13 137:22 158:6 217:15 <b>pass</b> 96:12 131:9 172:11 172:13,13 173:6,7,8,10,11 173:14,17,22 174:3 206:21 <b>passes</b> 39:5 <b>past</b> 54:22 94:7 99:19 172:10 <b>pattern</b> 63:16 149:8 <b>patterns</b> 83:20 <b>pause</b> 15:3 174:12,14 <b>pavlick</b> 7:14 <b>payment</b> 67:21 90:21 150:9,11 151:5 <b>peachtree</b> 5:5 <b>peeling</b> 48:5 <b>penalty</b> 12:22 217:9 221:7 <b>pending</b> 46:14 47:2 117:22 135:13 159:8 161:1,3,5 163:20 169:20 <b>pennsylvania</b> 3:12 6:20 <b>penultimate</b> 29:7</p>	<p><b>people</b> 16:15 33:12 44:2 45:9 63:15 72:15 96:4 97:2,13 98:21 98:22 105:22 118:3,5 126:13 175:18 <b>people's</b> 97:1 <b>percent</b> 15:9,9 15:10,11 26:22 31:3 32:11 35:8 38:4,16 40:6,13,16,18 40:21,21,21 41:1,3,5,6,6,14 41:14,15 42:11 42:20 43:2,3,3 43:12,12,13 44:4,7 56:3,6 56:17 57:5,10 58:3,4,11 60:13,14 61:1 61:2 62:6 63:3 63:18,20 64:15 64:20 65:2,2,3 65:5 66:3,5 69:15,16,19 70:12,12 71:10 71:15,18,20,21 72:1 76:13,16 76:17 77:1,8 78:3 79:1 80:5 80:5,6 81:8,22 84:4,15,18,21</p>	<p>95:18 96:18,19 96:20 100:22 101:4 103:18 104:3,6,10,10 104:14 106:20 107:19 108:17 108:17 109:10 109:11,12 110:14 113:10 113:11 114:4,4 114:12 126:20 129:17,20 140:4,5 151:6 155:13,14,17 165:1 170:10 171:7,8 173:8 173:9,18,21,22 174:5,7 179:19 180:12,14,21 180:22 182:13 182:14,17 184:9,11,14 200:15,18 201:19,19 <b>percent's</b> 65:1 <b>percentage</b> 59:20 60:1,4 64:5 70:15 72:5,7 113:12 114:1 155:11 164:21 184:10 <b>perfect</b> 196:22 <b>perform</b> 57:9 89:14</p>	<p><b>performed</b> 204:22 <b>performing</b> 167:10 <b>period</b> 61:2,13 204:2 <b>perjury</b> 12:22 217:9 221:8 <b>permit</b> 10:14 51:13 <b>permitted</b> 55:14,18,21 <b>person</b> 27:18 108:21 130:11 130:19 206:1 <b>personal</b> 1:4 152:6 187:12 187:15,18 194:3,5 <b>personally</b> 130:1 151:20 151:21 152:20 172:4 <b>perspective</b> 21:22 178:12 195:11 <b>pertinent</b> 54:14 <b>peter</b> 8:19 <b>petition</b> 46:17 46:19 151:14 <b>ph.d.</b> 1:14 2:1 9:3 10:3,10,18 11:9 17:18 101:18 217:4 218:5 219:2</p>
---	--	--	--

[ph.d. - precise]

Page 38

<p>220:2,22 221:3  <b>phase</b> 122:7  <b>phi</b> 192:11  <b>philadelphia</b>  3:12 6:20  100:19  <b>philips</b> 34:15  <b>phillip</b> 7:14  <b>phillips</b> 3:4  <b>phishing</b> 98:18  <b>phone</b> 18:4  33:11,13  143:13  <b>phrase</b> 55:3,9  92:3 213:18  <b>pick</b> 178:7  <b>picks</b> 94:22  <b>picture</b> 175:18  <b>piece</b> 47:6  96:22 193:3  <b>pii</b> 23:7 94:14  95:9,19 96:3,3  96:7,7,19,22  97:1,4,14 98:4  98:5 108:6  109:16 126:14  172:2 173:4  192:11 194:16  194:21  <b>pipefitters</b>  48:10  <b>place</b> 3:5 25:14  40:8 63:16,17  74:11 81:7  95:9 117:14</p>	<p>120:8 122:13  193:1 217:6  <b>places</b> 31:20,21  60:18 104:13  124:6 147:1  <b>plaintiff</b> 3:2 4:2  142:2  <b>plaintiff's</b>  47:14  <b>plaintiffs</b> 1:6  49:20 58:20  120:2 164:15  165:5  <b>plan</b> 25:15 53:7  54:4,4 62:21  66:22 137:5,13  <b>planning</b> 20:17  <b>play</b> 139:22  197:9  <b>please</b> 14:17  139:20  <b>plus</b> 43:20  44:18 80:17,19  80:21,22 87:6  87:7,8,9  142:19,21  165:1  <b>point</b> 20:1 26:7  38:2 62:18  85:10 86:17  95:1,16 104:1  107:4,11  109:21 113:3  124:17 125:3  125:11 134:8</p>	<p>142:4 160:18  165:20,22  166:8 178:13  182:4 186:6  189:16 190:4  191:4 195:8  203:14 208:10  208:16 209:13  209:16 210:4  <b>pointed</b> 131:12  <b>points</b> 59:20  60:1,4 113:12  114:1 181:8  184:10  <b>policyholders</b>  25:1  <b>poor</b> 13:18  <b>populated</b>  171:13  <b>population</b>  48:7 75:11,16  76:7,10 85:13  85:18 110:8  114:21 115:5  121:19,20,21  133:11 141:15  150:20 151:2  155:12 156:10  183:13  <b>populations</b>  136:15 148:10  <b>position</b> 47:1  58:13 194:14  <b>positions</b> 24:5</p>	<p><b>positive</b> 90:21  151:5  <b>possess</b> 43:11  44:12 98:4  <b>possesses</b> 96:3  <b>possession</b> 7:2  <b>possibility</b>  127:13  <b>possible</b> 168:22  <b>post</b> 46:16,19  49:21 93:12  121:10 160:20  <b>potential</b>  107:12 112:5  115:9 132:3  134:21 162:7  <b>potentially</b>  13:4 29:17  43:11 50:18  59:7 100:9  125:13 160:12  182:21 206:2  <b>ppavlick</b> 7:19  <b>practical</b>  125:16,22  <b>practice</b> 114:10  <b>preceded</b> 22:12  <b>precise</b> 30:1  39:2,17 46:7  46:11 57:21  58:3 60:17  62:1,8,9 64:21  76:1 87:16  109:9 116:1  141:19 143:4</p>
--	---	---	---

[precise - produced]

Page 39

148:8 149:21 165:13 202:7 <b>precisely</b> 119:3 <b>precision</b> 15:13 16:7 39:18 57:15,17 58:1 58:14 60:1,13 62:5 63:17 74:11,15 75:7 81:14 85:11 86:21,22 90:10 92:3,6,11,13 94:5 123:16,19 123:20 162:14 162:16,18 163:3,11 164:8 <b>predate</b> 148:4 <b>predecessor</b> 148:1 <b>predicate</b> 170:2 <b>preexisting</b> 32:12 <b>premise</b> 112:3 <b>premises</b> 10:14 51:14 <b>prepare</b> 18:20 19:14 <b>prepared</b> 88:1 202:12 203:22 <b>preparing</b> 16:13 19:1,4 21:12 201:3 <b>prepetition</b> 44:10 55:22	<b>prescribed</b> 32:20 <b>present</b> 2:16 8:18 22:11,14 74:21 163:17 164:6 165:15 166:2,3,20 167:7 204:2 205:1 <b>presented</b> 165:18,22 <b>president</b> 8:20 <b>prespecified</b> 121:19 <b>presumably</b> 109:2 <b>pretty</b> 36:20 212:9 <b>previously</b> 23:11 36:16 73:9 217:6 <b>principal</b> 23:22 33:18 <b>principally</b> 19:18 <b>principle</b> 39:10 <b>printed</b> 101:22 <b>prior</b> 41:20 98:15 137:5 156:2 159:7,20 162:10 184:12 <b>privacy</b> 35:12 35:15 36:10,13 36:16	<b>privilege</b> 14:20 14:21 <b>pro</b> 30:8 <b>probabilities</b> 116:8 <b>probability</b> 89:3,16 91:13 113:17 203:20 <b>probably</b> 16:1 16:9 19:6 22:17 24:4 38:12 46:12 55:9,12 57:7 61:8 70:3 77:14,16 86:3 87:7 99:1 111:8 136:15 142:3 163:6 165:10 166:20 171:15 172:21 173:18,21 197:17 199:22 208:7 <b>problem</b> 14:5 17:5 53:18 54:1 63:19 64:9 68:8 106:13 112:5 115:19 132:18 <b>problems</b> 121:22 123:5,7 <b>procedure</b> 37:8 37:12 <b>procedures</b> 62:21	<b>proceeding</b> 1:4 10:16 32:13 51:16 163:9 <b>proceedings</b> 165:19 221:6 <b>process</b> 16:2,5 16:17 18:19 30:4 45:9 47:8 47:10 50:21 67:5 68:11 85:4 86:16 95:9 97:8 108:15 109:2 109:18 115:7 121:8 122:5 130:6,20 146:4 148:7 166:16 168:16 173:1 177:1 182:2 185:13,15,17 186:7,13,17 187:4 191:17 191:19 193:2,6 193:17 201:7 <b>processes</b> 70:22 193:1 <b>processing</b> 144:17 <b>produce</b> 10:12 51:12 92:15 97:13 102:17 125:6,12 148:11 183:6 <b>produced</b> 31:11 42:8,9
--	---	--	--

[produced - quantifiable]

Page 40

88:22 104:4,7 161:12 171:14 172:1,21 174:7 183:10 186:18 193:6 <b>produces</b> 94:9 171:7,10 <b>producing</b> 57:18 83:14 170:7 177:18 186:14 <b>product</b> 8:20 161:19 201:7 <b>production</b> 56:19 88:10 191:17 193:6 195:6 197:12 <b>products</b> 134:6 212:2 214:17 <b>professional</b> 2:5 <b>proffer</b> 15:7 <b>proffered</b> 15:6 36:16 <b>progress</b> 160:12 <b>prohibitive</b> 33:12 <b>projecting</b> 68:15 176:3 <b>projections</b> 78:1 <b>promise</b> 14:7 <b>promised</b> 101:10	<b>proper</b> 111:10 111:14 121:16 <b>properly</b> 204:18 206:14 <b>properties</b> 16:6 <b>proponent</b> 29:18 <b>proportion</b> 75:11,14 82:20 90:14 115:11 125:20 133:5 141:14 146:2,7 146:11 <b>proposed</b> 38:4 93:4,7 95:18 159:2 200:20 201:10 203:2 203:10 <b>propounded</b> 221:7 <b>proprietary</b> 99:20 <b>protect</b> 46:13 <b>protection</b> 27:11 33:4 <b>protocol</b> 200:21 <b>protocols</b> 192:9 192:10,10,13 193:1,14 <b>provide</b> 56:1 73:5 92:17 203:11 <b>provided</b> 10:7 27:6,15,21	28:4,9,17 38:7 95:3 128:14 144:1 <b>provides</b> 45:21 207:17 <b>providing</b> 163:14 166:17 177:14 <b>prudent</b> 40:17 <b>public</b> 1:21 2:15 26:21 34:16 35:7,10 153:11,14,19 154:2,6 158:5 158:15 189:5 221:22 <b>publicly</b> 26:7 26:14,15 <b>pull</b> 171:17 179:3 <b>pump</b> 1:8,11 5:2 9:4 10:4 154:10 155:21 218:4 219:4 220:4 <b>pure</b> 121:18 196:19,21 <b>purpose</b> 32:15 55:21 63:1,4 83:4,6 84:5 110:10,11 181:4 204:11 <b>purposes</b> 38:17 40:7 47:11 53:21 55:14,18	67:2 69:3 72:19 78:5 86:8 88:18 111:18 136:2 158:20 160:4 161:11 182:12 182:13 201:12 <b>pursuant</b> 217:5 <b>push</b> 113:17 <b>put</b> 32:3 75:9 77:17 80:3 97:9,10 104:21 105:22 189:7 193:1 <b>puts</b> 123:11 <b>putting</b> 112:1 206:13
<b>q</b>			
<b>quadruple</b> 74:14 <b>quadrupling</b> 138:20 <b>qualification</b> 148:8 <b>qualifications</b> 188:11 <b>qualified</b> 37:3 37:7,11 <b>qualifier</b> 103:22 <b>quality</b> 73:6 108:15 109:2 173:1,12,16 <b>quantifiable</b> 59:11 60:11			

[quantification - really]

Page 41

<b>quantification</b> 213:4	85:7 86:11 87:2 88:5,9	127:21 131:9 132:1 140:20	215:20,22 <b>rate</b> 69:19
<b>quantified</b> 59:10 84:8	91:18 94:12 95:1 102:11	144:6,21 149:3 149:21 157:5	109:3 172:13 172:15,19
<b>quantify</b> 39:4 58:2,16 60:16	103:3 104:3 106:5 108:13	157:22 159:17 162:10,15	173:2,13,15 174:1,3
74:6 75:6 78:22 80:2,4	110:11 118:22 132:16 137:17	168:5 171:5,5 174:15 176:18	<b>rather</b> 206:4,5 <b>ratio</b> 112:10
81:21 82:19 90:14 107:11	139:14,20 140:2,7 141:19	178:11 199:21 200:7 203:17	214:10 <b>rc.com</b> 3:8,14
107:21 108:21 110:4 146:6	143:7,9 146:12 146:13,16,17	203:19 204:6 204:16 207:14	<b>reach</b> 112:1 119:17 157:14
206:8 <b>quantifying</b>	148:21 159:1 162:17 163:1	216:5 221:7 <b>quickly</b> 46:4	<b>reaches</b> 107:18 <b>reaching</b> 107:7
107:20 108:1 173:2	167:22 168:19 171:19 181:6	106:10 <b>quite</b> 64:11,22	107:22 157:20 <b>read</b> 54:14
<b>quarters</b> 28:6 184:7	186:4,21 188:1 201:14 202:15	75:21 111:2	106:19 107:8 147:15 191:4
<b>quash</b> 200:12	202:16,19 204:10 205:22	<b>r</b>	191:22 205:22 212:8 218:9
<b>query</b> 186:2,4,6 188:17 192:7,7	208:22 209:21 211:5 212:21	<b>r</b> 3:1,4 4:1 5:1 6:1 7:1,5 8:1	221:4 <b>reading</b> 119:17
<b>question</b> 13:3 13:10,13,16,20	213:13,16,16 213:20 214:8	11:2 217:1 219:1,1 220:1	138:5 <b>ready</b> 51:21
13:22 14:5,20 15:15 21:21	214:20 215:1,4 215:13	220:1 <b>races</b> 14:14	73:1 103:11 <b>real</b> 2:5,7 116:4
23:4 32:1 37:4 37:5,10 41:7	<b>questioning</b> 64:18 205:5,19	<b>ran</b> 113:20 <b>random</b> 93:8	127:4 168:10 <b>reality</b> 30:6
44:17 47:21 48:3,6 49:11	<b>questions</b> 22:8 23:1,2,2 39:2	94:2 103:17,18 200:21 201:4	<b>really</b> 15:8,10 16:8 21:8 23:1
50:9,20 53:9 55:20 57:15	39:12 40:3 47:20 71:2	203:2,11 <b>range</b> 57:11	29:20 30:7 34:9,19 39:11
58:19 59:2 67:15 70:17	76:9 93:2,19 103:5 104:2,5	77:20 87:11 128:22 143:1,3	42:22 45:17 46:9,22 48:6
75:8,10 76:2,6 77:10 83:11	104:9 106:11	145:19 165:17 166:2,3,5,10,11	48:21 69:20 167:1,2,4

[really - reinsurance]

Page 42

77:21 83:13 85:3,4 86:10 87:10 91:17 94:3 102:12 106:9 109:16 111:1 113:5,12 114:20 115:3 116:9,14 119:9 124:8 125:22 126:18 138:6 157:9 164:14 172:7,17 194:17 214:13 <b>realtime</b> 2:10 2:11 <b>reason</b> 47:4 65:19 157:14 186:21 218:11 219:5,7,9,11,13 219:15,17,19 219:21 220:5,7 220:9,11,13,15 220:17 <b>reasonable</b> 64:2 103:19,20 104:18 105:6 111:19,21 120:12,18 121:1 128:6 <b>reasonableness</b> 25:16 <b>reasons</b> 48:18 94:3 <b>rebuttal</b> 19:15 102:17	<b>recall</b> 24:13 35:5 53:11 128:8 191:6 <b>receipt</b> 218:17 <b>receive</b> 46:9,18 <b>received</b> 43:19 44:6,20 46:16 58:12 64:19 79:8 164:16 <b>receives</b> 184:6 <b>receiving</b> 184:9 <b>recent</b> 157:8 204:5,8 <b>recently</b> 157:10 <b>recess</b> 65:13 131:4 <b>recipient</b> 175:3 <b>recognize</b> 17:22 18:15 <b>recollection</b> 26:3 28:10 35:4 145:14 <b>reconciliation</b> 146:3,4 148:7 185:17 <b>reconsideration</b> 18:10 20:16 <b>record</b> 12:1 54:15 65:11 69:3 72:19 129:12,13 130:15 143:21 153:11,14,20 154:3 160:16 171:14,15	195:17 196:4,6 205:18 217:14 <b>recorded</b> 217:10 <b>records</b> 34:22 73:16 75:15 108:11,12,12 109:1,17 125:1 125:2 185:20 193:5,18 209:4 <b>red</b> 118:20 <b>redact</b> 96:13 126:17,17 172:2 193:18 <b>redacted</b> 96:14 96:15,19,21 108:4 193:8,9 <b>redacting</b> 96:12 193:3 <b>redaction</b> 97:11 108:15 186:3,7,13,17 187:4 189:3 193:9 198:5 <b>redo</b> 193:9 <b>reduce</b> 23:6 88:11 94:13 95:19 124:4 168:4 198:15 212:13 213:4 213:22 <b>reduced</b> 155:6 168:7 212:16 <b>reducing</b> 124:5 213:9	<b>reduction</b> 126:20 <b>refer</b> 53:17 144:22 <b>reference</b> 129:11 133:6 167:9 189:22 193:5 <b>referenced</b> 162:18 192:4 218:6 <b>referencing</b> 164:8 165:16 <b>referred</b> 85:13 144:17 <b>referring</b> 85:16 163:13,18 177:7,9 192:20 <b>refine</b> 82:10 <b>refined</b> 33:2 <b>reflect</b> 16:21 <b>refresh</b> 26:2 <b>regard</b> 25:18 146:18 154:11 154:13 160:13 214:3 <b>regardless</b> 25:7 <b>registered</b> 2:4,5 <b>regular</b> 107:5 <b>regularly</b> 130:11 <b>rehash</b> 129:13 <b>reinsurance</b> 25:3,4
---	--	--	---

[related - resolution]

Page 43

<p><b>related</b> 39:7 53:5 158:1 160:16 175:11 175:15 176:15 190:9 <b>relates</b> 190:20 212:17 <b>relation</b> 24:11 147:17 <b>relational</b> 188:14,17,19 <b>relationship</b> 128:18 <b>relative</b> 46:13 46:17 62:16 74:10,16 75:3 88:10 97:14 <b>relatively</b> 25:13 63:14 122:1 170:7 178:8,22 185:4 <b>released</b> 118:9 <b>relevant</b> 68:3 68:15 70:22 71:3 85:7 116:11 131:20 135:21 167:20 176:1 194:17 195:8 <b>reliability</b> 87:1 91:22 <b>reliable</b> 48:15 55:11 56:1 80:5,6,6,8 86:2 86:8 92:18</p>	<p>93:10,11 157:19 203:11 203:14 <b>reliably</b> 39:4 206:8 <b>rely</b> 50:18 76:1 92:11 156:1,10 189:14 190:1 <b>relying</b> 20:17 22:1 189:10 190:8,11,14 <b>remaining</b> 173:4 <b>remember</b> 66:6 146:5 <b>remembering</b> 176:19 <b>remix</b> 115:4 <b>remote</b> 1:19,20 2:14 97:9 217:21 <b>remotely</b> 217:7 221:6 <b>remove</b> 192:11 <b>render</b> 204:17 <b>rendered</b> 200:20 <b>reorganization</b> 62:22 67:1 <b>reorganized</b> 212:2 <b>repeat</b> 53:9 54:8,10 132:16 <b>repeatedly</b> 118:16</p>	<p><b>rephrase</b> 13:12 15:16 213:19 <b>report</b> 10:17 19:15,18,20 85:17 101:10 101:17 102:17 104:2,20 105:4 106:13,19 107:8 110:2 119:7,13,17 131:15 132:8 132:10 136:20 136:21 137:2 188:8,13 189:13,20 190:1 206:3 <b>reported</b> 1:18 <b>reporter</b> 1:20 1:20 2:4,5,6,6,7 2:7,8,9,10,11 2:12,14,15 9:15 10:7 217:3,21,21 <b>reporting</b> 61:21 79:11 <b>reports</b> 16:19 33:20 44:14 <b>represent</b> 12:2 41:11,12 43:6 84:15,18 144:16 <b>representative</b> 4:2 8:22 119:22 162:6 203:4,7</p>	<p><b>represented</b> 84:11,12 129:15,16 <b>request</b> 40:11 41:4 42:3 44:1 44:3 58:7,9 64:19 65:2,5 70:9 86:12 96:4 108:4 146:20,21 150:18 175:9 194:3 <b>requested</b> 41:20 147:18 171:8,9 175:2 175:5 177:13 216:13 <b>requesting</b> 104:4 155:7 <b>requests</b> 41:19 42:17 175:10 191:21 <b>required</b> 122:9 186:18 <b>requires</b> 83:10 <b>requiring</b> 159:19 <b>reread</b> 35:6 <b>reserving</b> 57:14 <b>resides</b> 190:12 <b>resolution</b> 30:6 47:8,10 53:16 67:5 70:22 161:6,9</p>
--	---	--	---

[resolve - roughly]

Page 44

<b>resolve</b> 30:2	<b>retrieving</b>	<b>rich</b> 45:21	181:16 186:5
<b>resolved</b> 14:22	185:3 186:11	<b>richard</b> 189:14	194:5,19 195:3
60:22 151:3	<b>retrocession</b>	189:18,18	195:19 196:12
159:7,11,20	25:5	190:8 191:2	197:3,9 200:16
160:22	<b>return</b> 123:22	<b>rickards</b> 3:17	202:2,5 204:2
<b>resource</b>	124:5 218:13	<b>right</b> 12:18,20	205:2 212:12
124:14,22	218:16	13:7 14:10	216:15,17
<b>resources</b>	<b>revealed</b> 49:16	15:2 18:12	<b>rise</b> 90:4
124:12	56:10 58:21	22:7,13,22	<b>risk</b> 23:6 57:13
<b>respect</b> 30:13	119:12 129:19	23:10 32:14	59:12 78:8,10
55:21 57:3	157:6 158:2	35:14 36:15	78:14,18,20,22
58:1 154:10	<b>revealing</b> 50:3	37:1,4,16,22	80:3 89:19
<b>respective</b> 2:17	50:4	38:1 42:6 49:5	94:13 95:19
<b>respond</b> 196:11	<b>reverses</b> 113:3	52:8,12 53:2	96:7 97:5 98:6
196:15	<b>review</b> 16:20	53:20 57:16	126:14 127:4,8
<b>responding</b>	27:15,21 28:4	65:7,17 68:21	127:9 206:4,5
187:12,20	28:9,17 124:21	69:2 71:9,14	206:13
191:20	171:9,13 172:1	72:12 74:5	<b>riskier</b> 89:20
<b>response</b> 13:3	172:5,6,11	78:7 84:13	<b>risking</b> 204:15
21:4,13 22:5	173:8,9 179:2	88:7 89:6,9	<b>risks</b> 88:10
128:4 183:13	182:5 186:7,17	99:2 100:7	<b>rmr</b> 1:18
186:18	187:4 192:8,11	101:9 111:5,8	217:18
<b>responsive</b>	193:17 195:18	114:20 116:20	<b>road</b> 5:5 15:14
146:17	197:21 198:16	117:12 121:21	<b>robinson</b> 3:3
<b>rest</b> 165:8	218:7	130:21 131:22	<b>romanette</b>
<b>result</b> 90:21	<b>reviewed</b> 19:15	132:7 133:5	163:3
92:3 99:12	31:12 191:1	134:22 146:12	<b>room</b> 17:13,14
<b>resulted</b> 42:13	196:3	149:1,15,16	71:13 121:13
<b>results</b> 156:6	<b>reviewing</b>	150:10 151:8	<b>root</b> 74:13,16
<b>retained</b> 24:20	83:14 174:6	154:10 158:17	168:22
25:1,2,3,13	179:1 190:19	165:9 169:8	<b>roseland</b> 8:6
151:12	193:2	172:16 174:8	<b>rough</b> 195:20
<b>retention</b>	<b>reviews</b> 27:5	174:10 176:19	197:17
151:15	38:6 95:2	177:10 180:15	<b>roughly</b> 145:6
	128:13	180:16 181:4	145:16 147:18



[roughly - sebo]

Page 45

152:2 197:2,5 <b>round</b> 22:12 <b>route</b> 160:12 <b>routinely</b> 130:9 <b>rpr</b> 1:18 217:18 <b>rsa</b> 1:19 217:19 <b>ruled</b> 200:11 <b>rules</b> 12:12 37:8,12 <b>ruling</b> 200:13 200:16 205:13 <b>run</b> 59:15 192:7 <b>runs</b> 38:12 <b>russian</b> 100:10	74:14,14,18 75:17 76:16 77:1,2 78:3,4,9 78:9,13,20 79:1,18 80:4 81:22 83:3,7 84:4 86:19,20 88:22 90:2,19 92:19 93:3,7,9 93:14,16,22 94:2 95:18 103:17,18 104:7,10,10,14 106:4,10,22,22 107:19 110:6,9 110:13 111:3 112:14,19 114:11 116:12 116:19 117:7 117:12,18 118:2,4,15,15 120:6,10 121:7 123:4,22 125:7 125:9 126:3 140:13 141:17 143:18 153:17 154:22 156:5 156:13 159:1 162:6 163:14 170:4,10,16,22 171:5 174:5,6 177:2,8 179:8 179:14,19,20 179:21 180:12 180:14,14,18	181:13,15,21 182:14 183:5,7 183:8 198:17 200:15,18 201:4,10,21 202:12 203:2,4 203:9,11,22 205:16 <b>sampled</b> 75:15 121:21 <b>samples</b> 116:13 153:21 156:2 156:10 180:21 181:4 <b>sampling</b> 23:4 23:6 24:2,5,12 24:14 25:7 26:4,11,19 27:17 28:1,7 28:11,22 29:3 29:6,8,19 30:4 30:8,9,14 31:8 31:13 32:6 33:6,6,15 35:3 35:4 39:12 40:2,4 61:2 78:12 81:7 93:1,8 94:13 106:17 112:5 121:7 122:22 122:22 123:14 123:17,21 124:15 125:17 141:12 152:16 153:1 154:9,16	155:19,21 167:20 170:1,3 200:21 <b>sandler</b> 8:3 <b>saying</b> 13:5 31:3,5 43:1,2 48:9 59:8 65:1 72:7 73:21 104:15 108:6 111:18 114:4 116:19 127:1,7 138:3 139:10 186:9 <b>says</b> 94:20,21 103:16 111:20 119:1 122:19 124:13 125:15 <b>scenario</b> 81:15 99:18 165:22 166:19,22 169:5 <b>scenarios</b> 114:15 <b>schnoll</b> 6:12 <b>scope</b> 32:17 67:3 104:17 195:15 <b>scor</b> 28:5 <b>screenings</b> 127:6 <b>scrub</b> 95:9 <b>sdny</b> 35:9 <b>sebo</b> 1:18 2:4 217:2,18
s			
s 3:1 4:1 5:1 6:1 7:1,14 8:1 11:2 <b>sake</b> 40:20 <b>salient</b> 50:14 50:16 163:7 <b>sample</b> 15:9,10 15:10 23:12 27:1,3,4,13 31:4,18,21 32:9,12,15 33:8 34:1 38:4 38:16,20 39:10 39:11 40:6 47:22 48:2 56:3,6,13,17 57:5,10 58:4 59:2 60:14 61:1,2,5 63:3 63:18 64:5			

[second - showed]

Page 46

<b>second</b> 18:2 23:5 29:14 47:6 55:3 57:22 94:12 110:5 132:9 137:10 172:12 172:13 173:6 173:10,11,14 173:21 174:2 192:16 198:20 <b>section</b> 203:12 <b>security</b> 36:7 96:5 99:6 <b>see</b> 12:5 21:10 32:3 41:10 52:22 55:17 73:10,11 81:12 82:22 84:1 88:19 90:5 106:9 146:20 157:2,16 161:20 172:8 172:12,15 175:12 183:15 185:7 196:8 <b>seeing</b> 157:12 <b>seek</b> 70:20 152:10 154:20 154:21 156:16 <b>seeking</b> 34:22 42:18,20,22 52:21 70:7 107:15 195:1 204:1	<b>seeks</b> 150:2 <b>seem</b> 130:12 <b>seems</b> 70:15 119:16 120:8 139:14 <b>seen</b> 52:12,15 52:16 102:3 121:9 137:5 148:7 165:12 168:9 187:17 <b>segued</b> 103:7 <b>select</b> 59:5,5 152:9,14 155:10 <b>selected</b> 25:22 <b>selection</b> 162:5 <b>semicolon</b> 55:1 55:10 <b>send</b> 96:6 <b>sense</b> 30:22 31:7 32:1 38:21 40:17 82:15 89:19 116:10 133:4 135:15 172:20 183:4 199:6 208:7 213:18 <b>sent</b> 218:14 <b>sentence</b> 72:22 73:2 110:6 115:10 122:18 123:1,11 128:18 129:8 207:16 210:6	<b>sentences</b> 190:15,21 <b>separate</b> 134:21 135:9 184:4,18 186:8 <b>separated</b> 39:21 <b>separately</b> 61:20 76:12 <b>series</b> 157:14 199:21 200:7 <b>serve</b> 22:5 <b>services</b> 8:9 35:18 98:21 <b>serving</b> 183:2 <b>session</b> 14:16 <b>set</b> 40:19 45:21 122:19 134:16 136:15 177:19 210:19 <b>sets</b> 16:3 23:1 181:10 <b>setting</b> 15:22 30:10 122:2 153:6 <b>settings</b> 134:2 172:6 <b>settled</b> 205:11 210:16 214:19 214:20 <b>settlement</b> 1:4 25:14,16 49:1 49:7 50:19 82:21 83:22 90:16 91:10	115:20 176:11 203:13 210:7,9 210:12,15 211:9,11,19 213:11 214:7 214:13 215:9 215:15 216:4 <b>settlements</b> 49:18 55:22 68:5,6,9 115:13 116:10 170:11 207:18 209:10 212:17 214:3 215:19 216:1,9,12 <b>several</b> 162:15 <b>shaking</b> 143:14 <b>share</b> 17:10 51:7 109:21 129:2 175:20 216:4 <b>sheet</b> 218:11 221:10 <b>shift</b> 59:18 112:13 <b>short</b> 12:3 14:16 22:7 85:12 86:6 88:2 <b>shorthand</b> 2:6 2:8 217:11 <b>show</b> 47:9 50:22 108:7 <b>showed</b> 20:15 37:16
---	---	---	--

[showing - speculation]

Page 47

<p><b>showing</b> 54:4  <b>shows</b> 116:14  117:9 118:10  126:9  <b>shrink</b> 89:13  90:2 92:19  <b>shy</b> 71:9  <b>sic</b> 24:3  <b>side</b> 23:5,12  120:6 187:9  <b>sides</b> 119:21  <b>sign</b> 218:12  <b>signature</b>  217:18 221:12  <b>signed</b> 27:18  218:19  <b>silent</b> 108:19  109:4 110:4  <b>silica</b> 29:1  <b>silly</b> 39:19  <b>silo</b> 184:22  <b>similar</b> 21:3  51:2 55:7 63:8  159:10 161:18  165:8 172:9  173:1 175:8  183:11 191:20  202:18  <b>similarly</b> 47:9  106:1 183:12  187:7  <b>simple</b> 94:2  106:6 114:11  161:7 188:16</p>	<p><b>simplification</b>  168:10  <b>simplifies</b>  168:11  <b>single</b> 99:9  141:12 142:9  161:5 166:18  168:11 171:10  <b>sitting</b> 16:17  35:5 78:21  80:3 101:3,6  108:5 127:9  145:14 146:5  167:7 191:7,8  <b>situation</b>  118:21  <b>size</b> 48:3 58:4  59:2 60:14  61:5 64:5  74:14,15 78:5  79:21 86:12  88:22 90:2,20  92:20 111:3  115:13 116:11  118:15 123:22  <b>sized</b> 183:12  <b>skews</b> 114:5  <b>skip</b> 94:10  <b>skipped</b> 119:16  <b>slightly</b> 74:18  <b>slipped</b> 108:18  <b>slowly</b> 46:6  <b>small</b> 63:14  84:16 111:13  113:13 115:12</p>	<p>115:15 126:14  170:7  <b>smaller</b> 78:13  78:19 86:18  114:12  <b>smallest</b> 63:12  <b>snapshot</b> 157:1  157:15  <b>soc</b> 35:19  <b>social</b> 96:5  <b>solution</b> 116:9  <b>solutions</b>  218:22  <b>solved</b> 161:17  <b>somebody</b>  89:20 99:4  138:10 208:10  <b>soon</b> 48:8 76:9  76:19 105:13  <b>sorry</b> 20:19,22  53:8 54:7  146:8 205:17  <b>sort</b> 12:12 22:5  22:12 37:17  62:17 73:12  94:20 143:9  <b>sorts</b> 159:16  <b>sotto</b> 51:9  102:1  <b>sought</b> 148:6  <b>source</b> 182:8,10  <b>sources</b> 123:18  124:2 132:4  133:2,20  134:11,20</p>	<p><b>south</b> 5:11  <b>spahr</b> 6:11  <b>speak</b> 19:7  107:4  <b>speaks</b> 50:17  <b>specialized</b>  35:15,17 36:2  36:3  <b>specific</b> 30:3,21  36:9 43:5 79:4  83:11 93:2  104:1 170:21  185:22 190:11  215:16  <b>specifically</b>  19:5 50:2  54:22 129:3  131:19 162:17  163:2 164:7  187:3 191:13  192:3 194:3  211:22  <b>specifics</b> 32:4  172:9 187:6  <b>specified</b> 121:2  185:4  <b>specify</b> 119:3  <b>specifying</b>  111:22  <b>specter</b> 97:8  <b>speculating</b>  196:9  <b>speculation</b>  196:10,14,19  196:21</p>
--	--	--	---

[spend - submitted]

Page 48

<p><b>spend</b> 19:3 79:13 142:1 168:7</p> <p><b>spent</b> 19:1 121:5,15</p> <p><b>spoke</b> 19:9 53:3 131:13</p> <p><b>spot</b> 50:19</p> <p><b>spring</b> 70:6</p> <p><b>square</b> 74:13 74:16</p> <p><b>squeeze</b> 203:8</p> <p><b>stage</b> 212:22</p> <p><b>stand</b> 139:17</p> <p><b>standard</b> 114:10 115:12 115:13 122:10</p> <p><b>standards</b> 92:8</p> <p><b>standpoint</b> 208:16</p> <p><b>stargatt</b> 6:3</p> <p><b>start</b> 20:13 29:11 37:2 47:19 48:5,8 49:5 64:16 75:4 76:19 79:14 81:5 84:13 93:3 96:14 98:5 103:14 140:3 151:8,17,21 169:3 197:19 197:20 198:1</p> <p><b>started</b> 17:2 44:7</p>	<p><b>starting</b> 43:1 66:10 139:5 160:18</p> <p><b>starts</b> 38:9</p> <p><b>state</b> 1:19 2:13 28:20 106:18 130:10 183:10 185:3 186:20 191:16 208:5 209:14 211:22 217:20</p> <p><b>stated</b> 40:7 78:5 134:9 137:10,15 186:14</p> <p><b>statement</b> 86:3 103:22 104:19 105:5 185:10 190:11 191:9 191:11 208:2,3 209:8 212:7</p> <p><b>statement's</b> 208:16</p> <p><b>statements</b> 120:16 191:13</p> <p><b>states</b> 1:1 106:17 156:4</p> <p><b>stating</b> 120:18</p> <p><b>statistical</b> 16:6 64:2 74:13 77:18 82:11,12 89:16 118:22 122:9,21</p> <p><b>statistically</b> 119:22 161:18</p>	<p>173:4</p> <p><b>statistician</b> 70:16 88:21</p> <p><b>statisticians</b> 77:21</p> <p><b>statistics</b> 15:20 16:9 116:22</p> <p><b>status</b> 161:2 184:21</p> <p><b>stays</b> 109:4 110:4</p> <p><b>stem</b> 34:20</p> <p><b>stenographer</b> 11:11,14 54:14 217:7</p> <p><b>step</b> 85:3 144:6</p> <p><b>steps</b> 45:8 122:5 164:2 167:15 169:7</p> <p><b>stick</b> 93:6,11 153:11</p> <p><b>stop</b> 14:21 29:14,15 50:9 57:22 199:14 199:16,18</p> <p><b>stopped</b> 49:22 50:8</p> <p><b>straightforward</b> 15:16 122:1,15 122:16 185:5 186:12</p> <p><b>strange</b> 138:2</p> <p><b>stratification</b> 93:20 121:11</p>	<p><b>stratified</b> 93:8 116:12 200:21 201:4 203:2,11</p> <p><b>stratify</b> 116:21 117:3,5</p> <p><b>stratifying</b> 94:1</p> <p><b>straw</b> 12:4</p> <p><b>streamline</b> 199:10</p> <p><b>street</b> 3:11 4:7 5:11 6:5,13,19 7:16</p> <p><b>strength</b> 32:20 135:21</p> <p><b>strict</b> 183:7</p> <p><b>strike</b> 45:3 162:11 213:20</p> <p><b>strokes</b> 38:14</p> <p><b>structure</b> 164:1</p> <p><b>struggle</b> 88:8</p> <p><b>studied</b> 110:9</p> <p><b>study</b> 128:3,12</p> <p><b>style</b> 58:19</p> <p><b>subgroups</b> 106:2</p> <p><b>subject</b> 150:5 162:11</p> <p><b>subjective</b> 168:16</p> <p><b>submitted</b> 16:13 145:7,21 147:4,5,8,9,12 148:5,18 176:16,22 189:19 191:2</p>
--	--	--	---

[subpoena - system]

Page 49

<b>subpoena</b> 10:12 51:1,12 150:1,5,7 154:20,21 155:3 156:15 172:3 174:18 175:1,3,7 177:13 179:10 187:13,20 194:2 196:12 196:16 <b>subpoenaed</b> 160:6 <b>subpoenas</b> 42:21 52:5,21 70:5 183:14 186:19 195:18 <b>subpopulation</b> 48:1,9 76:3,21 91:15 105:14 113:21 114:14 114:17 128:3 155:11,13,14 155:15,17 182:18,19 193:12 <b>subpopulations</b> 76:20,22 77:3 105:19 107:16 128:11 131:12 131:16,19 133:13,15 <b>subscribed</b> 221:13	<b>subsequent</b> 151:15 <b>subset</b> 42:18 48:13 54:2 76:10 84:14 106:4 134:16 154:15 159:14 159:18 172:15 173:12 179:15 183:8 <b>subsets</b> 48:14 68:2 <b>substance</b> 34:10 221:9 <b>substantial</b> 122:20 182:3 184:13 185:1 <b>substantially</b> 90:11 183:11 183:12 <b>substantively</b> 122:20 196:16 <b>suddenly</b> 63:22 <b>sued</b> 136:16 <b>suffers</b> 111:17 <b>suffices</b> 104:11 104:11 <b>sufficiency</b> 23:12 39:7 <b>sufficient</b> 29:12 32:15,22 38:4 38:16 40:6 48:4 56:4 57:6 57:7 63:3,5 64:6,10 65:1,3	76:21 77:15 83:3,6 84:5 88:2,6,14 90:3 92:8,11,17 106:17,22 158:20 160:3 169:22 178:10 181:13 201:11 203:20 <b>sufficiently</b> 30:1 64:21 86:8 92:6 100:9 <b>suggest</b> 88:1 <b>suggesting</b> 117:16 <b>suite</b> 3:11,18 5:5,11 7:6 <b>supervision</b> 217:12 <b>supplement</b> 85:10 91:4,5 160:5 <b>supplemental</b> 21:13,18 <b>supporting</b> 190:22 <b>supports</b> 206:13 <b>suppose</b> 164:22 <b>supposed</b> 137:14 140:15 164:12 <b>suppressing</b> 50:4	<b>suppression</b> 179:7 <b>sure</b> 14:17 16:20 17:6 18:3,11 30:18 36:3 41:6 49:11 53:10 60:12 86:4 97:20 99:17 132:10 134:14 146:9,11 149:5 178:15 190:5 190:20 214:11 214:21 <b>surprised</b> 36:20 <b>survey</b> 156:5 <b>suspect</b> 154:12 <b>suspicious</b> 121:4 <b>sutcliffe</b> 4:4 <b>swings</b> 89:11 <b>switch</b> 72:4,6 131:9 <b>sworn</b> 11:10,16 217:7 221:13 <b>system</b> 41:18 47:16 50:18 62:2 79:9,12 97:16 98:11 99:21 100:6 101:5 157:10 164:16 177:1 184:8
--	--	--	---

[systems - testimony]

Page 50

<b>systems</b> 2:8 98:9,14,22	<b>talk</b> 12:17 19:11 34:16 39:19 52:3 73:20 74:10 78:2 83:19 85:14 92:22 94:11 95:9 99:19 104:16 117:22 128:11 129:9 131:16 132:2,5,20 153:12 188:14 215:5	<b>taper</b> 46:4 <b>targeted</b> 42:18 84:21 <b>targeting</b> 44:7 <b>task</b> 213:3 <b>taylor</b> 6:3 <b>tdp</b> 163:21 164:1 <b>tdps</b> 164:7 <b>team</b> 16:17,19 18:18 19:10,17 19:19 102:7 <b>technical</b> 98:21 <b>technicalities</b> 21:3,6 <b>technological</b> 35:17 <b>technologies</b> 7:12 8:21 32:6 <b>tell</b> 11:11 13:11 14:6,11 34:9 36:19 50:12 80:9,11,13,18 86:2 88:21 89:10 98:22 103:12 141:11 151:10 164:7 165:12 169:15 178:14,15 199:14,16,17 200:14 217:8 <b>telling</b> 117:4 <b>tells</b> 80:8 <b>temporal</b> 150:16 207:21	207:22 208:9 210:1 <b>ten</b> 196:4,6 <b>tend</b> 170:14,16 <b>tenfold</b> 111:2 111:13 <b>tennessee</b> 2:13 <b>tens</b> 81:16,18 81:22 82:3 142:6,8 165:10 <b>term</b> 55:15,15 55:17 57:7 88:7 <b>terms</b> 16:5 20:7 26:3 30:14 41:9 58:14 60:16 64:5 71:2 130:1 149:22 171:20 176:9 177:4 189:3 <b>terrific</b> 14:13 <b>testified</b> 11:12 145:6 154:8 173:7 212:10 213:21 <b>testify</b> 188:3 <b>testifying</b> 12:21 152:19,21 153:6 <b>testimony</b> 21:10 30:12 43:9 44:11 54:21 55:5 64:4 69:11
<b>t</b>			
<b>t</b> 217:1,1 219:1 220:1 <b>tabulated</b> 70:2 <b>tabulation</b> 145:15 <b>tabulations</b> 106:6 <b>tainted</b> 49:17 <b>take</b> 14:17,21 40:17 41:2 43:3 51:20 58:18 60:22 61:2 62:18 65:8 66:5 74:15,17 77:1 78:9 89:8 96:12 102:9 112:8 124:20 125:2,3,13 130:22 153:18 159:21 170:10 174:18 188:17 196:1 198:13 199:3,9,22 200:4 207:9 215:8 <b>taken</b> 36:8 65:13 131:4 170:21 217:5 221:6 <b>takes</b> 188:16	<b>talked</b> 18:18 19:17,18 67:6 73:8 98:7 105:7 138:18 <b>talking</b> 39:13 43:4 60:3 66:1 73:4 74:1 87:22 91:21 96:21 98:19 99:17 103:2 111:2,3,12 119:9 128:6 129:3 131:11 133:1 144:22 182:16 214:22 <b>talks</b> 52:20 55:17 119:19 133:4 <b>tall</b> 111:11 <b>tanenbaum</b> 8:20		

[testimony - time]

Page 51

80:1,2 83:2 84:3 87:22 88:17 100:2 106:15 145:12 217:9,14 218:9 218:17 <b>thank</b> 11:14,17 71:12 127:17 200:8 206:22 207:1 <b>thankfully</b> 101:6 <b>thanks</b> 216:16 216:17 <b>theme</b> 34:18 <b>theory</b> 47:14 142:2 164:15 164:18 165:5,6 <b>thereof</b> 217:16 <b>thing</b> 32:19 53:3 73:22 89:17 99:17 126:1 139:17 156:12 <b>things</b> 39:22 45:20 56:16 74:21 78:18 79:10 86:13 87:19 105:8 110:16 112:13 114:6,13 116:7 118:19 124:3 125:11,14 127:10 129:5 130:8,10	132:20,22 137:2,9 156:9 169:1,2 170:13 170:15 195:21 199:3 202:7 211:20 212:14 <b>think</b> 12:3 13:9 14:5,22 21:4 21:16,22 29:4 33:16,17 34:6 34:9 35:6 36:2 38:8 40:8 41:2 41:7 42:1,2 44:14 56:17 60:10 64:8,9 64:11 68:17 73:16 76:4 77:13 85:12 87:13 88:7,9 95:22 98:11 100:5 101:2,3 101:12 102:21 105:1 107:13 108:16,18 110:21 111:14 127:22 128:4 131:18 134:4 137:20 138:9 140:14,21 142:17 145:5 145:14 146:2 151:14 152:11 153:12 156:16 161:16 165:9 167:1,2 174:9	174:20 187:22 188:4,13 195:9 197:14 198:13 199:11 202:4 203:19 205:7 205:19 206:12 209:1,3 212:9 213:17 214:15 <b>thinking</b> 143:16 <b>thinks</b> 77:15 <b>third</b> 29:4 53:17 62:22 110:13 197:16 197:18,22 <b>thirds</b> 28:6 29:2 <b>thomas</b> 3:18 <b>thousand</b> 108:11 <b>thousands</b> 41:18,21 68:22 109:17,17 181:22 <b>three</b> 28:6 42:21 53:12,20 53:21 61:6 74:22 75:1 80:12 139:7,16 141:4 150:13 184:7 214:18 <b>threefold</b> 80:21 <b>thrown</b> 92:7 <b>thrust</b> 49:1 52:2	<b>thursday</b> 20:11 <b>tied</b> 39:7 <b>till</b> 209:18 <b>time</b> 2:5,7 13:2 13:3 14:18 19:3 20:12 24:13,17 31:17 32:19 33:11 49:1,7 72:2 78:16 80:11 82:21 89:10 90:16 97:11 101:8 109:5 112:8,13 116:18 121:5 127:22 129:1,6 131:1 133:8 137:10 141:6 141:18 142:12 144:4 150:16 152:12 156:22 157:13,14,16 160:22 176:10 176:11 188:16 188:20 191:4 192:16,17 194:22 195:10 198:1 206:20 207:10,10 208:10 210:4,7 210:9,14 213:10 214:18 214:20 216:16 217:5 218:18
---	--	--	---

[timeframe - trusts]

Page 52

<b>timeframe</b> 218:8 <b>timeline</b> 209:16 <b>times</b> 61:6 66:1 74:22 75:1 80:15 85:18 99:1 124:15,15 138:18 139:7 139:16 140:22 141:5 152:8 165:21 169:2 171:4 <b>tip</b> 190:3 <b>tn</b> 1:20 217:21 <b>today</b> 12:4 15:1 19:4,8 20:1 23:2 78:21 80:3 98:15 101:7 102:7 138:19 140:9 145:5 167:8 191:8 207:10 210:2 <b>today's</b> 12:12 <b>together</b> 63:10 70:6 <b>told</b> 12:9 102:16 103:8 111:6 118:4 <b>took</b> 60:21 66:4 170:18 <b>tools</b> 118:22 <b>top</b> 25:21 82:12 97:12 215:10	<b>topic</b> 19:19 20:7 23:20 110:19 <b>topics</b> 152:10 152:12 <b>tort</b> 15:22 24:6 24:9,15 41:18 44:9 47:16 49:17,18 50:18 62:2 79:9,12 94:8 142:1 157:10 164:16 168:6 177:1 184:8 212:5 <b>torts</b> 24:12 <b>total</b> 71:9 146:10 151:2 155:12,17 163:20 <b>totality</b> 15:12 43:5 46:11 50:3 61:16 75:11 107:8 135:19 158:1 170:5,8 171:11 172:14 176:12 177:4 180:3 190:19 207:19 209:11 210:2,5 <b>towards</b> 29:22 113:18 <b>tower</b> 121:18 <b>traces</b> 194:8 <b>track</b> 101:13	<b>trade</b> 40:2 204:17 206:11 <b>trades</b> 128:20 176:5 <b>traditional</b> 59:18 <b>trained</b> 15:19 <b>training</b> 16:10 35:15,20,22 36:5 99:2 <b>trane</b> 7:12,12 8:20 <b>transcribed</b> 217:12 <b>transcript</b> 14:9 218:6,19 <b>transcription</b> 217:13 221:5 <b>transferred</b> 1:6 <b>transfers</b> 21:6 <b>transitioning</b> 214:14 <b>treat</b> 61:20 <b>trend</b> 204:15 <b>trends</b> 157:3,16 171:20 177:5 204:8,9,18 206:7,15 <b>tried</b> 42:2 191:13 <b>trip</b> 87:13 <b>triple</b> 74:18 80:12,13,18 81:8,10,14,17 142:13 147:19	165:7 <b>tripling</b> 62:11 62:13 81:10 87:13 138:19 139:3 140:4 <b>trivial</b> 97:3 <b>true</b> 49:21 94:6 134:3 141:11 154:1 216:14 217:13 <b>trust</b> 1:4 6:10 8:2 11:19 12:2 22:3 34:20,21 35:1 43:17 44:19 46:8 51:3 53:16 56:10,13 57:13 62:21 90:22 91:6,19 96:6 144:2 148:2 154:13 159:6 159:10 160:20 178:17 179:15 180:12 181:13 182:11 183:5,8 185:21 186:3 186:13 205:1 207:17 208:17 209:9 <b>trusts</b> 40:15 41:19 43:6,11 44:12,16 64:18 104:4 126:16 145:22 147:5 147:10,14
---	--	---	---



148:5,19 155:6 155:7 160:16 161:13 176:13 178:21 179:19 185:15 194:6 195:22 200:11 212:3 <b>truth</b> 11:11,11 11:12 217:8,8 217:9 <b>try</b> 40:5 45:1 65:8 69:4 84:7 84:22 88:19 129:13 130:3 141:6 168:22 196:10 199:3 199:10 200:3 201:21 207:9 <b>trying</b> 29:22 47:14 53:11 54:19 60:9 90:18 112:15 112:16 116:16 117:20,21 118:11 120:3 132:19 150:4 174:14 179:2 199:5,8 203:8 204:20 205:10 <b>turn</b> 31:14 49:21 62:17 63:5 67:21 72:17 92:21 93:21 94:6 101:9 105:11	131:20,22 178:19 203:18 <b>turned</b> 113:21 <b>turning</b> 78:2 178:3 <b>turns</b> 58:19 59:2,3 61:3 86:22 <b>twenty</b> 183:18 183:20 <b>two</b> 16:9,11 21:8 23:1,1,3 28:6,11 29:2 34:17,18 39:20 44:5 79:10,13 79:15 83:10 85:3 87:3 97:11 104:1,2 104:5,13 108:12 109:14 119:2 123:17 135:14,16 136:3,15,16 137:21 138:1 139:6 141:4 145:7,13 148:10,12 149:6,7,14,16 149:20 152:7 160:19 162:2 164:19 181:4 183:3 184:4,8 184:17 190:15 190:20,21	<b>type</b> 24:6 35:14 36:10 46:15 47:7 60:1 93:9 176:2,8 194:10 <b>types</b> 45:10 59:6 82:12 93:18 122:22 166:14 <b>typical</b> 63:10 63:15 195:22 <b>typically</b> 134:2 134:4 138:9 142:1 151:16 172:10 177:19 210:20 <b>u</b> <b>u.s.</b> 7:12 29:1 <b>ultimate</b> 15:13 78:14 87:1 161:8 163:3,7 163:10,12,18 165:16 <b>ultimately</b> 16:20 27:18 80:7 86:2 92:12 134:12 135:12 167:7 168:4,7,12 171:18 180:11 195:13 206:2 212:13 213:3,6 <b>uncertain</b> 185:18 <b>uncertainty</b> 46:21 57:12	61:7,10 62:12 62:12,13 74:19 75:1 80:10,12 80:14,15,20 81:1,4,9,10,11 81:17,18,19 82:1,5,12,13,16 87:14 90:12 123:13 138:19 138:20,21 139:4 140:3,4 140:5,12 141:9 142:4,5,14,16 142:17,20 164:22 165:2,7 165:9 166:2,12 166:15,21 167:3 <b>unclear</b> 120:4 <b>uncommon</b> 121:9 <b>under</b> 12:22 16:3,22 47:13 56:17 57:2 61:11 104:22 115:16 116:1 165:5,5 188:9 217:9,12 221:7 <b>underlies</b> 16:11 <b>underlying</b> 16:10 32:12 34:22 56:11 68:9 125:8 144:3 157:16 164:19 209:4
---	--	---	--

[understand - verus]

Page 54

<b>understand</b> 12:21 13:2,10 13:11,14 15:17 29:17 30:11 33:17 60:9,10 96:11 118:13 120:13 129:22 134:15 136:5 139:14,20 146:16 148:21 164:11 185:11 185:15 194:7 195:14 205:14 211:13 213:16 215:18,22 216:3,7	<b>universal</b> 103:22 104:19 <b>universe</b> 26:17 43:5 44:4,8,10 66:2,10 68:20 72:9,13 85:2 105:16 125:20 159:21 <b>unknown</b> 62:13 91:18 116:18 <b>unnecessary</b> 88:9 <b>usable</b> 178:3 <b>use</b> 18:19 31:3 31:5,17,20,21 33:15 39:16 41:9 57:8 69:4 73:20 76:7 77:22 83:17 93:16 104:6,10 105:1,5,22 112:16 117:21 119:21 122:12 124:15,16 156:8 160:4 161:11 170:5,7 170:8,9,14,16 171:11,21 176:15 177:2 180:4,6,9 181:3 184:6 205:8 208:8 <b>used</b> 18:20 24:4 32:8 38:13 56:18 104:5	118:14,17 120:13,17 122:9 154:9 163:22 178:6 192:10 218:19 <b>useful</b> 92:15 <b>uses</b> 47:7 104:18 119:11 <b>using</b> 15:9,11 31:2 32:16 47:11 72:9 88:14 90:18,22 112:5 126:2,4 135:3 140:12 150:22 152:16 153:1 159:18 171:4,5 182:11 195:6 199:7 <b>usually</b> 77:20 114:12 169:4 <b>utilized</b> 27:4,12 32:9,11 33:6 34:1	169:20 <b>valuing</b> 67:15 <b>variable</b> 117:3 117:6 <b>variables</b> 82:7 117:3 <b>variation</b> 116:13 <b>variations</b> 83:20 <b>varies</b> 47:17 <b>various</b> 16:3 98:1 128:19 129:9 153:21 156:1 <b>vast</b> 79:20 172:18 <b>verbal</b> 12:15 <b>verify</b> 218:9 <b>veritext</b> 218:14 218:22 <b>veritext.com.</b> 218:15 <b>versa</b> 161:22 <b>version</b> 12:12 154:16 158:5 158:10,13,15 <b>versus</b> 28:1,20 28:22 29:1,5 34:14 58:3 60:13 73:18 176:11 <b>verus</b> 8:2,9 11:19 12:2 43:6,10,17
<b>understanding</b> 13:20 14:2 59:19 68:13 117:10 126:10 211:8 <b>understood</b> 13:16 14:9,12 113:3 <b>undertook</b> 215:9 <b>undisclosed</b> 113:9 <b>unfeasible</b> 89:15 <b>unit</b> 135:11 136:1 <b>united</b> 1:1 156:4		<b>v</b>	
		<b>v</b> 1:7 9:4 10:4 218:4 219:4 220:4 <b>validated</b> 58:20 <b>valuation</b> 45:19 <b>value</b> 63:14 94:5 112:15 126:7 135:15 161:21 163:16 163:17,20 164:6 169:18	

[verus - work]

Page 55

44:11,16,20,20 97:18 101:4 160:14 209:9 <b>vice</b> 8:20 161:22 <b>view</b> 29:20 37:13,13 85:3 85:9 138:7 166:6 195:8 <b>violate</b> 161:14 <b>virtual</b> 113:16 <b>voce</b> 51:9 102:1 <b>volume</b> 31:17 <b>volunteer</b> 110:1	132:12 133:16 134:3,15 135:18 139:9 140:17 146:8 146:11 157:2,3 161:2 162:9 164:13 177:22 178:7 179:19 181:7 200:3 201:19 206:11 <b>wanted</b> 18:3 43:20 131:17 <b>wants</b> 100:11 186:3,14 <b>washington</b> 1:19 2:3,12 3:19 4:8 11:4 70:7 217:20 <b>way</b> 13:20 14:6 28:7 29:2 40:5 45:1 60:10 77:2 78:4 88:16,19 91:20 96:1 120:21 121:16 153:22 162:22 166:7 168:15 170:18 184:16 191:6 201:16 <b>ways</b> 68:7 105:6 165:19 175:17 <b>we've</b> 20:15 73:8 99:3,7 138:22 139:6	146:2,3 172:9 173:19 185:16 <b>weathersby</b> 5:3 <b>week</b> 20:12 <b>weight</b> 97:10 <b>welcome</b> 205:21 <b>went</b> 86:10 109:18 151:6 151:15 180:7 <b>western</b> 1:1 <b>white</b> 8:19 35:21 96:2,9 96:12,16,21 97:17 99:14 100:3 109:13 126:17 151:11 152:3,22 158:3 158:7,9,21 168:17 171:9 171:22 174:6 175:14 176:15 177:14 <b>white's</b> 97:16 98:9,14 99:21 100:3 <b>wilmington</b> 4:16 6:6,14 <b>wish</b> 79:21 <b>witness</b> 9:16,18 11:16 21:2 27:5,7,14,16,20 27:22 28:3,5,8 28:10,15,16,18 38:6,8 49:13	64:11 88:6 95:2,4 103:1 128:13,15 132:15 137:18 139:13 141:3 143:20 149:2 153:10 159:4 160:10 168:3 168:20 181:7 193:21 201:15 202:16 206:1 206:21 207:1 209:1,22 212:22 215:14 216:19 217:6 217:10,14 218:8,10,12,18 219:2 220:2 221:1 <b>women</b> 112:10 <b>wondering</b> 199:2 <b>word</b> 64:9 103:11 169:13 208:8 <b>wording</b> 21:1 <b>words</b> 77:17 88:15 <b>work</b> 16:17,21 23:5,20 29:9 29:22 30:9 35:3 40:12 45:14,22 60:6 61:21 62:7 63:9,22 64:21
<b>w</b>			
<b>wacker</b> 7:6 <b>waived</b> 184:19 <b>walk</b> 102:13 <b>want</b> 22:22 23:3 31:11 33:5 41:7 46:9 46:21,22 48:6 50:12,22 52:13 52:18 61:15 63:6 72:21 75:13 76:11 77:6,16,22 79:6,7 87:20 89:14 94:11 96:9 97:3 99:16 102:13 102:14,15,19 103:7 118:3 126:5 128:12			

[work - zoom]

Page 56

65:4 73:7	119:1 120:20	<b>young</b> 6:3
79:11 82:2	120:21 132:8	<b>z</b>
87:3,14,19	<b>wrote</b> 128:1	<b>zero</b> 39:15 89:9
88:15,18 89:2	129:21 205:9	115:17 137:7
89:4 91:3	<b>wyner</b> 10:18	197:15 210:21
92:16 128:3	21:13 59:9	<b>zoom</b> 3:17 6:12
151:17 155:5	74:12 75:9	7:4,14 8:19,21
165:11 168:21	76:4 77:13	17:9 52:1
170:17 171:1	101:17 121:5	
188:19 192:14	133:1 157:5	
201:7,8 202:17	189:14,18	
203:17 215:19	190:8	
<b>worked</b> 202:13	<b>wyner's</b> 19:15	
<b>working</b> 26:17	19:20 101:10	
89:8,9 98:1	102:8 132:10	
151:9,13,21	191:2,9	
180:15	<b>x</b>	
<b>workings</b> 187:8	<b>x</b> 1:3,9,12	
<b>world</b> 1:3 9:4	<b>y</b>	
10:4 17:9 52:1	<b>ycst.com</b> 6:8	
99:10 116:4	<b>yeah</b> 18:12	
168:10 218:4	21:21 22:16	
219:4 220:4	27:10 39:6	
<b>worth</b> 44:12	52:6 73:4 77:8	
57:16	100:18 132:18	
<b>worthwhile</b>	136:22 139:8	
120:10	143:15 145:12	
<b>write</b> 130:16,19	<b>year</b> 46:16	
188:16	<b>years</b> 46:18	
<b>writing</b> 137:6,8	59:17 112:11	
192:22	<b>yep</b> 28:15 52:7	
<b>written</b> 120:15	<b>york</b> 2:11,12	
184:16	8:14,14	
<b>wrong</b> 107:9		
112:12 118:22		