

IN THE COMMONWEALTH COURT OF
PENNSYLVANIA

PENNSYLVANIA DEPARTMENT : NO. 284 M.D.
GENERAL SERVICES, : 1990
PENNSYLVANIA DEPARTMENT :
OF TRANSPORTATION, :
PENNSYLVANIA PUBLIC :
UTILITY COMMISSION, :
PENNSYLVANIA EMERGENCY :
MANAGEMENT AGENCY, and :
PENNSYLVANIA DEPARTMENT :
OF STATE, :
Plaintiffs, :
- vs - :
UNITED STATES MINERAL :
PRODUCTS COMPANY, :
CERTAINTIED CORPORATION, :
COURTAULDS AEROSPACE, :
INC., CHEMREX, INC. :
PHILIPS ELECTRONICS :
NORTH AMERICA :
CORPORATION, ADVANCE :
TRANSFORMER COMPANY :
and MONSANTO COMPANY, :
Defendants. :

BEFORE THE HONORABLE
CHARLES P. MIRARCHI, JR.

Wednesday, February 2, 2000

Trial testimony in the
above-captioned matter, held at the
Commonwealth Court of Pennsylvania, City
Hall, Courtroom 453, Philadelphia,
Pennsylvania 19103, on Wednesday,
February 2, 2000, beginning at
approximately 10:15 a.m., before Megan
McKay, a Registered Professional Reporter
and Notary Public.

ESQUIRE DEPOSITION SERVICES
1880 J.F.K. Boulevard, 15th Floor
Philadelphia, Pennsylvania 19103

2 1 APPEARANCES: 2 3 HUMPHREY, FARRINGTON & MCCLAIN, P.C. 4 BY: KENNETH B. MCCLAIN, ESQUIRE 5 221 West Lexington, Suite 400 6 Independence, MI 64051 7 (816) 836-5050 8 Counsel for Plaintiffs 9 10 THOMAS W. HENDERSON, ESQUIRE 11 Suite 3975, One Oxford Circle 12 301 Grant Avenue 13 Pittsburgh PA 15219 14 (412) 261-6474 15 Counsel for Plaintiffs 16 17 WHITE & WILLIAMS 18 BY: THOMAS GOUTMAN, ESQUIRE 19 One Liberty Place, 18th Floor 20 Philadelphia, PA 19102 21 (215) 864-7000 22 Counsel for Defendant Monsanto 23 Corporation 24 25 MONTGOMERY, MCCracken, WALKER & 26 RHOADS, LLP 27 BY: JOYCE S. MEYERS, ESQUIRE 28 123 South Broad Street 29 Philadelphia, PA 19109 30 (215) 772-7452 31 Counsel for Defendant Courtaulds 32 Aerospace, Inc. 33 34 DANAHER, TEDFORD, LAGNESE & NEAL 35 BY: KEN NEAL, ESQUIRE 36 700 Capitol Place 37 21 Oak Street 38 Hartford, CT 06106 39 (860) 247-3666 40 Counsel for Defendant U.S. Mineral	4 1 INDEX 2 WITNESS PAGE 3 JOHN WOODYARD 4 5 BY MR. MCCLAIN 101 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
3 1 HOYLE, MORRIS & KERR 2 BY: SUSAN HERSCHEL, ESQUIRE 3 1640 Market Street, Suite 4900 4 Philadelphia, PA 19103 5 (215) 981-5700 6 Counsel for Defendant CertainTeed 7 Corporation 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	5 1 THE COURT CRIER: In the 2 name of the Commonwealth of 3 Pennsylvania this Commonwealth 4 Court is now declared open. The 5 Honorable Charles Mirarchi, 6 Junior, is presiding. Please be 7 seated. Good morning, your Honor. 8 THE COURT: Good morning. I 9 believe we reserved this time 10 for ... 11 MR. MCCLAIN: Your Honor, I 12 want to make a clarification to 13 the record. Yesterday Mr. Goutman 14 represented to the Court that he 15 never received any of the bulk 16 samples of fireproofing from Mr. 17 Roux, Mr. Neal's partner. So I 18 contacted Mr. Roux last night 19 because my recollection was that 20 Mr. Roux had sent bulk samples of 21 materials to Mr. Goutman. Mr. 22 Roux confirmed to me from memory 23 that he had done that. In fact, 24 identified those samples as being

6 1 the samples of fireproofing that 2 were attached to the report 3 attached to Mr. Kominsky's 4 report. Mr. Neal hasn't had a 5 chance to confirm that yet with 6 documents, and I have asked him to 7 do that. But that was Mr. Roux's 8 oral representation to me 9 yesterday on the telephone. 10 So Mr. Goutman's 11 recollection on this subject, I 12 think, is in error. He has had 13 other bulk samples of materials 14 sent to him, and that emphasizes 15 the need for a chain of custody 16 from Mr. Goutman's office to the 17 laboratory for these samples, in 18 my view. 19 MR. GOUTMAN: Your Honor, I 20 think counsel's recollection of 21 what I said to this Court is in 22 error, and I know it's in error, 23 because I have the transcript, and 24 here's what I told the Court: "We	8 1 other buildings. 2 MR. MCCLAIN: Your Honor -- 3 MR. GOUTMAN: I don't think 4 I'm done. You want to interrupt. 5 MR. MCCLAIN: No, I don't. 6 I really don't. I had 7 misrecollected that. I had not 8 heard that distinction that Mr. 9 Goutman made in the record that 10 they were T&S Building samples, 11 and I don't know whether the Court 12 did or not either. My impression 13 was the argument that was being 14 made that Mr. Goutman was saying 15 that he didn't have any other bulk 16 samples of fireproofing. Be that 17 as it may, the point is still the 18 same. The issue on chain of 19 custody applies equally either 20 way, but I want to tell Mr. 21 Goutman that I apologize because I 22 had misrecollected what you had 23 said in regard to the samples. 24 But if you had other bulk samples
7 1 never received" -- I will start 2 from the beginning at Page 3 113. "I'd like to correct the 4 record. Plaintiff's counsel said 5 to this Court that plaintiff's 6 counsel gave us other asbestos 7 samples," which you will recall 8 the Court and plaintiff's counsel 9 did, and, of course, at least 10 according to my representation 11 they never did, but in any event, 12 I continue, "Plaintiff's counsel 13 never gave us any other asbestos 14 samples." Then I say further, "We 15 never received any other T&S 16 Building samples from Mr. Roux and 17 Mr. Roux's partner could probably 18 verify that." 19 Now, Mr. McClain this 20 morning has said that I told the 21 Court that I had never received 22 any asbestos samples from Mr. 23 Roux, and that's just not true. 24 He sent me asbestos samples from	9 1 in your possession, that may be 2 the source of confusion for these 3 samples. 4 MR. GOUTMAN: Are you done? 5 MR. MCCLAIN: Yes, sir. 6 MR. GOUTMAN: The samples 7 that were sent from other 8 buildings, and I think there are, 9 I think, maybe three other 10 samples. My recollection is were 11 sent. Again my recollection was 12 that is some time in the fall of 13 1998. And, again, your Honor, the 14 record is still clear what 15 occurred here with respect to the 16 prefire samples. I received a box 17 from Mr. Ziegler and I turned that 18 around and sent it to the lab. 19 This is plaintiff's 20 counsel's attempt for a third bite 21 of this apple. The apple is 22 getting rather old and moldy at 23 this point and I think we should 24 move on. The jury is going to be

10 1 here shortly. Thank you, your 2 Honor. 3 MR. NEAL: Your Honor, I 4 would like to say for the record, 5 as your Honor knows, I got into 6 this case late, so I have no 7 knowledge of what is being 8 discussed. I'm a little 9 concerned, because Mr. Roux is my 10 former partner and he is not 11 handling this case and that he was 12 contacted. But in any event, Mr. 13 McClain asked if I had any 14 correspondence to that effect. As 15 I say, I am not aware of it, and 16 if it's the Court's pleasure I 17 will look for correspondence. But 18 other than that, I don't know what 19 I can do. I have no knowledge of 20 this. 21 MR. GOUTMAN: Your Honor, 22 with respect to the other 23 exhibits, I don't know if 24 plaintiff's counsel has copies for	12 1 MR. GOUTMAN: Yes. I see 2 you are look at the same thing I 3 am. 4 THE COURT: The reason I 5 mention that is I'm looking for 6 Page 8 and don't have it. 7 MR. GOUTMAN: One problem 8 is, your Honor, that plaintiff's 9 counsel is using a version of the 10 second edition, which, I believe, 11 was withdrawn. Can you tell me -- 12 THE COURT: No, no. The 13 reason I didn't find it is because 14 Page 13 preceded Page 8, and in 15 the manner of which I was 16 examining the document I thought 17 they would be sequentially 18 numbered. 19 MR. GOUTMAN: It may well be 20 that my pages, as can you see, 21 your Honor, if plaintiff's counsel 22 can hold up his second edition, 23 my second edition is different. 24 And as I advised plaintiff's
11 1 the Court. Do you? 2 MR. MCCLAIN: I have some. 3 On what? On the management 4 handbook? 5 MR. GOUTMAN: Start there. 6 MR. MCCLAIN: I think that I 7 have the relevant pages, your 8 Honor. There is only two sources 9 for these blow-ups. What we 10 marked as PCB Management Handbook, 11 this is, your Honor, these are 12 just pages from this book that I'm 13 holding up for the Court right 14 now. 15 THE COURT: Is that this? 16 MR. MCCLAIN: That's pages 17 from this book. 18 THE COURT: Uh-huh. 19 MR. GOUTMAN: Your Honor, I 20 direct the Court's attention to 21 Page 8 and what Exhibit 4008 E is. 22 THE COURT: You are talking 23 about Page 8 from this same 24 document.	13 1 counsel, the reason might well be 2 because one of the second editions 3 was withdrawn at the author's 4 request because the publisher had 5 made changes against the author 6 without the author's knowledge. 7 But in any event, we're 8 going to have a problem perhaps 9 locating the pages. 10 THE COURT: I have Page 8 11 now. 12 MR. GOUTMAN: Okay. 13 MR. MCCLAIN: What is the 14 quote you are looking for? 15 Because I don't think anything I 16 have on eight is quoted. 17 MR. GOUTMAN: The 18 reproductive tests on primates. 19 MR. MCCLAIN: That's not on 20 Page 8. 21 MR. GOUTMAN: It's on my 22 Page 8. That's the problem. 23 MR. MCCLAIN: Jim, can you 24 come here and help me with this?

14 1 MR. GOUTMAN: In this 2 edition of the second edition it 3 is in the introduction, your 4 Honor. Just so that we can move 5 this along, the quote that he has 6 blown up is reproductive tests on 7 primates that involved PCB 8 contamination have resulted in 9 total reproductive failure, 10 increased mortality, still birth 11 and low birth rates for surviving 12 test subjects. 13 MR. MCCLAIN: That is on 14 Page 8. I'm sorry. 15 MR. GOUTMAN: On my Page 8 16 it's the middle paragraph, last 17 line of the middle paragraph; is 18 that correct? 19 MR. MCCLAIN: Yes. 20 MR. GOUTMAN: Okay. Now, 21 your Honor, just to start from 22 beginning, and we've been over 23 this terrain before, documents 24 like this are hearsay and the law	16 1 and low birth rates for surviving 2 test subjects." He is talking 3 about animal tests here. 4 MR. MCCLAIN: Your Honor, 5 the witness testified repeatedly 6 about this building being safe, 7 about the levels being safe. The 8 issue is what is the meaning of 9 safe? Here the witness talks 10 about tests demonstrating that 11 animals that are exposed to PCBs 12 have resulted in total 13 reproductive failure, increased 14 mortality, still birth and low 15 birth rates. I would suggest that 16 a substance that does that is not 17 safe. The witness has repeatedly 18 said this building was safe. The 19 concerns that we had for these 20 very issues, and the witness has 21 written about them. This is his 22 own book, for heaven's sake, and 23 for the world called PCB 24 management handbook. And I don't
15 1 of Pennsylvania is that they 2 cannot be used except for 3 impeachment purposes of an expert 4 once he acknowledges them as 5 authoritative. Assuming this book 6 is acknowledged by its author as 7 authoritative, the question is 8 what is it that he is impeaching 9 this witness? This witness has 10 not been offered to testify on 11 toxicology. He has offered no 12 testimony on direct on animal 13 tests. Mr. McClain in his voir 14 dire on credentials established 15 that this witness is not a 16 toxicologist, and, therefore, I 17 don't understand how this gets 18 into the expert impeachment 19 exception to the hearsay rule. 20 Again, it says, "Reproductive 21 tests on primates that involved 22 PCB contamination have resulted in 23 total reproductive failure, 24 increased mortality, still birth	17 1 think that he can run from what he 2 has written. 3 MR. GOUTMAN: Well, your 4 Honor, respectfully, obviously he 5 hasn't quoted from those portions 6 of the book where he says, "PCBs 7 may be less dangerous than other 8 hazardous chemicals. Studies have 9 found that workers without 10 sophisticated protection can 11 handle PCBs for their entire 12 career without greater risk." 13 There are various 14 observations in this introduction 15 concerning the subject of 16 toxicology, but Mr. Woodyard has 17 not been qualified as an expert on 18 toxicology, he hasn't been 19 qualified as an expert in 20 epidemiology or the health effects 21 of PCBs. And in any event, none 22 of his direct testimony dealt with 23 that, and I don't know what the 24 impeachment value is. What Mr.

18 1 Woodyard said is there are various 2 standards that set safety levels, 3 and the levels in the building 4 were beneath those standards. 5 That's what he said. He didn't 6 discuss animal studies. He didn't 7 discuss the circumstances of these 8 animal studies, the fact that they 9 were high dose, doses that aren't 10 even applicable to the T&S 11 Building and so forth. 12 MR. MCCLAIN: Your Honor, 13 this is cross examination. 14 Anything which tests his 15 credibility and his opinion that 16 this was safe, particularly where 17 he has written about it, is open 18 for cross. 19 MR. GOUTMAN: I guess my 20 question is what is the relevance 21 of an observation of reproductive 22 tests on primates that involved 23 PCB contamination and so forth, 24 what is the relevance of that to	20 1 MR. MCCLAIN: Thank you, 2 your Honor. 3 THE COURT: Although, we do 4 have sentences that immediately 5 follow that espouse on the same 6 issue. 7 MR. GOUTMAN: Your Honor, 8 the next area -- 9 MR. MCCLAIN: I don't 10 object, your Honor, if he wants to 11 read that entire next paragraph. 12 That's fine with me. I mean, 13 those certainly aren't things you 14 can rule on at the time. But, I 15 mean, it demonstrates -- 16 THE COURT: I merely call it 17 to your attention. 18 MR. MCCLAIN: I understand. 19 Thank you. 20 MR. GOUTMAN: Your Honor, 21 the next area deals with just -- 22 there is another publication. 23 The other major publication that 24 he is taking from -- I shouldn't
19 1 this witness's testimony that he 2 is aware of PCB safe standards and 3 the levels in the building were 4 beneath them? Nothing that he 5 said -- he didn't say anything 6 about animal tests. He hasn't 7 been qualified as an expert on 8 toxicology. So, again, there is 9 no foundation, there is no 10 relevancy. 11 MR. MCCLAIN: It goes to his 12 credibility of telling the jury 13 that this was safe, and it's for 14 the jury to decide whether this 15 impacts on his opinion of safety. 16 You know, the real debate here is 17 should we have chosen the lower 18 NIOSH standard as opposed to this 19 quote-unquote EPA safe standard, 20 Judge, which we're going to find 21 out about in a minute. 22 THE COURT: The objection of 23 Monsanto is overruled and you may 24 question on this.	21 1 call it a major publication, but 2 it's called deriving remediation 3 criteria for PCBs and PCB 4 combustion -- that's not it. 5 MR. MCCLAIN: The concrete 6 article. 7 MR. GOUTMAN: Yeah. 8 MR. MCCLAIN: Your Honor, 9 there is some other quotes that 10 are taken from an article he wrote 11 called State of the Art Technology 12 PCB Decontamination of Concrete. 13 Can I just hand this up? 14 THE COURT: Yes. Thank you. 15 MR. MCCLAIN: You're 16 welcome. 17 MR. GOUTMAN: Your Honor, 18 again, I think starting from the 19 beginning, what is it that's being 20 impeached here and what is the 21 relevance of it to this case? 22 There was no testimony on direct 23 about concrete decontamination. 24 There is no evidence presented by

22 1 it's plaintiffs concerning any 2 problems with the concrete in the 3 T&S Building. This article and 4 these questions that might be 5 derived from here are, frankly, 6 out of left field. As an example, 7 your Honor, Page 122 he has blown 8 up the first paragraph under 9 Surface Concrete Removal. 10 MR. MCCLAIN: Which one? 11 MR. GOUTMAN: Page 122, the 12 paragraph under Surface Concrete 13 Removal, which is 4006 F. "The 14 type of PCB contamination of 15 concrete that is most frequently 16 encountered and most difficult to 17 treat is just below the surface 18 resulting from short-term spill 19 contact or grinding of dust 20 deposits through tracking." There 21 is no foundation here that this 22 occurred at the T&S Building. 23 There is no foundation here that 24 any concrete removal was required	24 1 said in Court and what was 2 testified to. So I excerpted both 3 Mr. Bond's testimony and Mr. 4 Halliwell as well as the 5 specifications about what was done 6 to the concrete. So I will hand 7 those to the Court. 8 First of all, the article 9 doesn't only deal with concrete. 10 It deals with many things about 11 the difficulty of remediating PCBs 12 from buildings and it talks about 13 the remediation techniques for 14 concrete being helpful for 15 remediating other building 16 systems, and so it's a 17 steppingstone. The witness uses 18 the technology used to 19 decontaminate PCB containing 20 concrete to demonstrate how 21 difficult it is and how elusive 22 trying to find contamination in a 23 building is and how difficult it 24 is to clean up. And then he uses
23 1 in the T&S Building. Plaintiff's 2 counsel attempted to elicit some 3 testimony from Mr. Halliwell 4 concerning that and we objected 5 because Mr. Halliwell, or the 6 plaintiff's, couldn't identify the 7 manufacturer of the mastic. 8 It goes on, "PCBs have shown 9 they are to penetrate concrete to 10 much greater depths than common 11 sense would dictate," and so 12 forth. There is no evidence that 13 this occurred at the T&S 14 Building. It's irrelevant and 15 there's nothing that this witness 16 has said which this can be used to 17 impeach him on. So I assume, I 18 guess, counsel is just going to 19 read it to him and say did you 20 write that? 21 MR. MCCLAIN: Well, your 22 Honor, I thought this would come 23 up so I thought the Court should 24 have reference to what was really	25 1 the examples of how concrete 2 absorbs PCBs, et cetera. 3 Now we had that problem at 4 the T&S Building, as you will see 5 from Halliwell's testimony where he 6 showed the jury slides about the 7 shot blasting of the concrete to 8 take off the PCBs. That's at Page 9 93. It would need to be cleaned 10 further, shot blasted further in 11 terms of cleaning up the building 12 for reoccupancy to one at Page 13 93. And then Mr. Bond, we asked 14 him in his testimony at 164, I 15 asked him, "What is shot blasting? 16 Shot blasting is a machine that 17 heralds tiny beebees within a 18 controlled space. The mastic is 19 removed. The specifications 20 require a quarter inch removal of 21 the concrete. Answer: Of the 22 concrete." That's Mr. Bond's 23 testimony in this case. 24 So we have testimony in this

26 1 case about removal of concrete 2 being necessary to decontaminate 3 the building. The witness has 4 testified that we went to extreme 5 lengths far more than was 6 necessary in regard to this 7 building, and yet his paper 8 indicates how difficult it is to 9 decontaminate concrete. 10 And so having put in issue 11 our methods of decontaminating 12 this building, that particular 13 paragraph is relevant to that 14 issue where he has written about 15 how difficult it is where PCBs are 16 detected on or in concrete. And 17 so that's the relevance of that. 18 If the Court would like to see the 19 specification that Mr. Bond 20 referred to I have a copy here, 21 but I don't think that's 22 necessary. 23 MR. GOUTMAN: Your Honor, I 24 guess my objection was, and	28 1 we'll go through it. But my 2 question is where in his case did 3 he present evidence that there was 4 any PCB entering the concrete? He 5 had evidence and entered evidence 6 that mastic, which is glue, on top 7 of concrete was removed. In fact, 8 on July 28, 1999, your Honor, Mr. 9 Halliwell attempted to show 10 pictures of shot blasting of that 11 mastic. I objected, or Mr. 12 Schmidt objecting saying that the 13 manufacturer of that mastic had 14 not been identified and that 15 objection was sustained. 16 So there is no evidence in 17 this case of penetration of PCBs 18 in the concrete. And what we have 19 is a series of quotes about what 20 to do when PCBs penetrate 21 concrete. There is no foundation 22 for that. It certainly is not 23 impeachment of anything this 24 witness said.
27 1 plaintiff's counsel hasn't 2 answered it, what evidence was 3 presented during his case, 4 certainly none was presented 5 during our case, that there was 6 any PCB penetration of concrete? 7 MR. MCCLAIN: There was the 8 tests done of the mastic, which 9 was on the concrete, which the 10 witness talks about. The 11 necessity to remove concrete, to 12 remove all contamination even when 13 there aren't tests. The 14 witness's article talks about the 15 necessity of doing that because 16 concrete absorbs PCBs. So if you 17 are going to decontaminate a 18 building you have got to shot 19 blast the concrete. That's what 20 his article says. 21 MR. GOUTMAN: Well, your 22 Honor, rather than trust 23 plaintiff's counsel's 24 characterization of the article	29 1 MR. MCCLAIN: We shot 2 blasted the concrete, he talks 3 about shot blasting the concrete 4 necessary to decontaminate the 5 building, the mastic on the 6 flooring contained PCBs. He talks 7 about the capillary action of 8 concrete absorbing PCBs. As the 9 Court heard Mr. Goutman read, how 10 it sometimes is unexplainable how 11 it occurs. 12 MR. GOUTMAN: Well, your 13 Honor, if he can lay a foundation 14 through this witness that there 15 was penetration of PCBs into the 16 concrete and then what would it be 17 required, or had been required to 18 remove it, that's fine. But he 19 can't go waving around quotes 20 concerning a hypothetical 21 situation about which there has 22 been no foundational 23 establishment. 24 THE COURT: Refresh the

30 1 Court's memory on this. The Court 2 recalls that we did have some 3 concrete penetration allegedly 4 when the outside caulk was done. 5 Other than that, the Court doesn't 6 recall any penetration. 7 MR. GOUTMAN: Actually -- 8 MS. MEYERS: Your Honor, can 9 I address that? 10 THE COURT: I just -- we're 11 not putting it in such a fiat. I 12 remember there was some concern 13 about the caulk penetrating or the 14 PCBs from the caulk allegedly 15 penetrating the concrete -- 16 outside concrete. 17 MS. MEYERS: Mr. Ewing's 18 testimony was that the data didn't 19 show that. Plaintiff's allege it, 20 but the data didn't show it and 21 that was Mr. Ewing's testimony. 22 MR. GOUTMAN: In fact, your 23 Honor, Mr. Halliwell attempted to 24 express an opinion on that. There	32 1 THE COURT: We are talking 2 about the outside concrete. 3 MR. MCCLAIN: Floor. 4 THE COURT: You are talking 5 about the floor. 6 MR. MCCLAIN: Floor. Shot 7 blasting the concrete. Then Mr. 8 Bond testified, in fact, they had 9 did that. They had shot blasted 10 the concrete. Mr. Halliwell 11 suggested that it would had to 12 have been shot blasted further to 13 get it down to one -- from ten to 14 one. 15 MR. GOUTMAN: Where is that? 16 MR. MCCLAIN: That's in this 17 quote. 18 MR. GOUTMAN: Where? 19 MR. MCCLAIN: Where he is 20 talking about -- let's take a look 21 at everything that is gone. If 22 you look at these -- 23 THE COURT: Where are you 24 reading?
31 1 is an objection by Ms. Meyers, it 2 was sustained and his testimony 3 was stricken. I have that cited 4 somewhere here. 5 THE COURT: That was only a 6 preamble to my next question. 7 That was one place where the Court 8 recalls concrete. 9 MR. MCCLAIN: Coming in. 10 THE COURT: Being mentioned. 11 MR. MCCLAIN: Yes. I think 12 that the Court is correct. 13 THE COURT: Was there any 14 other place where concrete was 15 mentioned? 16 MR. MCCLAIN: Yes. Where I 17 have given you those two cites. 18 Mr. Halliwell was asked what his 19 opinion would be to further 20 decontaminate the building down to 21 one. Remember the Court allowed 22 that testimony? He talks about 23 further shot blasting being 24 necessary.	33 1 MR. MCCLAIN: Page 93 in 2 the middle of the page, your 3 Honor, at line nine. "Where 4 they're left for PCBs and asbestos 5 containing materials to remain 6 when, in fact, it would be in my 7 opinion in the concrete deck. It 8 would need to be cleaned further, 9 shot blasted further." 10 MR. GOUTMAN: The problem 11 with that -- 12 MR. MCCLAIN: I'm sorry, you 13 know. You asked me to show you -- 14 but I don't want to argue with 15 you, Tom. "It would also be in the 16 metal deck, which is a rough 17 surface had has a lot of openings 18 in it. It's difficult to clean." 19 He did offer the opinions that the 20 concrete deck was, in fact, 21 contaminated and needed to be shot 22 blasted and the Court allowed that 23 opinion. 24 So we do have opinion

34 1 testimony about the contamination 2 of the concrete deck and the need 3 to shot blast it. This witness is 4 an expert in that area, has 5 written articles about it and I'd 6 like to elicit his opinion about 7 the necessity of shot blasting 8 concrete. 9 MR. GOUTMAN: Your Honor, 10 there is no testimony and there's 11 none here that there is any 12 penetration of PCBs in the 13 concrete. None. Mr. Halliwell 14 didn't present any. There is 15 simply no data, no data presented 16 as part of plaintiff's case, 17 because none exists that there was 18 PCB penetration of any concrete. 19 So plaintiff's counsel would like 20 to ask, I guess, show this witness 21 a bunch of quotes about how you 22 remove PCBs once they have 23 penetrated. Now, if he can lay a 24 foundation through this witness	36 1 association with PCBs. 2 Now, Ms. Meyers had a whole 3 argument about that. The Court 4 overruled it in regard to the 5 motion for nonsuit and it's in the 6 jury's hands about whether that 7 was necessary to decontaminate the 8 building. But we have the whole 9 issue of concrete, as it says 10 here, PCB has been shown, however, 11 to penetrate concrete to much 12 greater depths than common sense 13 would indicate. That's in this 14 paragraph that I have blown up 15 through capillary action or other 16 physical mechanisms. I want to 17 ask the witness what does that 18 mean? What are capillary actions? 19 What are the physical mechanisms 20 by which concrete when it's in 21 association with PCBs becomes 22 contaminated? What are the 23 concerns there, Mr. Witness? 24 That's in the middle of that
35 1 that there was PCB penetration at 2 the T&S Building, fine. But the 3 factual foundation isn't there. 4 MR. MCCLAIN: Your Honor, 5 this witness was allowed to 6 testify without any data on 7 anything. He got up here and 8 talked about vaporization without 9 any data, without any tests. 10 None. Zero. The Court allowed 11 him to testify. Now, we have 12 testimony from two witnesses 13 regarding the necessity to shot 14 blast the concrete to clean off 15 the mastic and Mr. Halliwell 16 offers the opinion that the 17 concrete was contaminated, the 18 Court allowed that opinion. In 19 addition, the Court is correct. 20 We then had additional testimony, 21 which this is relevant to, that 22 is, the saw cutting of the 23 concrete panels because of 24 concerns about contamination from	37 1 paragraph, Judge, under the 2 heading Surface Concrete Removal. 3 And so he studied this 4 subject about why concrete absorbs 5 PCBs and I think I have a right to 6 ask him about it. It's at issue 7 in this case. 8 MR. GOUTMAN: Well, he 9 doesn't have a right to ask him 10 about something that is not an 11 issue in this case. There is no 12 foundation that there was any bulk 13 testing of concrete in this 14 building, which showed PCB 15 penetration. If There was I'd 16 like to see it. There is no such 17 data. 18 Now, Mr. McClain is saying, 19 well, Mr. Woodyard didn't have any 20 tests. Mr. Woodyard talked about 21 the 20,000 some tests that he 22 reviewed. I think that's a little 23 more persuasive than the so-called 24 test that Mr. Ewing did.

38 1 But in any event, your 2 Honor, there is no factual premise 3 or foundation. There are -- and I 4 think there are a dozen quotes 5 from this article concerning 6 cleaning up PCBs once they have 7 penetrated concrete. There was no 8 testimony that that was even a 9 problem at the T&S Building. 10 There is no testimony that there 11 was even bulk sampling of concrete 12 at the T&S Building. So again, 13 your Honor, it has nothing to do 14 with this case. 15 THE COURT: The Court has no 16 recollection of tests performed on 17 the concrete evidencing PCB 18 penetration; is that correct? 19 MR. MCCLAIN: There is tests 20 on the mastic, your Honor; not the 21 concrete. The mastic on the 22 concrete was tested. 23 THE COURT: The mastic? 24 MR. MCCLAIN: Yes.	40 1 training in regard to how concrete 2 reacts when it is in association 3 with PCBs. That was the basis 4 upon Mr. Haliwell's opinion in 5 this regard and why it needed to 6 be shot blasted. So those become 7 facts for the purpose of this 8 issue. There is not a need to 9 have a specific test on the 10 concrete. 11 MR. GOUTMAN: Well -- 12 THE COURT: You mentioned 13 there was none. 14 MR. MCCLAIN: I understand. 15 I was just laying out for the 16 Court my recitation of where we 17 are in the evidence. 18 MR. GOUTMAN: Your Honor, I 19 think the Court's question goes to 20 the heart of this matter. 21 Plaintiff's counsel hasn't given 22 us any citation to Haliwell's 23 testimony where he said there was 24 penetration. He wants to do
39 1 THE COURT: But we're 2 talking about penetration in the 3 concrete, as I understand it. 4 MR. MCCLAIN: Right. We 5 have Mr. Haliwell's opinion. As 6 the Court laid out to the jury, 7 experts are allowed to testify by 8 opinion and the jury can consider 9 their opinions as facts. That's 10 what the Court told the jury in 11 regard to Mr. Woodyard and that 12 was a correct statement of law. 13 And so the opinion that Mr. 14 Halliwell has rendered here that 15 the concrete was contaminated is a 16 fact for the jury to consider 17 without the necessity, because the 18 Court allowed it, of specific 19 tests on the concrete like Mr. 20 Woodyard was allowed to offer 21 opinions about the no vaporization 22 from the ductboard, even though he 23 didn't have any tests. It was 24 based upon his experience and his	41 1 further shot blasting. 2 Plaintiff's counsel didn't explore 3 to him why he wants to do further 4 shot blasting; or, in fact, 5 whether further shot blasting was 6 done. 7 But in any event, Mr. 8 Halliwell at no time opined that 9 there was penetration of PCBs into 10 concrete. He attempted to do so 11 once and that was with respect to 12 the exterior caulk and Ms. Meyers 13 rose and objected. This Court 14 sustained the objection. She 15 orally moved to strike the 16 testimony and the Court struck the 17 testimony. That's all there is 18 concerning penetration of PCBs in 19 the concrete. Here we have a 20 dozen or so exhibits, blowups of 21 what you do once PCBs penetrate 22 concrete. And, therefore, again, 23 your Honor, it's not about this 24 case. It might be about another

42 1 case, but it's not about this 2 case. 3 MS. MEYERS: Your Honor, may 4 I be heard on this as well? 5 THE COURT: Yes. Could you 6 come forward? 7 MS. MEYERS: Yes. I've 8 looked at the quotes that Mr. 9 McClain would like to show Mr. 10 Woodyard about concrete, and all 11 of them, as I understand them, 12 refer to liquid spills on concrete 13 floors. That's not what we have 14 here, and it's one thing to talk 15 about liquid penetrating a floor 16 with the help of gravity, perhaps, 17 and it's quite another thing to 18 talk about what we really have in 19 the T&S Building where there was 20 not any liquid spill and there is 21 no evidence in the record 22 whatsoever that PCBs penetrated 23 any concrete surface inside or 24 outside. That's the first point.	44 1 there is no data. There is test 2 data, and the test data does not 3 support that conclusion. So it's 4 confusing and it's prejudicial. 5 One of those quotes talks about 6 penetration up to 12 inches. 7 There is no evidence in this case 8 that anything like that even 9 remotely happened at the T&S 10 Building. So in addition to not 11 being within the scope of Mr. 12 Woodyard's direct testimony and 13 not being relevant to any evidence 14 that plaintiff's put in about the 15 Transportation & Safety Building, 16 it's an invitation to the jury to 17 speculate that things that never 18 happened might have happened or 19 could have happened, and, 20 therefore, they can take them into 21 consideration when they didn't 22 happen. That's allowing the jury 23 to make a decision based on 24 nothing but speculation and
43 1 The second point is even if this 2 had some remote probative value, 3 which it doesn't, it's outside the 4 scope of this witness's direct 5 testimony and it's unrelated to 6 any evidence in the record about 7 the T&S Building, it's also unduly 8 prejudicial and confusing to the 9 jury, because the same confusion 10 that came up in the last few 11 minutes about concrete floors 12 versus concrete exterior wall 13 panels could arise in the jury's 14 mind. Suggesting or getting this 15 witness -- eliciting testimony 16 from this witness about what 17 happens when liquid PCBs penetrate 18 concrete floors could allow Mr. 19 McClain to try to argue to the 20 jury that somehow PCBs moved out 21 of the caulk into the concrete 22 panels on the outside of the 23 building in the same way, even 24 though his own expert admitted	45 1 conjecture and that's improper. 2 MR. MCCLAIN: Your Honor, 3 Ms. Meyers clearly is at a 4 disadvantage, since she hasn't 5 read these articles. If you'll 6 look at the Page 118 of the State 7 of the Art for PCB Decontamination 8 of Concrete written by Mr. 9 Woodyard, defendant's expert. He 10 says that the mode of 11 contamination of concrete is at 12 least in four ways. One, surface 13 soot. Imagine that. Surface 14 soot. Now, haven't we heard 15 enough about soot in this case to 16 know that's an issue in this 17 case? And we had bear concrete 18 floors throughout this building 19 and they alleged that surface soot 20 was found throughout this building 21 every square inch? We've heard 22 Mr. Goutman say that at least 15 23 times to this jury. Penetrated 24 fumes. We have heard repeatedly

46 1 about fumes in this building. We 2 have a theory about the release of 3 fumes from the overhead ductwork. 4 The defendant contends that does 5 not occur. We contend it does. 6 But more importantly, they contend 7 that such fumes occurred during 8 the fire. 9 Now, we have several modes 10 of contamination of this concrete, 11 which Mr. Woodyard opines about. 12 But he talks about the nature of 13 concrete and why it's such a good 14 absorber of PCBs. And what he 15 says is, "Structural and ornamental 16 concrete has several attributes 17 which combined to make this 18 substance unique from a 19 contamination standpoint." That's 20 in the characteristics of concrete 21 up above, your Honor. That's in 22 this paragraph up above. "First, 23 all concrete is porous to some 24 degree thereby allowing	48 1 this case. Look at table one. 2 It's at Page 123 and 124. In the 3 middle of that page, "Some commonly 4 cited standards for PCB 5 contamination," the witness 6 wrote. And what does he cite in 7 the middle of the page? The NIOSH 8 standard. He doesn't say that it 9 just applies to PCB fires, Judge, 10 which he told the jury it did. He 11 says that it's presumably for 12 interior surfaces and it's based 13 not on a PCB fire dioxin furan 14 cleanup standard, as he told the 15 jury. He says based on upper 16 background limits in 17 nonmanufacturing facilities. 18 So this article has wide 19 application and uses in cross 20 examination and we did have 21 concrete shot blasting at issue in 22 this case. We did have the 23 opinions of an expert that, in 24 fact, it was contaminated and
47 1 penetration by either liquid or 2 vapor contaminants. Second, 3 concrete continuously ages and 4 dries over its life-span changing 5 its porosity and its ability to 6 absorb contaminants. Third, and 7 perhaps more importantly, concrete 8 is often an intrical structure 9 component of the building so 10 decontamination must be 11 performed. Demolition and 12 disposal is not always an option." 13 So the essence of it is that 14 when you have surface soot you 15 have to be concerned about the 16 concrete, and he talks about 17 that. And so to the extent that 18 there has been a suggestion that 19 we did not have to be concerned 20 about the concrete, that's 21 incorrect. 22 And then we go over, Judge, 23 to table one in this same document 24 to show its wide application to	49 1 needed to be shot blasted. So we 2 believe that we ought to be able 3 to explore that with this witness. 4 MS. HERSCHEL: Your Honor, 5 Mr. McClain just did some public 6 reading. It is irrelevant what 7 Mr. Woodyard's -- at least for 8 this case it's irrelevant what Mr. 9 Woodyard's opinions are about the 10 process of PCBs concentrating in 11 concrete and the difficulty or 12 lack of difficulty for cleaning it 13 up, because, as your Honor has 14 pointed out several times now, 15 there is not a single piece of 16 data in the record that shows that 17 there were PCBs in the concrete. 18 The fact that plaintiff's 19 witnesses may have attempted to 20 put evidence in and were blocked 21 successfully does not create a 22 record. There's a not a piece of 23 data which shows that there were 24 PCBs in concrete inside the

50 1 building, and I think that's the 2 beginning and end of it, your 3 Honor. 4 MR. GOUTMAN: Your Honor, I 5 found it was on August 10th what I 6 was talking about. Mr. Halliwell 7 was going on about the exterior 8 caulk and he said, "In contractors 9 actually coming in and not only 10 removing the caulk, but he is 11 removing one and a half inches of 12 concrete either side of that seam 13 where it was determined that the 14 caulk had, in fact, leached into 15 the concrete. Ms. Meyers" -- 16 where he says it had, in fact, 17 leached into the 18 concrete. "Objection, your Honor. 19 The Court: Sustained. Ms. 20 Meyers: Move to strike. The 21 court: That will be stricken. 22 The jury is directed to disregard 23 that. And that was on August 10, 24 1999 at Pages 69 to 70.	52 1 because he does comment about 2 standards or guidelines. The 3 problem I have, your Honor -- is 4 do you have table one in front of 5 you? It's on Page 123. 6 THE COURT: 123 of what 7 document? 8 MR. GOUTMAN: I'm sorry. 9 It's the paper titled State of the 10 Art Technology Decontamination of 11 Concrete Penn 4006. 12 THE COURT: Okay. 13 MR. GOUTMAN: It's Page 14 123. Now, you will see that the 15 first entries on this table are 16 greater than 110, 100 micrograms 17 and so forth. Plaintiff's counsel 18 reproduces the top title, but then 19 skips essentially what was 20 ultimately to be the EPA standards 21 and goes right to the bottom. My 22 objection to this is that it's 23 inherently misleading. If he 24 wants to blow up this document
51 1 Additionally, I forgot to 2 bring up my notes, your Honor. 3 I'm sorry. I'll find the other 4 citation. The other two points I 5 want to make, your Honor, are that 6 without the factual predicate that 7 there was PCB penetration in any 8 concrete surfaces of this 9 building, and there is none and 10 plaintiffs counsel hasn't shown us 11 any, all the testimony in the 12 world concerning methods for 13 getting it out of concrete is 14 simply irrelevant in this case and 15 certainly there is nothing that 16 this witness has said that would 17 suggest this is impeachment 18 material. 19 One more point about this 20 concrete stuff. I have no problem 21 with plaintiffs using this article 22 for one and only one purpose and 23 that is to show table one. I have 24 no problem with that, your Honor,	53 1 you'll see he is -- this document 2 has the title of it, but it is 3 edited and he has edited out what 4 are essentially the EPA 5 guidelines, although the EPA had 6 not yet enacted this. This 7 document was published before this 8 spill policy. So this exhibit, 9 which is 4006 A, is inherently 10 misleading and I object to its 11 use. 12 MR. MCCLAIN: Let me address 13 that, if we can. Your Honor has 14 allowed us repeatedly to use 15 portions of a document and blow 16 them up so that you can read 17 them. The problem with trying to 18 do that entire chart was that you 19 couldn't read the entire chart in 20 this size blow up. You'd have to 21 blow it up as big as a house. 22 Now, there is no question that 23 there are other entries on that 24 exhibit, and we will make that

54 1 clear to the jury when we question 2 the witness. But if the Court -- 3 in a typical situation if we put 4 it on the elmo the Court would 5 certainly allow me to focus on 6 this so that we can read it, and 7 that's all we've done. I have not 8 presented -- 9 THE COURT: If I understand 10 that it says .5 -- 11 MR. MCCLAIN: Micrograms per 12 hundred cubic centimeters 13 squared. NIOSH 11/10/83, 14 presumably interior surfaces based 15 on upper background limit and 16 nonmanufacturing facilities. I 17 quoted it exactly. 18 THE COURT: Yes. That is as 19 to the concrete. 20 MR. MCCLAIN: That's just to 21 some commonly cited standards of 22 PCBs. 23 THE COURT: That's the 24 inherent standard.	56 1 what he said was agency helped 2 base clean up criteria determined 3 by this assessment for One Market 4 Plaza. 5 THE COURT: That is the 6 address of that building. 7 MR. MCCLAIN: Right. 8 THE COURT: And this is the 9 concrete test. 10 MR. GOUTMAN: It has nothing 11 to do with concrete. 12 THE COURT: It has nothing -- 13 MR. GOUTMAN: This has 14 nothing to do with concrete. 15 MR. MCCLAIN: The article 16 deals with a lot of subjects; not 17 just concrete. It talks about 18 using concrete decontamination 19 techniques to test out ways to 20 clean up buildings, and one of the 21 tables they cite is that this -- 22 what standards have been set for 23 decontaminating buildings; not 24 just concrete.
55 1 MR. MCCLAIN: Exactly what 2 we've been talking about. Then he 3 cites another one in regard to the 4 One Market Plaza decontamination, 5 which he told us about in his 6 direct and I'm -- and I blew that 7 up specifically because I have a 8 question about it, the One Market 9 Plaza situation. 10 THE COURT: Which one is 11 that? 12 MR. MCCLAIN: That's the one 13 microgram -- it's the next one 14 down on the chart, Judge, from I 15 think -- 16 THE COURT: It said City and 17 County of San Francisco. You 18 might have been naming the 19 building. 20 MR. MCCLAIN: General 21 occupancy -- yes. Department of 22 Health City and County of San 23 Francisco. That's in this first 24 column, but in the last column	57 1 MR. GOUTMAN: Your Honor, 2 that's wrong. What he has 3 excerpted from this article are 4 observations about decontamination 5 of concrete. It happens that in 6 this article there is a table that 7 deals not with concrete, but 8 general clean up standards and 9 that's table one. The point I 10 wanted to make to this Court is I 11 have no problem with him using 12 table one. I do have a problem 13 with him skillfully editing it so 14 that the jury thinks that this 15 witness said that some commonly 16 cited standards for PCB 17 contamination and then he lists 18 first NIOSH whereas, in fact, the 19 entire table should be shown to 20 the jury. 21 MR. MCCLAIN: I will be 22 happy to show -- let's see if we 23 can resolve it so we don't have a 24 silly argument in front of the

58 1 Court. I will be happy to show 2 the entire table, but I'm using 3 this blow up so everyone can read 4 it. That's all. 5 MR. GOUTMAN: Fine. In 6 another example, your Honor, of 7 the problematic use of this -- 8 THE COURT: You don't see 9 any problem with -- 10 MR. GOUTMAN: That table. 11 THE COURT: That page. 12 MR. GOUTMAN: As long as he 13 shows that page. 14 MR. MCCLAIN: But I can use 15 the blow up to read the parts that 16 I want to. 17 MR. GOUTMAN: That's fine. 18 MR. MCCLAIN: Fine. No 19 problem. 20 MR. GOUTMAN: As long as you 21 show the entire page first. 22 MR. MCCLAIN: I don't object 23 to that. 24 MR. GOUTMAN: Okay. But	60 1 Deep Concrete Removal. 2 MR. MCCLAIN: I wasn't going 3 to use that blow up. 4 THE COURT: You're 5 withdrawing it. 6 MR. MCCLAIN: That blow up 7 I'm not going to use. 8 THE COURT: Okay. 9 MR. GOUTMAN: Another 10 example, your Honor, Page -- I 11 have trouble reading these pages, 12 your Honor. 128, I believe it is, 13 under coating technology. 14 THE COURT: Where are you 15 reading? 16 MR. GOUTMAN: 128, a few 17 pages back from there. In the top 18 of the page, it says, "In situ 19 treatment." Then it says "Coating 20 Technology." What they're talking 21 about and what he wants to read or 22 blow up or has blown up is the 23 second paragraph under Coating 24 Technology. "In practice, because
59 1 again, your Honor, the table is 2 one thing. The portions that he 3 wants to read or blow up and show 4 this jury are another problem 5 entirely. They're very 6 prejudicial and they have nothing 7 to do with this case. 8 Another example, your Honor, 9 Page 126, where it says, "deep 10 concrete removal," like that has 11 something to do with this case. 12 You will see the first 13 sentence, "Long-term open use of 14 PCB in certain industrial 15 applications that resulted in 16 isolated cases of deep PCB 17 penetration of concrete." Well, 18 the plaintiffs in their blow up 19 have omitted that sentence, lifted 20 it out and blown up the rest of 21 that paragraph. 22 MR. MCCLAIN: Where are you 23 talking about, Mr. Goutman? 24 MR. GOUTMAN: Page 126 under	61 1 of any ongoing decontamination 2 projects involving industrial 3 property, transfer or long-term 4 liability issues." In any event, 5 what he is talking about there is 6 the use of sealants on top of 7 concrete. What does that have to 8 do with this case? 9 MR. MCCLAIN: I will tell 10 you, if you'd like to know. 11 MR. GOUTMAN: Sure. I'd 12 like to hear it. 13 MR. MCCLAIN: Your Honor, 14 this witness has the opinion, and 15 he has expressed it, that PCBs 16 stay put, stay put, as Mr. Goutman 17 has said. They don't move 18 anywhere. They don't go 19 anyplace. They have no vapor 20 pressure. Why be worried about 21 PCBs on surfaces? And yet he 22 writes that even after you 23 decontaminate concrete you got to 24 seal it. If they don't go

62 1 anyplace, why do you have to put a 2 sealer over PCBs on concrete? If 3 there's no ability for these to 4 move, if they truly do stay put, 5 stay put, why do you have to put 6 an epoxy coating to keep them away 7 from people? That's the issue. 8 Why is it, Mr. Witness, if, in 9 fact, they do not move and they do 10 not vaporize and they don't 11 present any risk to building 12 occupants, why do you then have to 13 seal them after you decontaminate 14 concrete? That's the issue. 15 MR. GOUTMAN: Well, Mr. 16 McClain, maybe you should read the 17 article, because he says why in 18 the first paragraph, "Concrete 19 sealants are often used as a means 20 of finishing industrial floors for 21 spill proofing, that is protecting 22 against future spills, or wear 23 resistance, wearing down the 24 concrete."	64 1 maybe before remediation, putting 2 a sealant on top of the concrete, 3 something that didn't even happen 4 in this building, where are we? 5 What does this have to do with 6 this case? There is nothing in 7 this paragraph about PCBs moving 8 around. He is saying putting a 9 sealant down to prevent future 10 spills or for wear resistance. 11 There is nothing about PCBs moving 12 around. 13 MR. MCCLAIN: Look at what 14 he says at 128, your Honor, in the 15 middle of that paragraph, "like 16 capping a landfill. Coating PCB 17 contamination in concrete requires 18 long-term maintenance and 19 long-term responsibility for the 20 user." We talked about -- 21 Secretary Crowell testified at 22 length how he was concerned that 23 if they left concrete -- left PCBs 24 in the floor it would require them
63 1 MR. MCCLAIN: Then it 2 says, "These coating techniques 3 have some applicability to PCB 4 contamination situations on the 5 principle that a sound coating 6 material would at least 7 temporarily inhibit human exposure 8 in the workplace." 9 MR. GOUTMAN: That's right. 10 MR. MCCLAIN: That's what he 11 says. So the issue is why are 12 coatings used and needed to 13 inhibit people being exposed to 14 them in the workplace if they 15 don't go anywhere? 16 MR. GOUTMAN: Your Honor, 17 this, I think, illustrates how far 18 afield we are. There is, number 19 one, no testimony that there is 20 any concrete problem in this 21 building that there was any 22 penetration of PCBs. Now we're 23 talking about assuming there was 24 penetration after remediation, or	65 1 to be involved in long-term 2 maintenance and long-term 3 responsibility to keep that 4 material from coming out again, 5 and the witness confirms that 6 testimony from his own article. 7 The issue is that if you leave it 8 in place, even if you clean it up 9 to one, you've got long-term 10 maintenance and long-term 11 responsibility for the user at 12 that level and he has written 13 about it. It's relevant to this 14 case. We've had testimony about 15 the concerns the Commonwealth had 16 that they would have to maintain 17 this. That they would have to 18 continue to monitor it even if 19 they capped it, even if they 20 cleaned it down to one. 21 And so we talked in 22 Secretary Crowell's testimony 23 about filling the troughs with 24 lightweight concrete to cap them.

66 1 But he was concerned that that 2 would not be enough in terms of a 3 long-term solution to this 4 problem. So those issues have 5 been in this case and they 6 continue to roll around and this 7 witness has written about them. 8 MR. GOUTMAN: Your Honor, 9 maybe counsel can show me where 10 Mr. Crowell, who is not an expert 11 in anything, or at least not an 12 expert in any environmental field, 13 testify about a concrete problem. 14 He talked about the under 15 flooring. But in any event, your 16 Honor, there is no expert 17 testimony that there was any PCB 18 penetration of concrete. So now 19 we're going to read to the jury 20 all the problems that might occur 21 if there is PCB penetration of the 22 concrete and all the, quote, 23 concerns. That's highly 24 prejudicial. It has nothing to do	68 1 therefore, what you do about it, 2 what problems might occur if there 3 is penetration of concrete 4 shouldn't go before this jury. 5 MR. MCCLAIN: Your Honor, he 6 testified at length about the 7 specification. We are looking for 8 Secretary Crowell's testimony. I 9 had it out and I had it copied, 10 but we didn't bring it over. So 11 we'll show you where that is, 12 too. 13 But in terms of the 14 remediation of this building, he 15 testified on direct that he 16 examined these specifications, 17 that the specifications were 18 written by people that didn't know 19 anything about this subject, that 20 they were overblown, and at three 21 places they talk about cleaning 22 the concrete in exactly the same 23 terms he talks about in this 24 article at Page 13, your Honor, at
67 1 with this case. If they wanted to 2 present a PCB penetration of the 3 concrete case they could have 4 presented it. The problem they 5 have, your Honor, is that they 6 have no data to support any 7 argument that there was PCB 8 penetration of the concrete. So 9 now they want to devote at least a 10 substantial -- from the number of 11 exhibits here, there might be 12 eight or ten exhibits from this 13 one article -- a substantial 14 amounts of cross examination 15 devoted to what you do when PCBs 16 penetrate concrete. And that's 17 highly prejudicial. It's not in 18 this case. If, in fact, Mr. 19 Woodyard's opinions are so unfirm 20 concerning what he has testified 21 to, why are we talking about 22 penetration of concrete? There 23 has been no testimony about 24 penetration of concrete. And,	69 1 Page 1. 2 THE COURT: What are you 3 reading from? 4 MR. MCCLAIN: I'm reading 5 from the document in evidence the 6 Penn 2584.1, the project manual 7 for decontaminating the building. 8 And with the Court's permission, I 9 will just hand you the document. 10 It's tabbed at those locations. 11 MR. GOUTMAN: Where are you 12 directing him? 13 MR. MCCLAIN: The three 14 tabs. 15 MR. GOUTMAN: Your Honor, 16 again, there is nothing there -- 17 in answering the Court's original 18 question, there is nothing in 19 there that says that there is any 20 PCB penetration of concrete. What 21 they did was remove the mastic. 22 But there is nothing in that 23 document that says that PCBs 24 penetrated the concrete. There is

70 1 no test data that shows that. 2 It's not there. 3 THE COURT: Am I correct 4 this is for the new building, the 5 Keystone Building? 6 MR. MCCLAIN: That was 7 decontamination before the 8 building was torn down, before the 9 T&S Building was torn down. 10 MR. GOUTMAN: Those were 11 specifications, your Honor. There 12 are no facts of record here that 13 suggest that there was any PCB 14 penetration. Those are 15 specifications should they find 16 PCB penetration. 17 MR. MCCLAIN: No, your 18 Honor. We had testimony that they 19 actually did it. They actually 20 shot blasted the concrete. We had 21 pictures of it. We had Mr. Bond's 22 testimony regarding it. We had 23 Mr. Haliwell's opinion that the 24 concrete was contaminated, which	72 1 building. The specifications that 2 he has shown you deal with 3 specifications for demolition. 4 There is no testimony that 5 anything had to be done to the 6 concrete for reoccupancy of the 7 building. None. 8 MR. MCCLAIN: Your Honor, 9 Mr. Goutman really ought to go and 10 read Mr. Haliwell's testimony that 11 I just gave him because that's 12 what he was talking about. The 13 Court allowed him to opine that at 14 that point in the testimony about 15 what was necessary to clean down 16 to a level of one. And he talks 17 about the necessity of further 18 shot blasting of the concrete. He 19 talked about that it had been done 20 but it needed to be done more 21 because it was contaminated with 22 PCBs in his opinion. That the 23 Court allowed. The Court allowed 24 that testimony over objection and
71 1 is a fact before the jury. 2 MR. GOUTMAN: And the 3 testimony was that shot blasting 4 occurred to remove the mastic from 5 the surface. That was the 6 testimony. 7 MR. MCCLAIN: That's not 8 what the specification calls for. 9 It calls for shot blasting of the 10 concrete to remove contamination 11 in the concrete. 12 MR. GOUTMAN: Your Honor, 13 the record before this Court is 14 that whatever shot blasting 15 occurred had occurred to remove 16 the mastic. 17 MR. MCCLAIN: I can't 18 remember the number. It's on the 19 first page, your Honor. 20 THE COURT: Pen 2584.1. 21 MR. GOUTMAN: I should also 22 add, your Honor, that plaintiffs 23 are trying to tie this in to some 24 problem with reoccupying the	73 1 it is part of this record. 2 MR. GOUTMAN: Well, I guess, 3 your Honor, I don't know where in 4 the record it says plaintiffs have 5 established that, number one, 6 we're talking about bulk sampling, 7 and NIOSH does not have a bulk 8 guideline. It's a wipe surface 9 guideline. So they have not 10 established that in order -- by 11 any expert that in order to occupy 12 a building you would have to clean 13 down to one part per million, 14 which is the bulk standard. But 15 in any event, your Honor, that's 16 neither here nor there. The point 17 is, your Honor, they have cited 18 absolutely no evidence that there 19 was PCB penetration of concrete. 20 The issue here is whether this 21 jury is going to be entertained 22 with an hour's worth of questions 23 about what to do in cases of PCB 24 penetration of concrete.

74 1 MR. MCCLAIN: Your Honor, I 2 found where Secretary Crowell was 3 asked about this subject and where 4 he expressed the exact concerns 5 that are in the article about 6 maintenance of concrete, if you'd 7 like to read it, Mr. Goutman, 8 before I read it to the Court and 9 before I hand it up to him. 10 MR. GOUTMAN: What are you 11 referring to? 12 MR. MCCLAIN: 158, 159, 160, 13 161. He talks about capping the 14 concrete, he talks about long-term 15 concerns about maintaining PCBs in 16 place, even if they were entombed 17 in a new layer of concrete. 18 MR. GOUTMAN: No. He is 19 talking about filling the 20 electrical cells with lightweight 21 concrete. That's what he is 22 talking about here. 23 MR. MCCLAIN: Right. 24 MR. GOUTMAN: In any event,	76 1 a Thursday, your Honor. I'm sure 2 that came to your mind 3 immediately. A little levity 4 never hurts. 5 I was asking about this 6 subject of entombing the Q-deck 7 trenches because the idea was they 8 could never get those cleaned up. 9 You remember that. He said, "What 10 about entombing these trenches 11 with concrete with the PCBs in 12 them? What was your feeling about 13 whether that was a good idea?" He 14 says, "I had -- for a long time I 15 had a problem with that because 16 people come into the building and 17 did some maintenance work, what 18 have you. They weren't aware of 19 that. People can drill through 20 those trenches. The possibility 21 of releasing PCBs when people put 22 suspended ceilings -- now remember 23 that the decking, because it's 24 decking and below when they put
75 1 I don't see how Secretary Crowell 2 presents the expert foundation for 3 any kinds of questioning about 4 whether there was PCB 5 penetration. Now, again, if he 6 can establish through this witness 7 that there was PCB penetration of 8 concrete, fine. But he has no 9 foundation for that line of 10 questioning at this point. 11 MR. MCCLAIN: Your Honor, 12 now we're missing the point. The 13 point on Secretary Crowell's 14 testimony, let me read it to you, 15 if I could. Could I have the mike 16 so the Court can hear me, if I 17 could? Thanks. Your Honor, what 18 Secretary Crowell testified about 19 was that now -- he was talking 20 about the Q-deck. 21 THE COURT: What was that 22 date? 23 MR. MCCLAIN: This was June 24 3rd of '99. The record says it was	77 1 hangers into the suspended 2 ceilings they shoot into that area 3 and hang suspended ceilings. So 4 there's a possibility that that 5 could be disturbed." Then he goes 6 on to talk about disturbing the 7 PCBs. That's what Mr. Woodyard 8 talks about here in regard to 9 capping the concrete. He says 10 that -- this is on coating 11 technology at 128. "Furthermore, 12 like capping a landfill," this is 13 at Page 128, Judge. 14 THE COURT: Right. You are 15 reading what section? 16 MR. MCCLAIN: That paragraph 17 under the heading Coating 18 Technology, the paragraph that 19 begins "in practice". I'm reading 20 the line that says, "Like capping a 21 landfill coating PCBs in concrete 22 requires long-term maintenance and 23 long-term responsibility for the 24 user." And that's what Secretary

78 1 Crowell was talking about. He was 2 talking about that same problem 3 and why he was concerned that even 4 filling in these trenches didn't 5 relieve him of the responsibility 6 in regard to PCBs. And the 7 witness recognizes that principle 8 in his article. It's all 9 interrelated and it relates to the 10 subjects we've been dealing with 11 and this witness has written about 12 it and I think it would be 13 informative to let the jury know 14 some of the things that he has 15 written. They confirm, in our 16 view, the plaintiff's position on 17 these things. That's what cross 18 examination is all about. So we 19 would like to be able to use this 20 article for a variety of purposes, 21 and we've shown you several that 22 are relevant in this case. 23 MR. GOUTMAN: Your Honor, 24 plaintiff's counsel just	80 1 name in vain, that there are ten 2 separate ways I can get this into 3 evidence, and I think that I've 4 laid out for the Court ten 5 separate ways. 6 MS. HERSCHEL: He needs 11, 7 your Honor. 8 MR. MCCLAIN: I will 9 probably come up with it, because 10 I've got boxes of stuff that I 11 prepared on this subject. 12 MS. HERSCHEL: Your Honor, 13 Mr. McClain wants to cross examine 14 Mr. Woodyard about his views on 15 problems potentially created when 16 PCBs penetrate concrete. He can't 17 do that in this case because there 18 is no evidence that PCBs 19 penetrated concrete and presented 20 any kind of potential problem in 21 that area for the Commonwealth 22 agencies. The mention of concrete 23 by Mr. Crowell is collateral. He 24 is talking about using concrete to
79 1 represented to the Court that 2 there was something in this 3 transcript about Secretary 4 Crowell's concerns about 5 penetration of PCBs in concrete. 6 There is nothing there. I will 7 hand it up. 8 MR. MCCLAIN: He can read 9 that whole section. 10 MR. GOUTMAN: Not that 11 Secretary Crowell could lay the 12 necessary factual expert 13 predicate. What he is talking 14 about is penetration of the 15 electrical cells and they were 16 going to seal them with 17 lightweight concrete. That's the 18 only reference to concrete in the 19 pages plaintiff's counsel has 20 cited for the Court. 21 MR. MCCLAIN: Your Honor, 22 I'm reminded, on the issue of 23 levity again, I'm reminded of Mr. 24 Roux's comment, not to use his	81 1 fill in trenches that he was 2 worried about. So that there is 3 no basis for Mr. McClain to ask 4 Mr. Woodyard questions about his 5 views on problems created by PCBs 6 penetrated into concrete. 7 THE COURT: Is there 8 anything further? 9 MR. GOUTMAN: Nothing on 10 this document on the concrete 11 issue. I can proceed to the other 12 exhibit if the Court wishes, or if 13 the Court wants to rule on 14 concrete. Whatever the Court 15 wants. 16 THE COURT: The objection is 17 overruled. 18 MR. GOUTMAN: Your Honor, 19 could we have a continuing 20 objection so that I don't have to 21 keep on popping up and down? 22 THE COURT: Yes. 23 MR. GOUTMAN: Your Honor, 24 going back to the PCB Management

82 1 Handbook. 2 THE COURT: We're going back 3 to where? 4 MR. GOUTMAN: The PCB 5 Management Handbook. 6 MR. MCCLAIN: This one, your 7 Honor. Your Honor, it might be 8 easier for you to follow along if 9 you had my book. Would that be 10 easier than those pages? Are they 11 legible? 12 THE COURT: As long as we 13 deal with the pages that are 14 contained in here I can follow 15 them. 16 MR. MCCLAIN: Okay. Let me 17 make sure about that. What page, 18 Mr. Goutman? 19 MR. GOUTMAN: Well, that's 20 just it. My book is different 21 than yours. 22 MR. MCCLAIN: Tom, you want 23 this? 24 MR. GOUTMAN: Yes.	84 1 were present in the T&S Building. 2 MR. MCCLAIN: I will wait 3 until the Court has read the 4 paragraph. 5 THE COURT: I don't 6 understand the relevance of that 7 sentence. 8 MR. MCCLAIN: The sentence 9 that I want to read is it's 10 impossible to identify all of 11 these materials as PCB 12 contaminated -- no, that's not 13 it. "It's important to recognize 14 that the residual contamination 15 from these sources can exist in 16 industrial and commercial 17 settings. PCB spills or fires 18 that involve transformers, 19 capacitors or other equipment in 20 these locations can inadvertently 21 reveal contamination from these 22 residual sources and misrepresent 23 the spill-related contamination. 24 The point that he makes is that
83 1 MR. MCCLAIN: I have got the 2 references to my pages on the 3 blowups. 4 MR. GOUTMAN: Your Honor, 5 Page 27. 6 MR. NEAL: What exhibit 7 number is that? 8 MR. MCCLAIN: This is 408, 9 Ken. You don't have a copy. 10 MR. GOUTMAN: The quote that 11 he wants to read is from the 12 middle -- he has cut off the first 13 part of the middle paragraph and 14 wants to read the second part, 15 which starts with, "It is important 16 to recognize that residual 17 contamination from these sources." 18 My objection is, your Honor, not 19 only is it misleading to crop off 20 what the reference is, these 21 sources, but if you read up here, 22 there is no expert foundation that 23 any of, quote, these sources, 24 close quote, that contain PCBs	85 1 frequently following a fire 2 testing is done for PCBs and you 3 find residual contaminations, 4 which are ascribed to the fire. 5 That's what we believe the 6 defendant is doing here now. 7 They're ascribing preexisting 8 contamination to the fire. The 9 witness has written about this 10 subject matter and the subject 11 matter is relevant here. He is 12 talking these other applications, 13 PCBs and investment casting wax, 14 dye, carriers for carbonless 15 papers and colored inks are just 16 other sources for PCBs in 17 buildings which preexist fires. 18 And so what I want to ask him 19 about is this subject matter that 20 fires frequently disclose 21 preexisting contamination, isn't 22 that true? Isn't that what that 23 paragraph refers to? It's not 24 just restricted. If Mr. Goutman

86 1 wants to read all that and if the 2 witness wants to say that only 3 applies to investment casting wax 4 in dye carriers for carbonless 5 paper, that's a subject for 6 redirect. But the subject matter 7 is what we're dealing with here. 8 We believe that the fire disclosed 9 previous contamination that 10 existed from the ductwork during 11 the heating season. Mr. Kominsky 12 has put forward the additional 13 idea that PCBs off-gas during the 14 installation of those ducts when 15 you tape them. It was preexisting 16 in the building and the fire 17 disclosed that to us is our view 18 of the evidence. And the witness 19 has written about that subject 20 here. That's its relevance in 21 this case. 22 MR. GOUTMAN: The problem is 23 he hasn't, your Honor. The 24 plaintiff hasn't presented no	88 1 THE COURT: Aren't you more 2 referring to the second sentence 3 of that or the last sentence of 4 that paragraph that deals with PCB 5 spills or fires that involve 6 transformers, capacitors rather 7 than the first sentence that you 8 read? 9 MR. MCCLAIN: I'm not 10 following you, your Honor. 11 THE COURT: Well, you 12 indicated that the paragraph that 13 you want to read, or the portion 14 you want to read, quote, in that 15 first full paragraph on Page 27, 16 it is important to recognize that 17 the residual contamination from 18 these sources can exist in 19 industrial and commercial 20 settings. 21 MR. MCCLAIN: I have got the 22 whole quote. I go on PCB 23 spills -- 24 THE COURT: Wait a minute.
87 1 evidence that the T&S Building had 2 PCB containing investment casting 3 wax, dye carriers for carbonless 4 copy paper, colored inks and so 5 forth. There's no evidence of 6 that. 7 MR. MCCLAIN: Your Honor-- 8 MR. GOUTMAN: There's no 9 evidence that anything they are 10 ascribing to what this paragraph 11 means is mentioned in this 12 paragraph. 13 MR. MCCLAIN: Your Honor, 14 this is cross examination. The 15 subject matter is the same subject 16 matter that we're dealing with, 17 and I'm allowed latitude to be 18 able to ask the witness. If he 19 disagree that it applies here, 20 then he can say that. That's 21 all. If the witness doesn't agree 22 that that's the situation that 23 we're dealing with, he can say 24 that.	89 1 I'm sure you can read. Honest. 2 MR. MCCLAIN: I have blown 3 up the whole quote and what I'm 4 saying. 5 THE COURT: And I'm picking 6 it apart. 7 MR. MCCLAIN: Okay. 8 THE COURT: Can I go back 9 and pick? Okay. 10 MR. MCCLAIN: It's your 11 court. 12 THE COURT: Thank you. The 13 first part that you wanted to read 14 is, "It is important to recognize 15 that residual contamination from 16 these sources, these sources can 17 exist in industrial and commercial 18 settings." Is that correct. 19 MR. MCCLAIN: Yes. 20 THE COURT: Now "these 21 sources" refer to the paragraph 22 above it, the sentences above it 23 when we're talking about 24 carbonless paper, colored inks,

90 1 casting wax and dye carriers, et 2 cetera, et cetera, et cetera. We 3 don't have that here. The 4 sentence that I thought that you 5 might -- that you were more 6 interested in was, "PCB spills or 7 fires that involve transformers 8 and capacitors," which is what we 9 do have here. 10 MR. GOUTMAN: Your Honor, 11 that same sentence refers to 12 "these residual sources." So 13 it's the same problem, your 14 Honor. The second to the last 15 line there, "these residual 16 sources." 17 MR. MCCLAIN: Your Honor -- 18 MR. GOUTMAN: It's the same 19 problem. 20 MR. MCCLAIN: I think the 21 witness would agree, and I can lay 22 a foundation before we show it, 23 that other applications aren't 24 restricted. These are just	92 1 the second of those two sentences. 2 MR. MCCLAIN: Okay. 3 MR. GOUTMAN: Your Honor, 4 Page 3, introduction. 5 THE COURT: Of the same 6 document? 7 MR. GOUTMAN: Yes. Counsel 8 has blown up that part of the 9 first paragraph that starts 10 with, "Partly because PCBs comprise 11 the only chemical class explicitly 12 controlled by an act of congress. 13 These chemicals are a popular 14 focus for public and the news 15 media." I don't know what the 16 relevance of that is. 17 MR. MCCLAIN: It goes on to 18 say, "This special treatment has 19 helped create a regulatory and 20 business subculture that targets 21 PCBs as a major environmental 22 hazard." And that's his 23 business. He is part of this 24 business subculture that targets
91 1 examples. PCB investment casting 2 wax, dye carriers for carbonless 3 papers. He'd agree that other 4 applications would include 5 building products. I think that 6 the witness would agree with that 7 if I asked him on the stand and I 8 will do that as a foundation and 9 that will clarify that. 10 THE COURT: If we have the 11 foundation as -- I still do not 12 believe that the first sentence of 13 that document is relevant, and 14 that is the sentence beginning "it 15 is important to recognize." 16 MR. MCCLAIN: Okay. But I 17 will ask him some questions about 18 foundation before we show that 19 blow up. 20 THE COURT: As I say, that I 21 would excise. 22 MR. MCCLAIN: I understand. 23 THE COURT: If you have a 24 foundation then you may get into	93 1 PCBs as a major environmental 2 hazard and it goes to his entire 3 credibility, because what this guy 4 does is goes around, in my view, 5 and tells business clients they've 6 got a real problem on their hands 7 and they need to hire him to clean 8 it up. He is part of this 9 business and regulatory subculture 10 that targets PCBs as a major 11 environmental hazard, and yet he 12 has come on the stand here to say 13 we didn't have much of a problem. 14 MR. GOUTMAN: Well, your 15 Honor, I think the problem with 16 plaintiff's argument is there was 17 no PCB problem in the T&S 18 Building. Pennsylvania Department 19 of Health and the various 20 plaintiffs in this case said so 21 time and again until they decided 22 to sue the PCB defendants. 23 But in any event, everything 24 that Mr. Woodyard said is

94 1 completely consistent with what 2 the Pennsylvania Department of 3 Health, the Pennsylvania 4 Department of Transportation and 5 DGS said year after year. But 6 leaving that aside, your Honor, 7 the fact that the public and the 8 news media have created a 9 subculture is not relevant to this 10 case. 11 MR. MCCLAIN: It's partly 12 because PCBs comprise the only 13 chemical class explicitly 14 controlled by an act of congress, 15 which the jury has already heard 16 about and he recognizes this and 17 he is part of this business 18 subculture that targets PCBs as 19 major environmental hazard. A 20 major environmental hazard are his 21 words. And the jury has a right 22 to know that that's how he has 23 characterized PCBs. 24 THE COURT: Overruled.	96 1 and the Court has allowed them on 2 the issue of defect. The issue in 3 this instance is the U.S. out of 4 the mainstream. I mean, is this 5 an overreaction by our government 6 or have others reacted in the same 7 way? And the issue is, of course, 8 we reacted in the same way every 9 place it's been dealt with. And 10 that's what the witness -- that's 11 why the witness points it out. 12 The witness brings it to the 13 attention of the reader in his PCB 14 management handbook to show the 15 U.S. Government is not out of sync 16 with everybody else. Everybody 17 thinks this stuff needs to be 18 banned. So that's the essence of 19 the paragraph. 20 MR. GOUTMAN: Well, your 21 Honor, I believe the Court 22 permitted the United States 23 regulations because they're 24 relevant to the T&S Building,
95 1 MR. GOUTMAN: Next, your 2 Honor, Page 5, I believe, relates 3 to most industrialized nations 4 have since imposed their own 5 controls and they talk about the 6 regulations of Canada and Germany 7 and so forth. I don't know what 8 the relevance of that is to this 9 case. It's the middle paragraph. 10 MR. MCCLAIN: Page 5. 11 THE COURT: On Page 5. 12 MR. GOUTMAN: Enacted in 13 1976, and they go on to talk about 14 the regulations in United Kingdom, 15 Norway, Canada and Germany. 16 THE COURT: Is it the whole 17 paragraph? 18 MR. MCCLAIN: Yes. 19 MR. GOUTMAN: I don't 20 believe that those regulations are 21 applicable to the T&S Building. 22 MR. MCCLAIN: The issue is 23 the jury already knows about the 24 U.S. regulations. These others --	97 1 since the T&S Building is located 2 in Harrisburg, Pennsylvania USA 3 what Canada regulations might be 4 or what United Kingdom regulations 5 might be is irrelevant here. 6 MR. MCCLAIN: We've heard 7 about studies all around the 8 world. We heard about studies 9 from Dr. James of people in the 10 Netherlands. We heard about other 11 children that have been studied in 12 these other populations, Norway. 13 We heard about a study from 14 Norway. This is all related to 15 the essence -- 16 THE COURT: Only the first 17 sentence would be admissible. 18 MR. MCCLAIN: Actually, I 19 think that's the way we have them 20 blown up. 21 THE COURT: The objection is 22 sustained as to the remaining 23 portion of the paragraph. The 24 first sentence may be read.

98 1 MR. MCCLAIN: Okay. 2 MR. GOUTMAN: The next 3 thing, your Honor, is on Page 5 at 4 the very bottom. 5 THE COURT: Now, where are 6 you? 7 MR. GOUTMAN: I'm on the 8 same page, the last line of that 9 page under bioconcentration. Like 10 chlorinated pesticides, the 11 structure of PCBs bioconcentrate, 12 bioaccumulate and biomagnify in 13 the food chain. There is nothing 14 that this witness has said on 15 direct about biomagnification in 16 the food chain. There is nothing 17 that he has said that this could 18 be used to impeach. It is well 19 outside whatever the purposes this 20 witness was called for and it's 21 irrelevant to this witness' 22 testimony. 23 MR. MCCLAIN: It's the same 24 issue the Court has already ruled	100 1 objection with the appropriate 2 subject matter. 3 THE COURT: It will apply to 4 CertainTeed and Courtaulds. 5 MS. MEYERS: That's correct, 6 your Honor. Courtaulds also joins 7 from all the objections. 8 MR. MCCLAIN: Your Honor, I 9 need -- we have spread these 10 exhibits out all over the place 11 going through them. I need just a 12 minute to organize them, if I 13 could have it. It will take less 14 than five to probably put them in 15 order. 16 THE COURT: We still have to 17 then tailor our cross examination 18 to allow for reasonable luncheon 19 period, but we will commence 20 testimony before lunch. 21 MR. MCCLAIN: I would like 22 to, sure. I will be ready within 23 five minutes. 24 THE COURT: That's fine.
99 1 on regarding the study of primates 2 and developmental problems. It 3 goes to the issue of safety. The 4 witness has written about it. 5 This is one of the reasons why he 6 goes on to say why it's regulated 7 and why we're concerned about it, 8 and it relates to the general 9 issue of his testimony about what 10 is safe and what isn't. 11 THE COURT: How much of that 12 paragraph? 13 MR. MCCLAIN: Just that 14 sentence, isn't it? 15 MR. GOUTMAN: Yes. 16 MR. MCCLAIN: Just that 17 sentence. 18 THE COURT: Overruled. 19 MR. GOUTMAN: That's all I 20 have. 21 MS. HERSCHEL: Your Honor, 22 CertainTeed, of course, joins in 23 the objection that Mr. Goutman has 24 made and asks for a continuing	101 1 We'll take a five-minute recess. 2 (Recess is taken at this 3 time.) 4 THE COURT CRIER: You may be 5 seated. This Court is in session. 6 THE COURT: Good morning. 7 THE COURT CRIER: Sir, state 8 your name for the record. 9 THE WITNESS: John Woodyard. 10 THE COURT CRIER: I remind 11 you that you are still under oath. 12 MR. MCCLAIN: May I proceed, 13 your Honor? 14 THE COURT: Yes. 15 MR. MCCLAIN: Good morning, 16 ladies and gentlemen. 17 THE JURY: Good morning. 18 * * * 19 EXAMINATION 20 * * * 21 BY MR. MCCLAIN: 22 Q. Good morning, Mr. Woodyard. 23 I want to take up where we left off 24 yesterday -- where you left off, anyway,

1 with Mr. Goutman to see if I have this
2 right. The last number you put up was
3 that you thought that it would take 1.3
4 million to remove the asbestos and only
5 \$100,000 to decontaminate the building
6 for PCBs; is that right?

7 A. My original estimate was
8 13.3, actually. I think you read 1.3.

9 Q. I'm sorry. 13.3, and then
10 \$100,000 for the PCBs; am I right?

11 A. Yes. The PCB aspects of the
12 asbestos abatement.

13 Q. Just so that I'm clear, as I
14 remember from your qualifications, you
15 have been paid over \$250,000 in this case
16 alone; am I right?

17 A. My firm has been paid, but
18 that includes lab work, that includes
19 database management for all those
20 samples. It's a lot of work.

21 Q. For your participation your
22 firm has been paid \$250,000; am I right?

23 A. Approximately, yes.

24 Q. And it's your testimony to

1 this jury that the PCB component of this
2 building would have cost us \$100,000; is
3 that right?

4 MR. GOUTMAN: Objection.
5 That isn't what he said, your
6 Honor.

7 MR. MCCLAIN: Your Honor,
8 this is cross examination.

9 THE COURT: Overruled.
10 BY MR. MCCLAIN:

11 Q. That's the number you had up
12 here, Mr. Woodyard, \$100,000.

13 A. That \$100,000 is the PCB
14 related increment of that asbestos
15 abatement project.

16 Q. Right. And that's your
17 estimate, right, \$100,000 for the PCB
18 related increment; is that right?

19 A. Yes, sir.

20 Q. You have charged \$250,000
21 for your participation in this case; is
22 that right?

23 A. My firm has for all the work
24 we've done, yes.

1 Q. Now, you have been working
2 with Mr. Goutman for how long? Two
3 years?

4 A. Approximately three,
5 actually.

6 Q. And you have gotten pretty
7 friendly with him; isn't that right?

8 A. I know Mr. Goutman.

9 MS. MEYERS: Objection, your
10 Honor, to the relevance of that
11 question.

12 MR. MCCLAIN: It goes to
13 credibility and bias, your Honor.

14 THE COURT: Overruled.

15 BY MR. MCCLAIN:

16 Q. In fact, he calls you Woody,
17 doesn't he?

18 A. I ask that outside the
19 courtroom everybody call me Woody.

20 Q. Well, you didn't ask me to
21 call you Woody when I took your
22 deposition, did you?

23 A. I consider that inside the
24 courtroom, but we'll have a chance

1 someday, hopefully.

2 Q. And from your association
3 with Mr. Goutman you have gotten another
4 case for Monsanto Company down in Alabama
5 that you are working on; isn't that true?

6 A. Actually, it has nothing to
7 do with my association with Mr. Goutman.

8 Q. You are doing another case
9 for Monsanto in Alabama.

10 A. Yes, sir, but I got involved
11 in that case with no relationship at all
12 through Tom. It was a completely
13 different avenue.

14 Q. Through Monsanto?

15 A. That's correct.

16 Q. But before you met Mr.
17 Goutman you have, as you told the jury,
18 written about PCBs; is that correct?

19 A. Yes, sir.

20 Q. One of the things that
21 you've written is the PCB management
22 handbook; isn't that right? By John P.
23 Woodyard and James J. King?

24 A. Yes, that's correct.

1 Q. You can buy this book from
2 industrial hygiene supply stores and
3 other things; isn't that right?
4 A. You could buy the book.
5 It's out of print now, but back in the
6 early 90s you could.
7 Q. Would it surprise you that I
8 bought this book a month ago?
9 A. Thank you. Thank you.
10 Q. It's still for sale, isn't
11 it?
12 A. Not to my knowledge. People
13 call and say it's been out of print for a
14 couple years.
15 Q. You get royalties when it's
16 sold, don't you?
17 A. Yes. Well, my daughter's
18 college fund.
19 Q. The Indian Princess.
20 A. Absolutely.
21 Q. We are going to talk about
22 that in just a little while. In this
23 book you have written various
24 instructions and information that other

1 professionals can use when considering
2 the issue of PCB cleanups; am I right?
3 A. Yes, sir.
4 Q. And I have taken some quotes
5 from that because I'd like to ask you
6 about them from your book. I have
7 excerpted portions of it, unless you have
8 a copy with you today.
9 A. No, I do not.
10 Q. And I have blown them up,
11 Mr. Woodyard. But this is just so you
12 can confirm whether or not the quotes are
13 accurate. I think counsel has looked at
14 them, but I want you to have a chance to
15 look at them and be sure about that,
16 too.
17 MR. GOUTMAN: Your Honor, I
18 think it's important the witness
19 have the book in front of him, the
20 entire book in case any question
21 of context arises.
22 MR. MCCLAIN: I would be
23 happy to.
24 THE COURT: That's fine.

1 MR. GOUTMAN: Mr. McClain,
2 could you show me the exhibit
3 before you show it? Thank you.
4 MR. MCCLAIN: It's the same
5 order we just went over with the
6 Court.
7 MR. GOUTMAN: I just would
8 like to see it first.
9 MR. MCCLAIN: Fine.
10 BY MR. MCCLAIN:
11 Q. Now, Mr. Woodyard, in this
12 book that you wrote for other
13 professionals, at Page 3 you have a
14 quote. Would you turn to Page 3.
15 A. Okay. I'm there.
16 Q. The quote -- counsel, you
17 with me? I have it blown up so that the
18 jury can read along with us. You
19 wrote, "Partly because PCBs comprise the
20 only chemical class explicitly controlled
21 by an act of congress, these chemicals
22 are a popular focus for the public and
23 the news media. The special treatment
24 has helped create a regulatory and

1 business subculture that targets PCBs as
2 a major environmental hazard." That's
3 what you wrote, didn't you?
4 A. That's correct. That's
5 what's in here.
6 Q. Yes. It's true, isn't it,
7 that your company is in the business of
8 addressing major environmental hazards;
9 isn't that true? Roy F. Weston, that's
10 your business?
11 A. Well, we do environmental
12 engineering and service work.
13 Q. As you told the jury, on
14 some dozens of PCB projects you have been
15 involved in cleanups; am I right?
16 A. Yes, that's correct.
17 Q. Now, there was -- there is
18 part of this quote that I want to come
19 back to and I think that we've heard it
20 before. I want to know, it's your view
21 that PCBs are the only chemical class
22 explicitly controlled by an act of
23 congress. That's true, isn't it?
24 A. Yes. The Toxic Substance

1 Control Act was passed in 1976 to
2 regulate the use of all chemicals in the
3 United States, and at the time there were
4 no regulations that things like PCBs
5 could be subjected to. So congress
6 included PCB as one of the chemicals they
7 wanted to regulate.

8 Q. Specifically PCBs?

9 A. Yes, sir.

10 Q. The only class explicitly
11 controlled by an act of congress, PCBs
12 are special in the law.

13 A. Because largely the popular
14 focus of the media. There was concern
15 with Congress that they needed to have
16 some regulatory control and that's what
17 they established.

18 Q. And we are going to talk
19 about some of the reasons for that right
20 now. Look at Page 4 of your handbook,
21 Mr. Woodyard. This quote at Page 4
22 is, "PCBs developed about a hundred years
23 ago." So they were not natural in the
24 environment; am I right? They were

1 man-made about a hundred years ago;
2 right?

3 A. They were first developed in
4 the laboratory a hundred years ago, as I
5 understand. They weren't really
6 manufactured for use until quite some
7 time after that.

8 Q. But the point is that they
9 are a synthetic chemical. They are not a
10 naturally occurring substance in the
11 environment; isn't that true?

12 A. That's correct.

13 Q. "PCBs developed about a
14 hundred years ago and are characterized
15 by chemicals stability, heat resistance,
16 low flammability, low solubility in water
17 and low electrical conductivity making
18 them suitable for many electrical and
19 high temperature industrial
20 applications. Unfortunately, these
21 characteristics are also viewed as
22 potential threats to human health and the
23 environment." That's what you wrote?

24 A. Yes. Again, referring back

1 to the media hype, if you will, about
2 PCBs and about how the concern translates
3 to regulators and legislators.

4 MR. MCCLAIN: Your Honor, so
5 that you are with us, it's at Page
6 4.

7 THE COURT: Page 4.

8 MR. MCCLAIN: I will call
9 out the page from now on. I
10 apologize.

11 BY MR. MCCLAIN:

12 Q. "Unfortunately, these
13 characteristics are also viewed as
14 potential threats to human health and the
15 environment." What you are referring to
16 is the chemical stability, low solubility
17 characteristics of these chemicals; isn't
18 that right? Isn't that what is viewed as
19 potential threats to human health in the
20 environment?

21 A. Not really. Those are
22 characteristics that made PCB the wonder
23 chemical that you are hearing about.
24 Before what concerned people is simply

1 their persistence in the environment and
2 the fact that you couldn't measure them.
3 At the time the laws were initiated and
4 the regulations were developed there
5 still was no certain knowledge that PCBs
6 were, in fact, a human health threat.

7 Q. You point that out at Page
8 5. You say, "In regard to the way they
9 act" -- your Honor, this is Page 5 of the
10 handbook.

11 THE COURT: We have it
12 BY MR. MCCLAIN:

13 Q. "Like chlorinated
14 pesticides." Tell the jury about some of
15 them they might remember. DDT was a
16 chlorinated pesticide, wasn't it?

17 MR. GOUTMAN: Objection,
18 your Honor. Can we go to side
19 bar?

20 (Side-bar discussion begins
21 at this time.)

22 MR. GOUTMAN: Your Honor,
23 this Court has residually
24 attempted to keep other chemicals

114 1 out of this case. Mr. McClain 2 would now like to tar and feather 3 PCBs with DDT and God knows what 4 else. I don't want to defend a 5 DDT case. There are many 6 distinguishing properties between 7 the chemicals toxicologically and 8 otherwise, and I think it's, 9 frankly, outrageous that this jury 10 is now being treated to a 11 comparison between DDT and PCBs. 12 This Court has continuously ruled 13 that this is a PCB case; not a DDT 14 or any other kind of case. 15 MR. MCCLAIN: I didn't make 16 the comparison. This is the quote 17 that's contained within the 18 article and the witness made the 19 comparison. He says, "Like 20 chlorinated pesticides PCBs 21 accumulate, bioaccumulate and 22 biomagnify in the human system. 23 That's his quote. And so the most 24 common example of a chlorinated	116 1 seeing here is doesn't the book 2 say this, doesn't the book say 3 that. The book speaks for 4 itself. 5 MR. MCCLAIN: These 6 statements are in contravention of 7 the statements that he has made 8 before the jury in regard to the 9 safety of these products and in 10 regard to the way that they need 11 to be handled and that they are 12 safe to be left in this building. 13 He has a right to be confronted 14 with his previous statements and 15 the jury can decide whether it 16 impacts his credibility. He 17 doesn't have to agree or 18 disagree. He wrote it. It's his 19 statement. It's not a learned 20 treatise. It's his own 21 statement. It is impeachment. 22 It's an admission against this 23 witness that he said these things 24 out of court. And so it's nothing
115 1 pesticides is DDT, but I will let 2 him answer the question. 3 MS. HERSCHEL: Just because 4 Mr. Woodyard treats a subject in 5 his professional papers doesn't 6 mean it can be bantered back and 7 forth in this courtroom. 8 MR. GOUTMAN: Your Honor, 9 while we're here, on to the manner 10 in which this is done. This is 11 not impeachment of a witness. 12 The witness is not being asked 13 whether -- in the abstract whether 14 he agrees or disagrees with a 15 proposition. He is merely being 16 shown portions of the book and 17 saying isn't this what it says, 18 isn't this what it says. This is 19 not impeachment. That is not the 20 proper use of anyone's 21 publications. The proper use of a 22 publication is if the witness says 23 something different and then you 24 confront him with it. All we're	117 1 different than in a deposition 2 where you present them and said 3 this is what you said in the 4 deposition, isn't it. And so we 5 have a situation here where he is 6 being -- the Court has already 7 ruled on all these statements. 8 MR. GOUTMAN: Except the 9 Court hasn't ruled that this can 10 be shown like a slide show. 11 Counsel is right. If the witness 12 had said something different in 13 his deposition you can read the 14 deposition, but you can't stand up 15 and say you said this in your 16 deposition, didn't you? And you 17 said that in your deposition. The 18 witness said nothing in his direct 19 about PCBs being banned or why 20 they were banned. He is not being 21 impeached at all. This is 22 essentially a closing speech by 23 plaintiff's counsel using excerpts 24 from the book. It's an improper

1 use of the material.
 2 THE COURT: At the moment
 3 we're here with the last sentence
 4 on Page 5. That's the only area
 5 that we're going to rule on and
 6 the objection is overruled.
 7 MR. MCCLAIN: Thank you,
 8 your Honor.
 9 THE COURT: That is a form
 10 of impeaching.
 11 (Side-bar discussion ends at
 12 this time.)
 13 BY MR. MCCLAIN:
 14 Q. I asked you for a
 15 chlorinated pesticide. Have you thought
 16 of one?
 17 A. No, I haven't.
 18 Q. Is DDT one such chlorinated
 19 pesticide?
 20 A. I don't know.
 21 Q. What did you intend when you
 22 wrote this, Mr. Woodyard? When you wrote
 23 chlorinated pesticide, did you have
 24 anything in mind?

1 A. The reference material that
 2 we looked at to create the summary that
 3 you are using pointed out that a number
 4 of chemicals like chlorinated pesticides
 5 bioaccumulate, which is well-known, and
 6 that's the first signal to scientists
 7 that they should look at these issues and
 8 determine whether there really is a
 9 health threat or not.
 10 Q. Like chlorinated pesticides,
 11 the structural components of PCBs
 12 bioconcentrate, bioaccumulate and
 13 biomagnify in the food chain.
 14 Bioconcentrate, what does that term mean?
 15 Can you tell us?
 16 A. It means that PCBs
 17 accumulate in certain parts of living
 18 organisms.
 19 Q. Is bioconcentrate different
 20 than bioaccumulate?
 21 A. In the sense that it would
 22 target a particular part of the organism,
 23 say a fat tissue or something.
 24 Q. In other words, they go to

1 certain parts of our body and accumulate
 2 there; am I right? Bioconcentrate?
 3 A. That's generally what that
 4 means.
 5 Q. So, like, in regard to PCBs,
 6 the literature that you looked at says
 7 they bioconcentrate in the liver, as an
 8 example. That would be an example of
 9 where they bioconcentrate; am I right?
 10 A. I don't know that. I'm
 11 typically familiar with fat accumulation
 12 of things like PCBs it.
 13 Q. Tell us what bioaccumulate
 14 means.
 15 A. It means that the amount of
 16 PCB, or whatever compound you are talking
 17 about, might tend to increase because the
 18 body doesn't remove it as fast as it
 19 might come in the body.
 20 Q. So you take some of it and
 21 it's retained in the body; is that the
 22 idea? It bioaccumulates.
 23 A. Some of it might. That's
 24 what that term is supposed to refer to.

1 Q. Because it's difficult to
 2 get rid of it because it's not water or
 3 fat soluble; right?
 4 A. I believe so.
 5 Q. And biomagnify in the food
 6 chain. What does biomagnify mean?
 7 A. I think biomagnify refers to
 8 the accumulation through food chain
 9 consumption, things that contain
 10 chemicals.
 11 Q. Doesn't biomagnify mean as
 12 it accumulates in the food chain it gets
 13 larger in various species? Isn't that
 14 what it means, biomagnify in the food
 15 chain?
 16 A. In a manner of speaking it's
 17 related to accumulation because it
 18 specifically identifies how PCBs got to
 19 you, whether it's through fish or
 20 something like that that might have low
 21 levels of PCB.
 22 Q. It's true, isn't it, Page 5,
 23 your Honor, you have also written the
 24 Abrupt U.S. PCB Banned in 1976 was Partly

122 1 Motivated by the Discovery of Widespread, 2 Low Level PCB Contamination Worldwide. 3 Is that what you wrote, Mr. Woodyard? 4 A. Yes, sir. 5 Q. And it's true, isn't it, 6 that -- 7 A. Excuse me for a second. I'm 8 not sure -- what you need to understand, 9 and I didn't point this out before, this 10 particular version of the book, the blue 11 version, was edited by somebody at the 12 publisher and it was sold without an 13 author review. And because they weren't 14 scientific editors they tended to make it 15 more journalistic. If you flip through 16 here there is headings that are totally 17 off the wall. Some of the terminology in 18 here would not have been mine. The term 19 "abrupt U.S. banned" is not something I 20 think I would have written. 21 Q. Mr. Woodyard, are you saying 22 that this book that is sold -- 23 THE COURT: May I see 24 counsel, please.	124 1 THE COURT: Then I don't 2 have a problem. 3 (Side-bar discussion ends at 4 this time.) 5 BY MR. MCCLAIN: 6 Q. Mr. Woodyard, this book has 7 been sold over the country with your name 8 on it, am I right? 9 A. There is a black version 10 that looks just like this that has been 11 sold all over the country. These were 12 recalled. I don't know where you bought 13 it. 14 Q. Sir, I can't testify where I 15 bought it, but it's true, isn't it, that 16 copy has been circulated all over the 17 country with your name on it; am I right? 18 A. I have no idea. 19 Q. You received royalties on it 20 that went into your daughter's college 21 fund; isn't that true? 22 A. Not for the blue version I 23 didn't, no. 24 Q. So the blue version somebody
123 1 (Side-bar discussion begins 2 at this time.) 3 THE COURT: The paragraph 4 that you are reading is not one 5 that was offered to the Court and 6 we had highlighted those areas. 7 MR. MCCLAIN: Mr. Goutman 8 didn't object to this one. This 9 one was most industrialized 10 nations. It was that point. 11 THE COURT: If you notice 12 that's out. And the next one -- 13 we skipped this one and the next 14 one was this one. 15 MR. MCCLAIN: Right. 16 THE COURT: The reason that 17 I'm bringing you here is because I 18 did not have the paragraph that 19 you are referring to highlighted 20 because I was not familiar with 21 this being part of the cross 22 examination. 23 MR. MCCLAIN: Mr. Goutman 24 didn't object to that paragraph.	125 1 somehow snuck some words in there? 2 MS. HERSCHEL: Objection to 3 the form. 4 THE WITNESS: That's 5 absolutely true. 6 MR. MCCLAIN: It's cross 7 examination, your Honor. 8 THE COURT: Overruled. 9 THE WITNESS: I would not 10 have used a term like "abrupt U.S. 11 PCB banned" because there wasn't 12 an abrupt U.S. PCB banned. There 13 was a law passed by congress that 14 directed EPA to develop management 15 procedures for continuing to 16 regulate how PCBs are to be used, 17 and it's perfectly legal today to 18 use PCBs for a number of things. 19 So there was no abrupt U.S. PCB 20 banned and I can't vouch for that 21 language. 22 BY MR. MCCLAIN: 23 Q. Well, in the book that bears 24 your name it says the abrupt U.S. PCB

1 banned in '76 was partly motivated by the
2 discovery of widespread, low level PCB
3 contamination worldwide; am I right?

4 A. That's what the blue book
5 says.

6 Q. It's true, isn't it, that
7 widespread low level PCB contamination
8 worldwide has been discovered; isn't that
9 true?

10 A. PCBs have been identified at
11 extremely low levels in a number of
12 locations around the world, yes.

13 Q. As you pointed out on the
14 board that I have two back, this PCB low
15 level contamination was, in fact, created
16 by man; am I right? It was
17 manufactured.

18 A. The PCBs themselves were
19 manufactured by man. In fact, they are
20 distributed at extremely low levels
21 worldwide and the result of extremely low
22 level environmental releases, I assume,
23 over many, many decades.

24 Q. They bioconcentrate,

1 bioaccumulate and biomagnify in the food
2 chain; true?

3 A. That's correct.

4 Q. Now, this is Page 8, your
5 Honor, from the handbook. You also wrote
6 about reproductive tests on primates that
7 involve PCB contamination have resulted
8 in total reproductive failure, increased
9 mortality, still birth and low birth
10 rates for surviving test subjects, didn't
11 you?

12 A. Where is that in here?

13 Q. Page 8.

14 A. Where is that on Page 8?

15 Q. I think it's in the middle
16 of the paragraph or the end of the
17 paragraph.

18 THE COURT: It would be the
19 last sentence of the third
20 paragraph.

21 THE WITNESS: Okay. Thank
22 you, your Honor. Yes, that's what
23 it says in here, again, subject to
24 the qualifier I gave you before.

1 BY MR. MCCLAIN:

2 Q. That's some of the things
3 that have concerned the regulators and
4 others as they banned PCBs; am I right?

5 A. No. Their primary concern
6 was the existence of PCBs in the
7 environment at all and making sure for
8 the safety of people that those levels
9 were somehow regulated on the basis of
10 some type of risk. At that point, and at
11 the point we wrote this, a lot of that
12 was sketchy scientific research.

13 Q. Widespread low level PCB
14 contamination is what you are talking
15 about worldwide; right?

16 A. Yes, sir.

17 Q. And you wrote that
18 reproductive tests on primates that
19 involve PCB contamination have resulted
20 in total reproductive failure, increased
21 mortality, stillbirth and low birth rates
22 for surviving test subjects; true?

23 A. The fact that is cited in
24 there bears no relationship to this low

1 level worldwide concentration that we are
2 talking about. There is nothing in here
3 about concentration, as you heard Dr.
4 James explain. That's the all important
5 factor in doing these types of tests.
6 And it requires the liver research. This
7 is not based on primates that were found
8 in the wild and tested. This is based on
9 actual scientific laboratory research.

10 Q. It is, isn't it? It's
11 actual laboratory scientific research.

12 A. Back at the time that this
13 was written there wasn't much available
14 in the 10 or 12 years since that work was
15 published. There has been a tremendous
16 amount of information out there, as you
17 heard from Dr. James, a lot of news and a
18 lot of studies that have shown quite the
19 opposite. There isn't quite the health
20 effect concern that was expressed by
21 congress 25 years ago.

22 Q. Did you ever write a letter
23 to all the people that bought your book
24 and say now that I heard Dr. James I want

1 to change what I wrote? Have you ever
 2 done that, Mr. Woodyard?
 3 A. No. But the beginning of
 4 this book, like any book, there is a
 5 qualifier that says anybody who wants to
 6 make decisions in the field about things
 7 like PCB cleanup should consult the most
 8 current regulations and most current
 9 scientific literature. This type of book
 10 when it comes to health effects
 11 information is more like Reader's
 12 Digest. It's a summary of a moment in
 13 time of what information is available.
 14 Obviously, from what you heard in court
 15 here, there is a lot more, a lot better
 16 information out there now that
 17 contradicts a lot of this.
 18 Q. And there is a lot that
 19 supports it. But we are not here to
 20 debate that. I'm talking about what you
 21 wrote.
 22 MR. GOUTMAN: Objection.
 23 Motion to strike counsel's
 24 commentary.

1 THE COURT: Sustained.
 2 MR. MCCLAIN: Your Honor, I
 3 -- let me ask a question.
 4 BY MR. MCCLAIN:
 5 Q. Now, it's true, isn't it,
 6 that this is what you wrote in your book,
 7 PCB Management Handbook, Mr. Woodyard,
 8 that's what you wrote?
 9 A. That's what's in here. I
 10 have to check it against the real version
 11 to determine if it's exactly what I said.
 12 Q. Now, you also wrote, didn't
 13 you, at Page 9 of your PCB Management
 14 Handbook -- and by the way, this book was
 15 written before you started doing work for
 16 Monsanto; isn't that true?
 17 A. Yes, that's correct.
 18 Q. "A strict program of personal
 19 hygiene," this is at Page 9, your Honor.
 20 You say, "A strict program of personal
 21 hygiene should be established in any
 22 workplace where the work can involve PCB
 23 contaminated equipment." That's true,
 24 isn't it?

1 A. Yes, absolutely. The term
 2 PCB contaminated has a very specific
 3 meaning in the regulations and in the law
 4 that is really geared toward electrical
 5 equipment where PCB levels are high and
 6 workers might be in contact with it all
 7 the time like in a utility service shop
 8 or someplace like that. It doesn't refer
 9 to anything really but that.
 10 Q. Look at Page 9, would you,
 11 and refer to us any language that you
 12 have that qualifies that statement. Go
 13 ahead and read it. Read us anything you
 14 like to from Page 9.
 15 A. The headings that are in
 16 here are very different from the ones in
 17 the final versions. I can't vouch for
 18 how the book is broken up. I'm chuckling
 19 because some of the headings are funny.
 20 Q. Funny?
 21 A. Funny in the sense that they
 22 aren't scientific or technical headings.
 23 There is a heading in there in the
 24 section that talks about cleaning up

1 spills that says "out with wash", which
 2 sounds more like a newspaper article than
 3 it does a technical book.
 4 Q. Funny with your name on it,
 5 am I right?
 6 A. Excuse me?
 7 Q. Funny and it bears your name
 8 on its front page.
 9 A. I'm embarrassed by the fact
 10 that is even out there. I don't know how
 11 you got a copy.
 12 Q. Now --
 13 MR. GOUTMAN: Objection.
 14 Could I see the Court at side bar?
 15 (Side-bar discussion begins
 16 at this time.)
 17 MR. GOUTMAN: Your Honor,
 18 I'd like to object to this exhibit
 19 and I'd like to at this time --
 20 this is found at Page 13. The
 21 chapter of the heading is chapter
 22 two.
 23 MR. MCCLAIN: Your Honor, I
 24 think that we need to argue this

134 1 out of the presence of the jury 2 because it will take a little more 3 than just a -- if he is really 4 objecting to it. 5 THE COURT: I assume he is. 6 MS. HERSCHEL: Me too. 7 MR. NEAL: Since we're all 8 standing here. 9 MR. MCCLAIN: I'm willing to 10 break right now. 11 THE COURT: But the major 12 problem is I don't have it. 13 MR. MCCLAIN: You don't have 14 13? Yes. It's before Page 8. 15 It's out of sequence. 16 THE COURT: Why wouldn't I 17 remember that? 18 MR. MCCLAIN: I remember 19 everything you've said, your 20 Honor. 21 THE COURT: I got Page 13. 22 MR. MCCLAIN: That's it. 23 THE COURT: Industrial 24 history.	136 1 precluding you from having lunch 2 with defense counsel. We are just 3 advising you that conversations 4 relating to the subject matter of 5 the trial cannot be discussed 6 during lunch, and I know that Mr. 7 Goutman and other counsel are 8 familiar with that, and I'm sure 9 now you know and you are familiar 10 with it. 11 THE WITNESS: Yes. Thank 12 you, your Honor. 13 MR. GOUTMAN: May I call him 14 Woody? 15 THE COURT: Outside the 16 courtroom. 17 MR. MCCLAIN: Please do. 18 (The jury and the witness 19 are excused at this time.) 20 MR. GOUTMAN: Your Honor, 21 the basis for my objection is that 22 much of this paragraph concerns 23 postsale conduct of Monsanto 24 Company and this Court precluded
135 1 MR. GOUTMAN: Yep. 2 THE COURT: I only have one 3 page. Is that all we need? 4 MR. MCCLAIN: It's after 5 TSCA. After TSCA. 6 THE COURT: Okay. We'll 7 break for lunch. 8 MR. MCCLAIN: Okay. 9 (Side-bar discussion ends at 10 this time.) 11 THE COURT: We are going to 12 recess for lunch at this point, or 13 at least the jury is going to 14 recess for lunch. We have another 15 matter that we are going to take 16 up during the recess. So we're 17 going to recess until 2 o'clock. 18 MR. MCCLAIN: Your Honor, 19 before we can excuse Mr. Woodyard 20 can we have the traditional 21 admonition of witnesses discussing 22 the case? 23 THE COURT: We're going to 24 recess for lunch. We are not	137 1 numerous documents that plaintiffs 2 sought to introduce concerning 3 postsale conduct of actually all 4 the defendants, at least all of 5 the PCB defendants, and the same 6 proposition holds here. 7 MR. MCCLAIN: Your Honor, I 8 mean, the whole subject of TSCA is 9 postsale. The Court has allowed 10 it on the issue of defect and we 11 have a witness here who professes 12 to know that Monsanto cut its 13 sales of PCBs for certain on 14 electrical applications, and what 15 we've seen in the documents what 16 they cut was the plasticizer 17 applications in 1970. And the 18 reason they did was because of 19 their concern for releases to the 20 environment. 21 Now, the witness has written 22 about this subject in the book, 23 the plasticizers that we're here 24 to talk about. He has introduced

138

1 this subject to a readership
2 worldwide in his handbook and he
3 ought to be asked about
4 plasticizers. And what I want to
5 ask him about is regarding
6 Monsanto and what they cut in '70
7 was plasticizers. Do you know
8 that? That is what you are
9 referring to. Yes. Why do they
10 do it? Because of this worldwide
11 low level pollution that we are
12 talking about. They escape to the
13 environment. That's what it's all
14 about. It goes to this
15 vaporization idea that we are here
16 to address, its ability to off
17 gas. It's all related.

18 MR. GOUTMAN: I think, your
19 Honor, this Court concluded months
20 ago that Pennsylvania law is clear
21 that the postsale conduct of an
22 alleged tortfeasor whether it's a
23 402 A case or what is not
24 admissible. The Court ruled out

139

1 numerous documents on this basis.
2 Now they want to get into it. The
3 mere fact that this witness has
4 written on it does not make it
5 admissible. And, indeed, once
6 again, your Honor, this witness
7 said nothing about what Monsanto
8 did or didn't do on direct. But
9 in any event, your Honor, I
10 believe the Court was scrupulous
11 about keeping out postsale
12 documents based upon clear
13 Pennsylvania law concerning
14 postsale duty to warn, and,
15 therefore, references to what
16 Monsanto did or didn't do in the
17 1970s should not go before this
18 jury.

19 MR. MCCLAIN: Your Honor,
20 you have ruled that postsale
21 evidence could come in on defect.
22 The defect is what I want to focus
23 on and the Court -- specifically
24 on some of these documents that he

140

1 is referring to that went to
2 defect. The Court ruled if we had
3 it, it would be admissible, but
4 without an expert it's not
5 admissible. We have an expert on
6 the stand who has written on the
7 subject and I ought to be able to
8 explore this with him because he
9 has rendered the opinion to the
10 jury that they don't vaporize.
11 They do vaporize. They get into
12 the environment. They are an open
13 system and this witness knows
14 that. He has written about it so
15 we have a right to explore it.
16 And it goes to the nature of the
17 defect. The defect is this
18 product vaporizes. That's what
19 we're here about.

20 MR. GOUTMAN: This Court
21 rejected that argument last -- I
22 believe the Court initially ruled
23 perhaps in June and they filed a
24 petition for reconsideration and

141

1 the Court reaffirmed its ruling, I
2 believe, in either the end of
3 August or early September.
4 Plaintiffs argue, well, it goes to
5 defect. And this Court ruled, I
6 believe, that they're postsale
7 actions which simply don't go
8 before the jury. Now plaintiff's
9 counsel has said what they are
10 talking about is vaporization.
11 There is nothing in here about
12 vaporization. And, once again, we
13 go to a fundamental problem, your
14 Honor, of the way plaintiff is
15 using this as sort of a closing
16 speech slide show where,
17 incidentally, he asks some
18 questions of Mr. Woodyard, which
19 involve largely didn't you say
20 this, didn't you say that? This
21 witness has said nothing about
22 what Monsanto did or didn't do.
23 This isn't impeachment material
24 and it doesn't say anything about

142 1 vaporization in here. Now, it's 2 not even impeachment material and 3 it gets into postsale conduct. 4 That's the basis for my 5 objection. Thank you, your 6 Honor. 7 MS. MEYERS: It just 8 occurred to me in listening to Mr. 9 McClain explain what he wants to 10 do with this that in addition what 11 he is trying to elicit from this 12 witness is hearsay speculation 13 about why Monsanto did what it did 14 and what Monsanto knew at any 15 given time. And there's certainly 16 no foundation for that with this 17 witness. 18 MR. MCCLAIN: Your Honor, 19 they qualify him as an expert, as 20 a PCB control expert. They 21 qualified him in the area of PCB 22 chemistry and the analytical 23 methods. They qualified this 24 witness in the cost of cleaning up	144 1 admissible. 2 MS. HERSCHEL: Your Honor 3 has ruled clearly that postsale 4 conduct and knowledge are not 5 issues in this case, and that has 6 not changed by any expert's area 7 of expertise. 8 MR. MCCLAIN: It goes to 9 defect, your Honor. 10 THE COURT: The objection is 11 sustained. Anything further? 12 MR. GOUTMAN: No, sir. 13 THE COURT: We will now 14 recess for lunch. 15 (A luncheon recess is taken 16 at this time from 12:35 p.m. until 17 2:15 p.m.) 18 MR. MCCLAIN: For the 19 record, Exhibit 4008 A was Page 3 20 from the Woodyard and King 21 beginning "partly because PCBs." 22 Exhibit 4008 B. I from Woodyard 23 and King's book at Page 4 24 beginning "PCBs developed." Exhibit
143 1 PCBs. They've qualified him in 2 every single area. An expert can 3 rely on hearsay and render 4 opinions about it. And he has 5 rendered an opinion regarding why 6 they stopped selling it and it 7 relates to this open system 8 nonelectrical applications. The 9 plasticizers that we're concerned 10 about that got free in this 11 building and contaminated it. 12 That's the whole purpose of the 13 examination. 14 MR. GOUTMAN: Well, your 15 Honor, Mr. Woodyard was not 16 qualified in the field of 17 clairvoyance or mind reading and 18 plaintiff's counsel believes that 19 he can question this jury as to 20 why Monsanto did what it did. It 21 does not state here why Monsanto 22 did what it did. It just says 23 what Monsanto did, and what 24 Monsanto did after 1970 is not	145 1 4008 C is from Woodyard and King's 2 book from Page 5. It begins, "Like 3 chlorinated pesticides." Exhibit 4 4008 D is from Page 5 of Woodyard 5 and King and it says "the abrupt 6 U.S. PCB banned." That's the 7 beginning of the sentence. 4008 E 8 is reproductive tests on primates 9 from Page 8 of Woodyard and King's 10 book and 4008 F begins "a strict 11 program," and it's from Page 9 of 12 Woodyard and King's book. And 13 those were read to the witness 14 while he was on the stand. Mr. 15 Goutman, do you acknowledge or do 16 you agree that those are the 17 correct exhibit numbers and 18 exhibits that were read to the 19 witness? 20 MR. GOUTMAN: I don't 21 acknowledge anything. Yes. 22 MR. MCCLAIN: Note that 23 there was laughter in exchange 24 between counsel.

146 1 THE COURT: I just want to 2 refresh my memory about our 3 schedule. As I remember we're due 4 here the rest of this week, 5 Thursday and Friday. And for next 6 week we have several days that 7 were out, if I remember correctly. 8 MR. GOUTMAN: That's 9 correct. 10 MR. MCCLAIN: I know about 11 Tuesday. What other days are we 12 out? 13 MR. NEAL: Friday. 14 THE COURT: I think Friday 15 we're out. 16 MR. GOUTMAN: A juror can't 17 make it either Monday or Friday, 18 according to my notes. 19 THE COURT: So I'm -- that's 20 Tuesday and Friday that we're out 21 -- or Monday, Tuesday and Friday. 22 MR. GOUTMAN: Monday my 23 notes said that a juror is not 24 available Monday and Friday and I	148 1 presiding. You may be seated. 2 THE COURT: Mr. McClain, Mr. 3 Woodyard. 4 THE COURT CRIER: Your full 5 name and address. 6 THE WITNESS: John Woodward, 7 W-O-O-D-Y-A-R-D. 8 THE COURT CRIER: Your 9 address. 10 THE WITNESS: 610 Paradise 11 Lane in Liberty, Illinois. 12 * * * 13 JOHN WOODYARD, after having 14 been duly sworn, was examined and 15 testified as follows: 16 * * * 17 EXAMINATION 18 * * * 19 BY MR. MCCLAIN: 20 Q. Mr. Woodyard, now you're 21 double sworn. 22 MR. MCCLAIN: Your Honor, 23 before we begin, Mr. Goutman and I 24 read the exhibit numbers from
147 1 asked the Court to take Tuesday 2 off. 3 THE COURT: You have 4 something very special on 5 Thursday -- 6 MR. GOUTMAN: Tuesday. 7 THE COURT: Tuesday. Which 8 only gives us Wednesday and 9 Thursday of next week. But I 10 wanted to be in sync and I wanted 11 to be able to tell the jury. By 12 the way, did you meet Sam, our new 13 court officer for the rest of the 14 day? 15 MR. MCCLAIN: He has been 16 here before. 17 THE COURT: Yes, he has. 18 MR. MCCLAIN: We said hello 19 again. 20 THE COURT CRIER: All rise. 21 In the name of the Commonwealth of 22 Pennsylvania this court is now 23 open. The Honorable Charles P. 24 Mirarchi, Junior, is now	149 1 those blow-ups into the record 2 before the Court ascended the 3 bench and we agreed those were the 4 ones that were read to the witness 5 -- shown to the witness 6 previously. 7 THE COURT: That's fine. 8 MR. MCCLAIN: I would like 9 them noted for the record and at 10 the end I'm going to be moving 11 those into evidence. We could 12 just move them into evidence now 13 so that. 14 THE COURT: You may. 15 MR. MCCLAIN: I move those 16 into evidence that we read in the 17 morning session. 18 MR. GOUTMAN: Objection, 19 your Honor. I believe he's 20 rested. 21 THE COURT: Pardon me? 22 MR. GOUTMAN: He's rested, 23 your Honor. 24 THE COURT: I didn't hear

150 1 you. 2 MR. GOUTMAN: Plaintiff 3 rested five months ago. 4 THE COURT: Plaintiff did 5 rest. 6 MR. GOUTMAN: I object to 7 him moving it into evidence. 8 THE COURT: Overruled. 9 MS. MEYERS: Your Honor, 10 could Mr. McClain announce to the 11 rest of us -- 12 THE COURT: I think we're 13 going to need the microphones. 14 MS. MEYERS: My question was 15 could Mr. McClain tell the rest of 16 us the exhibit numbers. 17 THE COURT: Yes, fine. 18 Would you identify the exhibits 19 that you -- 20 MR. MCCLAIN: Your Honor, 21 next time we'll do this in open 22 court. 4008 A, 4,008 B, 4008 C, 23 4008 D, 4008 E, 4008 F. 24 MS. MEYERS: Thank you.	152 1 MR. MCCLAIN: I wanted the 2 general subject area, your Honor. 3 THE WITNESS: Where is that? 4 BY MR. MCCLAIN: 5 Q. It's on Page 27, Mr. 6 Woodyard, about residual contamination. 7 A. I'm not finding it. Can you 8 show me exactly where it is? 9 Q. Sure. I obviously have the 10 wrong page or I can't find it either. 11 Wait a minute. Here it is. It's in the 12 middle of this paragraph. 13 THE COURT: Okay. Now could 14 we have the Court find it? 15 MR. MCCLAIN: It's in the 16 paragraph beginning "other 17 applications", your Honor, on Page 18 27. 19 THE COURT: Okay. Fine. 20 BY MR. MCCLAIN: 21 Q. That's the paragraph we were 22 looking for. 23 A. I found it. And the 24 question is?
151 1 MR. MCCLAIN: You're 2 welcome. 3 BY MR. MCCLAIN: 4 Q. Mr. Woodyard, we broke at 5 lunch and I want to deal with another 6 subject. In your book you write about a 7 situation where following a fire 8 sometimes you will find what's called 9 residual contamination, don't you? 10 MR. GOUTMAN: Objection, 11 your Honor. If there is a 12 specific passage that he is 13 pointing him to -- 14 THE COURT: Sustained. 15 BY MR. MCCLAIN: 16 Q. I would be happy to, your 17 Honor. I just wanted to -- before 18 refreshing his recollection does he not 19 recollect it? It's at Page 27. 20 THE COURT: I think even if 21 a person wrote a book, just to 22 pick a sentence out of it would 23 not be sufficient to draw his 24 attention to it.	153 1 Q. The concept that's discussed 2 there involves fires disclosing residual 3 contamination in buildings. 4 A. Yes, sir. 5 Q. All right. And the concept 6 you discuss there is that sometimes 7 following a fire involving PCB 8 transformers you can find contamination 9 that previously existed in the building 10 that you didn't know about; am I right? 11 A. Well, the specific term 12 "residual sources" in this context in 13 the situations I have been involved in 14 relates specifically to things like 15 office products. I think we might have 16 discussed earlier the fact that 17 carbonless copy paper made 30 years ago, 18 40 years ago contains a small amount of 19 PCB. So if you have a lot of carbon 20 paper in your office back in those days 21 you would have some small, low level 22 residual maybe on desks or somewhere in 23 the office environment. So it's 24 analogous in a way to this background

1 concept we were talking about before.
 2 Q. PCBs that vaporize from
 3 other sources and get onto surfaces that
 4 you are unaware of.
 5 A. Excuse me. I didn't say
 6 anything about vaporizing. If you got
 7 carbon paper on a desk it rubs off on the
 8 desk.
 9 Q. It's true, isn't it, that
 10 sometimes this residual contamination
 11 from sources that you are unaware of, or
 12 that's even in the air, as you talked
 13 about, background, can be unknown until
 14 there's a fire and it's discovered, isn't
 15 that true?
 16 MR. GOUTMAN: Objection to
 17 the form of the question. That's
 18 a compound question.
 19 THE COURT: Sustained.
 20 THE WITNESS: Could you
 21 repeat it, please.
 22 BY MR. MCCLAIN:
 23 Q. You talked about background
 24 contamination; am I right?

1 A. Yes.
 2 Q. And so it's possible that a
 3 fire will disclose, quote-unquote,
 4 background contamination; isn't that
 5 true?
 6 A. Well, the fire doesn't
 7 disclose it. What happens, as you can
 8 imagine, if you have a spill in a
 9 location where PCB carbon paper, for
 10 example, might have been used a long time
 11 ago and you start taking samples, you
 12 might not have known that there was any
 13 low level background already there and
 14 you find that out because suddenly you
 15 are taking samples for the first time.
 16 So it's important to know what those
 17 background levels are before you start
 18 the cleanup so that you're not knocking
 19 yourself out trying to get to an
 20 extremely low level when there's already
 21 some there.
 22 Q. Residual contamination you
 23 call it, right? That's the term used.
 24 A. Well, that's the term in the

1 book. It's not really a term of art.
 2 Q. It's a term you used?
 3 A. That's correct, correct.
 4 And it really refers to the sort of
 5 background concentrations we have been
 6 talking about.
 7 Q. Now, I want to go to another
 8 issue. You talked to Mr. Goutman
 9 repeatedly about the EPA safe level. You
 10 said it was called the EPA safe level. I
 11 want to hand you what we marked
 12 previously as 3221.3A.
 13 THE COURT: What was that
 14 number?
 15 MR. MCCLAIN: 3221.3A, your
 16 Honor, the EPA spill policy.
 17 MS. HERSCHEL: Mr. McClain,
 18 can we have one more?
 19 MR. MCCLAIN: If you say
 20 please.
 21 MS. HERSCHEL: Thank you.
 22 MR. MCCLAIN: You're
 23 welcome. Your Honor, could I hand
 24 one up to the Court, please.

1 THE COURT: I'm sure we have
 2 one, but we don't carry all of the
 3 exhibits with us.
 4 MR. MCCLAIN: That's why I
 5 made extra copies.
 6 THE COURT: Thank you.
 7 BY MR. MCCLAIN:
 8 Q. Now, I had a copy that was
 9 highlighted. Who has my copy? Have I
 10 given that to you, Mr. Goutman?
 11 A. I believe I may. Are you
 12 talking about yellow? Do I win a prize?
 13 Q. You get to trade me so I
 14 know what questions to ask.
 15 A. I see.
 16 Q. You are familiar with this,
 17 are you not?
 18 A. Yes, I am.
 19 Q. Now, you said repeatedly
 20 this was called the EPA safe standard,
 21 didn't you, to Mr. Goutman?
 22 A. I've used terms like that,
 23 or EPA safe level when referring to the
 24 cleanup standards themselves.

1 Q. Read to the jury anywhere in
2 that document that says that.
3 A. I don't recall it being in
4 here.
5 Q. It's not in there, is it?
6 A. The exact wording, no.
7 Q. It's not called the EPA safe
8 standard in the document, is it?
9 A. No. It's referred to by a
10 number of different names throughout the
11 industry.
12 Q. It's called the EPA
13 polychlorinated biphenyl spill clean up
14 policy final rule; am I right?
15 A. No. The EPA safe standard
16 we have been talking about is a number.
17 It's a clean up target that you use when
18 you are taking samples.
19 Q. Mr. Woodyard, is this
20 document called the polychlorinated
21 biphenyl and spill clean up policy final
22 rule?
23 A. Yes, it is.
24 Q. And this is the document

1 which establishes this ten number that
2 we've been looking at throughout this
3 case; am I right?
4 A. Yes, that's correct.
5 Q. And that's for high contact
6 interior surfaces; am I right?
7 A. Yes, in general, that's
8 true.
9 Q. Now, let's look at this
10 document, would you, for a minute. This
11 document relates to spills, doesn't it?
12 Isn't that what it says?
13 A. Yeah. That's part of the
14 title.
15 Q. Yeah. It's part of the
16 title. In fact, you have a definition of
17 what a spill is in your book, don't you?
18 A. I don't recall.
19 Q. It's taken directly from the
20 EPA spill policy. Look at that for the
21 jury, if you would. Your Honor, I don't
22 have an excerpt on the bench right now.
23 A. Yes. There is a definition
24 in my book. It's not the same as the one

1 that's in here.
2 Q. The one that's in here at
3 page -- when we say "in here" it's in the
4 federal register at page -- your Honor,
5 it's at 10690. It begins at the bottom
6 at four.
7 A. Was there a question?
8 Q. I'm letting the Court find
9 where we are before I begin.
10 A. I understand.
11 THE COURT: Okay.
12 MR. MCCLAIN: Do you see
13 where we are, your Honor?
14 THE COURT: Yes.
15 BY MR. MCCLAIN:
16 Q. A spill is defined as the
17 term as used in this policy means both
18 intentional and unintentional spills,
19 leaks and other uncontrolled discharges
20 where the release results in any quantity
21 of PCBs running off or about to run off
22 the external surface of the equipment or
23 other PCB source as well as the
24 contamination resulting from these

1 releases; am I right?
2 A. Yes.
3 Q. That's the definition of
4 what a spill is?
5 A. Yeah. It goes on.
6 Q. It says, "This policy applies
7 to spills of 50 parts per million or
8 greater PCBs. The concentration of PCBs
9 spilled is determined by the PCB
10 concentration in the material spilled as
11 opposed to concentrations of PCBs in the
12 material onto which the PCBs were
13 spilled." Did I read that accurately,
14 Mr. Woodyard?
15 A. Yes, yes.
16 Q. Let's read that again
17 because it was --
18 A. I'm sorry. My copy is kind
19 of garbled from the copying source and my
20 glasses are kind of old.
21 Q. I'm responsible for the
22 copying, but not your glasses.
23 A. I understand.
24 Q. "The concentration of PCBs

1 spilled is determined by the PCB
2 concentration in the material spilled as
3 opposed to the concentration of PCBs in
4 the material onto which the PCBs were
5 spilled." Did I read that right?

6 A. Yes.

7 Q. What that means is that the
8 way we determine whether or not 50 parts
9 per million exist in a circumstance is
10 not in relation to the surface or area
11 where the material is spilled, but the
12 material from which that spill so-called
13 came; am I right?

14 A. That's what that definition
15 means, yes, sir.

16 Q. And then it says, "Where a
17 spill of untested mineral oil occurs, the
18 oil is presumed to contain greater than
19 50 parts per million but less than 500
20 parts per million as is the subject to
21 the relevant requirements of this
22 policy," right? That doesn't apply
23 here. We don't have mineral oil
24 containing PCBs that we know about, am I

1 right?

2 A. Really, most of the
3 definition doesn't apply to the T&S
4 Building.

5 Q. Right. Because we don't
6 have a spill as defined here; am I right?

7 A. Not at all. We have a
8 release that you define as a spill for
9 purposes of taking some action to clean
10 it up.

11 Q. By this definition it's not
12 a spill, is it?

13 A. I think you would be able to
14 take issue with that.

15 Q. I'm asking you what the
16 words say.

17 A. No. This is absolutely a
18 spill.

19 Q. What spilled?

20 A. What was released during the
21 fire is a spill.

22 Q. Tell the jury what ran off
23 the external surface of the equipment or
24 other PCB source.

1 A. No. I think the jury can
2 understand that a spill, and I will
3 excerpt the words out here, a spill
4 includes an unintentional, uncontrolled
5 discharge where the release results in
6 any quantity of PCBs.

7 Q. Is that what it says, Mr.
8 Woodyard, or does it say this? Let's
9 show the jury. Let's show them what the
10 words really say. You and I can read
11 them, but it would be helpful to see
12 them.

13 A. I think --

14 Q. So that we're reading
15 together, it says here, Jim, if you can
16 focus that tighter. Perfect. It says
17 here, "Spill, the term as used in this
18 policy means both intentional and
19 unintentional spills, leaks and other
20 uncontrolled discharges where the release
21 results in any quantity of PCBs running
22 off or about to run off the external
23 surface of equipment or other PCB
24 source." I want to focus on these words

1 for a minute and tell me what ran off or
2 was about to run off the external surface
3 of equipment or other PCB source in that
4 building, the T&S Building.

5 A. EPA has always interpreted a
6 release as being a release -- forget the
7 words run off or about to run off. We're
8 talking about contamination, which they
9 cite very clearly there, contamination
10 resulting from those releases.

11 Q. Mr. Woodyard, we said the
12 words now. I'm not talking about
13 someone's interpretation.

14 A. The interpretation is
15 everything. This guideline is set up for
16 people who don't want to talk to EPA or
17 deal with them on a relatively routine
18 spill.

19 Q. So we have to look at the
20 words.

21 A. This, as you characterize
22 it, hardly qualifies as a routine spill.
23 It's a catastrophic fire that released
24 PCBs into this building.

1 Q. Absolutely. And this is a
2 routine spill policy, isn't it?

3 A. The policy itself is
4 designed for what I would consider a
5 routine spill. I would agree with you.

6 Q. And the words here about
7 what is a spill does not apply to the
8 situation at the T&S Building; am I
9 correct?

10 A. Well, the words running off
11 or about to run off don't, but the
12 concept clearly does.

13 Q. The words --

14 A. You take a release that
15 results in contamination, which is what
16 they're talking about. That's EPA's
17 concern is that the PCBs somehow escape
18 their use and are available as
19 contaminants.

20 Q. Mr. Woodyard --

21 MR. GOUTMAN: Your Honor --

22 THE COURT: We are having a
23 run over between the answer and
24 the next question, so I don't know

1 that we have the, quote, answer
2 recorded.

3 BY MR. MCCLAIN:

4 Q. I apologize if I stepped on
5 the witness's words, your Honor. But my
6 question really is this: Do the words as
7 written here on this screen describe the
8 situation at the T&S Building? And I
9 think the answer to that is no, isn't it,
10 Mr. Woodyard?

11 A. It was not EPA's intent to
12 give you a cookbook to clean up a
13 catastrophic incident like the T&S
14 Building. Clearly this is not as written
15 relevant directly to cleaning up the PCB
16 spill there.

17 Q. And, likewise, Mr. Woodyard,
18 this definition does not apply to what
19 happened at the T&S Building; am I right?

20 A. The definition in general is
21 intended to apply to any type of
22 contamination when you are talking about
23 spills. The release from the intended
24 use of the PCB.

1 Q. You agree with me that there
2 was no running off -- there was nothing
3 that was running off or about to run off
4 any external surface in the T&S
5 Building.

6 A. That's correct. But there
7 clearly was contamination resulting from
8 the release, which is what the EPA is
9 really worried about.

10 MR. MCCLAIN: Your Honor, I
11 ask that that part of the answer
12 be stricken. I asked whether
13 there was any run off.

14 MR. GOUTMAN: Your Honor, it
15 was responsive to the question.

16 THE COURT: Overruled.

17 BY MR. MCCLAIN:

18 Q. Now, Mr. Woodyard, let's
19 look at some other things in this
20 document. Now, you also mentioned, did
21 you not, something about NIOSH and
22 transformers and electric capacitors.
23 There is a whole section on leaks and
24 spills from transformers and capacitors

1 in this document as well, isn't there, if
2 you look over at Page 10695.

3 A. You are referring to the
4 section under "risks posed by leaks and
5 spills of PCB."

6 Q. Yes, sir.

7 A. Yes, that's correct.

8 Q. And it talks about
9 transformers and capacitors leaking; am I
10 right? And how much leak from them.

11 A. Yes, that's correct. It's a
12 narrative explaining the whole concept of
13 capacitor and transformer leaks.

14 Q. And that's not what happened
15 at the T&S Building, is it?

16 A. No. Absolutely not.

17 Q. Now, look over at -- this
18 document talks about some issues about
19 the applicability of this spill policy
20 over at Page 10782, I believe it is,
21 Jim.

22 MS. HERSHEL: It only goes
23 up to 709.

24 BY MR. MCCLAIN:

1 Q. 702. It's 10,702.
 2 A. Uh-huh.
 3 Q. Where it says
 4 "additionally". Your Honor, are you
 5 with us? You need to tighten that up,
 6 Jim.
 7 Now, first of all, are you
 8 familiar with this document, Mr.
 9 Woodyard?
 10 A. Yes, I have seen it before.
 11 Q. It says that when EPA was
 12 developing this spill policy they assumed
 13 550 square feet of indoor surfaces in
 14 regard to a typical spill, didn't they?
 15 A. Yes, that's correct.
 16 Q. There's more than 550 square
 17 feet in the T&S Building, isn't there?
 18 A. Certainly.
 19 Q. How many would you estimate
 20 was in the T&S Building square foot wise?
 21 A. I believe it's on the order
 22 of 750,000.
 23 Q. Square feet?
 24 A. Floor space, that's correct.

1 Q. It's over what? 100 times
 2 the amount assumed by this policy?
 3 A. Yes. It's much larger than
 4 was intended by the spill policy.
 5 Q. It says, "Additionally, spill
 6 situations involving significantly larger
 7 areas of contamination than those assumed
 8 in developing this policy, e.g. less than
 9 .5 acres in soil and 550 feet on indoor
 10 surfaces, spills in areas involving
 11 repeated daily contact such that the
 12 potential for dermal contact may be
 13 significantly higher than assumed was
 14 developed this possible, e.g. spills
 15 resulting from violent equipment rupture
 16 during PCDF and/or PCDDs were formed and
 17 spills onto farmlands on which root crops
 18 are grown may require more stringent
 19 levels of clean up." Correct?
 20 A. Yes, that's correct.
 21 THE COURT: You are reading
 22 from 10702.
 23 MR. MCCLAIN: Yes, your
 24 Honor.

1 THE COURT: They are three
 2 columns very closely printed, and
 3 I don't find exactly where you are
 4 reading from.
 5 MR. MCCLAIN: The first
 6 column beginning with
 7 "additionally".
 8 THE COURT: Fine. You
 9 should preface each citation to
 10 the document as to the column or
 11 the paragraph so that we can find
 12 it.
 13 MR. MCCLAIN: I apologize.
 14 BY MR. MCCLAIN:
 15 Q. And that is your
 16 understanding of this spill policy as
 17 well, isn't it? Those were the
 18 assumptions and that's what it says?
 19 A. That's what the intended use
 20 of the spill policy as a whole was for;
 21 that's correct.
 22 Q. Okay. Now, look over at
 23 Page 10704 in the last column beginning
 24 with the words "in addition". Are you

1 with us, your Honor?
 2 THE COURT: Uh-huh.
 3 BY MR. MCCLAIN:
 4 Q. It's on the screen, if
 5 that's helpful. Okay. It says here, in
 6 addition, the TSCA policy discusses other
 7 spill situations which may warrant the
 8 use of EPA authority to require more
 9 stringent requirements, e.g. where depth
 10 of ground water and type of soil and the
 11 presence of chemicals may pose
 12 exceptionally high potential for ground
 13 water contamination by residual PCB spill
 14 situations involving significant larger
 15 areas of contamination than those assumed
 16 in developing this policy, spills
 17 resulting from the violent equipment
 18 rupture during which PCDFs and PCDDs were
 19 formed and spills onto farmland on which
 20 root crops are grown. The TSCA policy
 21 provides that in each situation the
 22 regional administrator may require clean
 23 up in addition to that required by the
 24 TSCA policy." True?

1 A. That's correct.
 2 Q. And that is something that
 3 EPA can do; am I right?
 4 A. Well, yes, but elsewhere in
 5 here, which you haven't cited, EPA makes
 6 it very clear that they are perfectly
 7 willing to accept less stringent
 8 standards for a variety of different
 9 reasons. In fact, back toward the front
 10 in the areas they highlight is their
 11 request. This policy, just so that you
 12 understand, is designed -- it was
 13 conceived back in the mid 80s back when
 14 utilities had a lot of little spills and
 15 there were no cleanup standards at all
 16 and they didn't want to deal with EPA, do
 17 a risk assessment and all that stuff
 18 every time they had a spill. So what
 19 they elected to do with EPA and utilities
 20 together is come up with a policy, and
 21 that's what this is called. It's not a
 22 regulation. It's basically a standard
 23 procedure you use to clean up a routine
 24 spill.

1 Q. And we've already
 2 established --
 3 A. You have established the
 4 boundaries for the conditions under which
 5 it automatically applies. Clearly EPA
 6 over the years has accepted the same
 7 cleanup standards for larger spills on a
 8 very regular basis and even relaxed, as I
 9 just pointed out, because they're
 10 inviting people to use risk assessments
 11 and use extenuating circumstances to
 12 argue for more lenient standards.
 13 Q. Mr. Woodyard, you talked
 14 about all of that in your direct. I'm
 15 talking about this document right now.
 16 It's true, isn't it, that the EPA
 17 regional administrator may require
 18 additional clean up, particularly in
 19 areas where the surface area is larger
 20 than 550 square feet. That's what the
 21 policy says; am I right?
 22 A. Certainly. But as I said,
 23 the policy also says the regional
 24 administrator may accept less stringent

1 standards for areas that are in excess by
 2 what's covered in the spill policy.
 3 Q. We are going to come back to
 4 that.
 5 A. The rule invites both, but
 6 the more stringent clean up standards in
 7 there relate to what we've been calling
 8 high occupancy type applications.
 9 Q. Now, let's look at some
 10 other things from your book. Woodyard
 11 and King, PCB Management Handbook at Page
 12 67, your Honor.
 13 THE COURT: What page is
 14 that?
 15 MR. MCCLAIN: 67.
 16 THE COURT: From the
 17 handbook?
 18 MR. MCCLAIN: Yes.
 19 MR. GOUTMAN: Your Honor, I
 20 would ask that this entire page be
 21 shown to the jury for context
 22 purposes right here where you just
 23 put it up on the TV screen.
 24 MR. MCCLAIN: Your Honor, I

1 don't object to Mr. Goutman
 2 reading anything additional after
 3 I'm done, but I have a right to
 4 ask questions. If he wants to
 5 read more for context --
 6 THE COURT: Is this the book
 7 you are talking about?
 8 MR. MCCLAIN: Right.
 9 THE COURT: I don't have a
 10 Page 67.
 11 MR. MCCLAIN: Last page.
 12 THE COURT: Yes, I do. I'm
 13 used to seeing pages sequentially,
 14 and when I had less than the
 15 number of pages I didn't think we
 16 were up to 67.
 17 MR. GOUTMAN: Your Honor,
 18 I'm not suggesting that anything
 19 be read. I just think the page
 20 should be shown to the jury as it
 21 exists. They have excerpts.
 22 MR. MCCLAIN: I said I don't
 23 object.
 24 MR. GOUTMAN: Thank you.

178

1 MR. MCCLAIN: You want
2 anything else, Mr. Goutman?
3 MR. GOUTMAN: Cup of coffee
4 would be great.
5 MR. MCCLAIN: Your Honor,
6 that's where I draw the line.
7 THE COURT: I thought it was
8 at cream and sugar.
9 MR. MCCLAIN: Your Honor,
10 you are right.
11 BY MR. MCCLAIN:
12 Q. At Page 67 in your handbook
13 you state, do you not, "PCBs can migrate
14 through simple ventilation. Although the
15 related vapor pressure is low, so are the
16 clean up guidelines."
17 MR. GOUTMAN: Excuse me.
18 Your Honor, I would ask that the
19 picture remain up. It just was
20 taken off the entire page.
21 MR. MCCLAIN: Your Honor, I
22 was very gracious. If Mr. Goutman
23 wants to show anything during his
24 exam, he can. But this is

179

1 interrupting me at this point.
2 MR. GOUTMAN: I am not just
3 interrupting. I believe it is
4 important for the jury to see the
5 entire page in the context. He
6 has removed a portion of that
7 page. The jury should see the
8 entire page.
9 MR. MCCLAIN: We know that.
10 I will stipulate to that. That's
11 why we have blown it up. So they
12 can read it.
13 MR. GOUTMAN: I think the
14 jury should see the entire page.
15 It was on the TV screen.
16 THE COURT: At this point we
17 will permit Mr. McClain to proceed
18 with his cross, and, of course,
19 reserving the right to supplement
20 it.
21 MR. MCCLAIN: Thank you,
22 your Honor.
23 THE COURT: With any cross
24 examination that's appropriate.

180

1 MR. GOUTMAN: Thank you,
2 your Honor.
3 BY MR. MCCLAIN:
4 Q. Can everyone read it over
5 here? "PCBs can also migrate through
6 simple ventilation. Although the related
7 vapor pressure is low, so are the clean
8 up guidelines. The most commonly used
9 criteria for airborne contamination is .1
10 grams to M third, the current NIOSH
11 recommendation; am I right?
12 A. The standard is actually 1.0
13 micrograms per cubic meter, which is the
14 number we've thrown around before in the
15 testimony.
16 Q. Right. And that's what you
17 say in your book.
18 A. Yes. It was taken out of
19 context. It's an odd stand alone
20 statement.
21 Q. Is this statement there or
22 not?
23 A. Yes, it is. The section
24 it's in, by the way, since you didn't see

181

1 the page long enough probably --
2 MR. MCCLAIN: Your Honor --
3 THE COURT: No, because --
4 MR. GOUTMAN: It was taken
5 out of context.
6 THE COURT: If the
7 identification of the subject
8 matter is misleading, the witness
9 has the right to put it in proper
10 context. So that we can't pull
11 out a sentence from thin air and
12 ask the witness about it just
13 because it's in the book if it's
14 out of context.
15 BY MR. MCCLAIN:
16 Q. Mr. Woodyard --
17 THE COURT: So to that
18 extent Mr. Woodyard has the right
19 to explain the context in which
20 the document is referring.
21 MR. MCCLAIN: Your Honor, I
22 invite Mr. Woodyard to read
23 whatever he like from that page.
24 MR. GOUTMAN: I would like

182 1 the witness to explain his answer. 2 THE COURT: The Court did 3 not limit Mr. Woodyard to the 4 page. The Court stated that he 5 could identify the page to the 6 context under which it is 7 associated. Otherwise, it is 8 misleading. 9 MR. MCCLAIN: Well, your 10 Honor, I would hope that you would 11 reserve whether it's misleading 12 until he says whatever it is he is 13 going to say. I don't want to be 14 misleading. I understand the 15 Court's ruling. 16 THE WITNESS: Well, so we 17 all understand, this as a stand 18 alone statement is very 19 misleading. The section that is 20 in the book is the section about 21 cleaning up spills, and 22 specifically the section about 23 gross clean up. If you remember 24 when we talked the other day we	184 1 through simple ventilation? That's a 2 true statement, isn't it? 3 A. Like I just said, PCBs will 4 move with air currents, and if you are 5 cleaning up a spill, particularly in a 6 dust, which is what we're always talking 7 about here, if you don't isolate with 8 plastic or something like that the areas 9 that are clean from the areas that are 10 dirty, it will move with the dust. 11 Q. And it's true, isn't it, 12 that although the vapor pressure is low, 13 so are the clean up guidelines, that's 14 true, isn't it? 15 A. Well, I think that really 16 points out the whole issue we talked 17 about. We talked about terms like 18 micrograms and milligrams for so long you 19 forget how small those levels really, 20 really are. And when you are worried 21 about isolating one room from another you 22 have to be extremely careful. It's 23 almost like hospital conditions where you 24 are separating clean rooms from areas
183 1 were talking about the different 2 steps you go through to clean up a 3 spill. One of the areas is what I 4 called containment, I believe, in 5 my testimony. That's when you 6 seal up doors and so forth so 7 people aren't trapped in the 8 contamination back and forth so 9 that you don't have dust moving 10 into clean areas. In that 11 context, which is what I'm talking 12 about in that statement, we are 13 talking about being concerned 14 about dust moving back and forth 15 between rooms, especially when you 16 are doing the clean up. It has 17 nothing to do with ventilation and 18 the concept we are talking about 19 related to ductwork and 20 off-gassing and things we have 21 been dismissing all along here. 22 BY MR. MCCLAIN: 23 Q. Mr. Woodyard, it's true, 24 isn't it, that PCBs can also migrate	185 1 where you are doing work. 2 Q. It's true that the most 3 commonly used clean up criteria for 4 airborne contamination is the one NIOSH 5 recommendation. 6 A. Well, the only standard is 7 really the OSHA standard, but people had 8 used on cleanups the NIOSH airborne 9 guideline. And I understand that when we 10 talked about NIOSH, don't get confused, 11 we are talking here about the airborne 12 measured levels; not this one microgram 13 per hundred square centimeter surface 14 letter that the state elected on their 15 own to use for the clean up. Very, very 16 different. 17 Q. Now, you have mentioned -- 18 you have written some other papers as 19 well, haven't you? 20 A. Yes, sir. 21 Q. You wrote one paper on the 22 decontaminating concrete containing PCBs; 23 am I right? 24 A. Yes, sir.

1 Q. In fact, it's called State
2 of the Art Technology for the
3 Decontamination of Concrete. Your Honor,
4 do you still have your copy of that paper
5 up on the bench?

6 THE COURT: Decontamination
7 of concrete, yes.

8 BY MR. MCCLAIN:

9 Q. In this document you have a
10 table one; am I right?

11 A. Yes, sir.

12 Q. And just to show the jury
13 everything on table one, because it goes
14 on for two pages, Mr. Ziegler, could you
15 put that up? Three pages, actually.

16 MR. GOUTMAN: Excuse me,
17 your Honor, what I had asked for
18 is that the jury be permitted to
19 see -- and I thought there was an
20 agreement -- be permitted to see
21 the entire first page. The blow
22 up only blows up the bottom half
23 of the first page.

24 MR. MCCLAIN: That's what

1 MR. MCCLAIN: Your Honor,
2 this is disruptive of my cross
3 examination.

4 MR. GOUTMAN: Well, your
5 Honor, I think we have reached an
6 agreement, and I don't know --
7 they're showing this document in a
8 way the jury can't even see it. I
9 don't know that reflects our
10 agreement.

11 MR. MCCLAIN: Your Honor,
12 this is -- maybe we need to come
13 to side bar.

14 THE COURT: To put the whole
15 document on the screen, it would
16 not be practical for anybody to
17 read it.

18 MR. MCCLAIN: That's right.

19 THE COURT: And what we
20 could do is start at the top and
21 swing back and forth so that we
22 get line by line.

23 MR. GOUTMAN: That's fine.

24 MR. MCCLAIN: Your Honor, I

1 we're showing them.

2 MR. GOUTMAN: You are
3 showing it in a way that I think
4 the person with the best eyesight
5 in the world can't read a word of
6 it.

7 MR. MCCLAIN: That's why we
8 blew it up, your Honor. But I
9 agreed to show the entire page.

10 THE COURT: And we're
11 reading from table one.

12 MR. MCCLAIN: Right. We
13 already ruled on this and I said I
14 would show the whole first page so
15 they could see there were more
16 things on it. If Mr. Goutman
17 wants to direct them to anything
18 he can do that on redirect.

19 MR. GOUTMAN: Your Honor, I
20 would like the jury to see the
21 page in a way that they can read
22 it, and right now we are focusing
23 on the center of it. I'd like the
24 left-hand column to be shown.

1 didn't want -- that's not part of
2 my exam. If the Court directs me
3 to do that I'm happy to do it.
4 But this breaks everything up when
5 I want to go through a specific
6 line in this document. It would
7 be more proper for redirect
8 examination.

9 THE COURT: You may proceed.

10 MR. MCCLAIN: Thank you,
11 your Honor.

12 BY MR. MCCLAIN:

13 Q. I want to take your
14 attention to table one. This is from the
15 first page of the document. In this
16 document you say some commonly cited
17 standards for PCB decontamination; am I
18 right?

19 A. Yes. This paper was written
20 around 1985, probably a couple years
21 before EPA had their spill policy. There
22 were no standards, and what this table
23 does, which if you could read the whole
24 thing, is list a whole bunch of different

1 standards that people had used on
2 different projects and a little bit of
3 background of where they came from and
4 why it had been used on that particular
5 project. This table one excerpt on the
6 blow up is a small section of that that
7 refers to two particular standards.

8 Q. When did you last review
9 this, Mr. Woodyard?

10 A. It's been a long time.

11 Q. Going back to -- you just
12 recall that about that table out of this
13 one article you wrote?

14 A. This article is easily the
15 most commonly requested article I get.

16 Q. It's still used?

17 A. Absolutely.

18 Q. So you said that you were
19 talking about the NIOSH recommendation in
20 your book PCB management was an air
21 standard, but back in this article you
22 were talking about a surface standard,
23 were you not?

24 A. Yes, yes, I believe that's

1 correct.

2 Q. And you referred people to
3 some commonly cited standards for PCB
4 contamination; isn't that true?

5 A. Yes. Actually, they're
6 examples of different clean up standards
7 used on different projects.

8 Q. One of those that you listed
9 was a recommendation by NIOSH as of 1983
10 .5 micrograms per 100 cubic centimeters;
11 am I right?

12 A. That's -- that standard was
13 listed in the table because, if I recall
14 correctly, I think it was the Santa Fe,
15 New Mexico PCB incident that had used the
16 .5 background level.

17 Q. It says .5 micrograms per
18 100 cubic centimeters, NIOSH, presumably
19 interior surfaces based on upper
20 background limits in nonmanufacturing
21 facilities; am I right?

22 A. That's what it says. Again,
23 it's based on a particular project, I
24 think, where we found this unusually low

1 standard.

2 Q. That was being recommended
3 by NIOSH back in 1983 for interior
4 surfaces; am I right?

5 A. But it was related like all
6 of NIOSH'S work related to these PCB
7 fires. That's what we discussed before
8 where the standard really isn't PCB. The
9 standard is these dioxins that were
10 formed and the PCBs are just the
11 measuring device.

12 Q. Tell the jury where you say
13 that in this document. Tell the jury
14 where in this document you say some
15 commonly cited standards for PCB
16 decontamination you say anything about
17 PCB fires.

18 A. This document is all about
19 cleaning up concrete, and people are
20 interested when they read documents like
21 this in what the standards are that are
22 out there, particularly when there were
23 no standards, and they were looking for
24 different examples to cite.

1 Q. The document doesn't say
2 anything about PCB fires, does it?

3 A. It doesn't have to. The
4 second example you have on that list
5 right there, if I can read it. It says
6 One Market Plaza, which is one of the
7 more widely known PCB transformer fires
8 in the country back in the early '80s.

9 Q. Does the NIOSH reference say
10 anything about PCB fires, sir?

11 A. Not on the table. I don't
12 know what the reference itself says that
13 that came from.

14 Q. Look at it. Look at your
15 paper. Does it make any reference to
16 that standard being a PCB fire?

17 A. I'm sorry. I'm talking
18 about the citation, the source
19 information that was used to put that
20 number on the table. I can't recall
21 where that came from.

22 Q. But anybody reading your
23 paper from the world some commonly cited
24 standard for PCB decontamination. It

1 says that the standard is .5 per
2 microgram per hundred square centimeters
3 from NIOSH, presumably interior surfaces
4 based on upper background limits and
5 nonmanufacturing facilities; am I right?
6 That's what you tell the world?

7 A. What I'm telling the world
8 -- in all fairness, what I'm telling the
9 world is here are the standards people
10 have used on some different projects.
11 There is a whole range of standards all
12 the way up to 100 micrograms. An
13 informed clean up expert is going to use
14 the standard that applies best to their
15 situation. They are not going to pick
16 the low standard.

17 Q. You say this relates to the
18 Santa Fe situation?

19 A. That's my guess; although,
20 the schedule on there says '83.

21 Q. You know Mr. Kominsky has
22 been here, worked on that. Was there any
23 fire at the Santa Fe transportation
24 building?

1 A. It was a transformer
2 explosion or rupture.

3 Q. Was there any fire? There
4 was no fire at Santa Fe, was there?

5 A. Going back to the jargon we
6 have been using, the whole idea of
7 transformer fires is equipment failures
8 that result in releases of PCB. Santa Fe
9 was unique because it spewed out liquids
10 and vapors up through the building at
11 extremely high concentrations, thousands
12 of pounds perhaps, and resulted in a very
13 different kind of contamination.

14 Q. Was there any fire?

15 A. No, except there was arcing
16 inside the transformer, which is a fire.
17 But it has absolutely no relevance to the
18 T&S Building. It's exactly the example
19 we are trying to illustrate to
20 everybody. These are like night and day,
21 apples and oranges.

22 Q. I want to go to another
23 subject that you discussed with Mr.
24 Goutman. First of all, let's stay with

1 NIOSH for the moment. You are aware, are
2 you not, that NIOSH wrote a report. In
3 fact, you mentioned it to the jury,
4 didn't you, on the T&S Building. They
5 wrote a report to Mr. Jannetta at DGS.
6 You are familiar with that?

7 A. Yes.

8 Q. Let me hand it to you
9 Exhibit 996. Your Honor, you have a
10 number of these, but I will hand it up
11 for the Court.

12 MS. MEYERS: Can I have one,
13 Mr. McClain?

14 MR. MCCLAIN: Sure. Your
15 Honor, the jury needs a stretch.
16 Do we need a break?

17 THE COURT: We'll take a
18 short recess.

19 THE COURT CRIER: This court
20 now stands in recess for the call
21 of the crier.

22 (Recess is taken at this
23 time.)

24 THE COURT CRIER: Court is

1 now in session. Sir, you are
2 still under oath.

3 MR. MCCLAIN: May I resume,
4 your Honor?

5 THE COURT: You may proceed.
6 BY MR. MCCLAIN:

7 Q. Now, Mr. Woodyard, what
8 we're -- when we broke we had handed out
9 a letter, which -- I don't know whether I
10 gave Mr. Ziegler a copy. Did I? When we
11 broke we were looking at a letter written
12 by Allen Echt at NIOSH to Secretary
13 Jannetta. We've already seen this in
14 evidence. It's Exhibit Pen 996. Back
15 that up, if you would, so they could see
16 the first page. And you reviewed this in
17 preparation for your testimony, did you
18 not?

19 A. Yes, sir, I did.

20 Q. It's to Mr. Jannetta, the
21 Secretary of the Department of General
22 Services, and it's signed. If you could
23 point up at the top, Mr. Ziegler, where
24 it says "NIOSH" over in the right-hand

1 corner, please, the heading. National
2 Institute of Occupational Safety and
3 Health, Cincinnati, Ohio, and go to the
4 last page, signed by Allen Echt, MPH,
5 that's Master of Public Health; am I
6 right? That's what those designations
7 mean.

8 A. Yes, sir.

9 Q. And CIH, a Certified
10 Industrial Hygienist, am I right?

11 A. That is correct.

12 Q. You are neither one of those
13 things, are you?

14 A. No, I'm not.

15 Q. Now, it's signed by Mr.
16 Echt, Master of Public Health, and a
17 Certified Industrial Hygienist. You are
18 neither Master of Public Health or a
19 Certified Industrial Hygienist, are you?

20 A. That's correct.

21 Q. And he is a direct employee
22 of NIOSH and you've never worked for
23 NIOSH, have you?

24 A. No, I have not. I have

1 worked with them but not for them.

2 Q. Now looking over at the
3 first page again, Mr. Ziegler, this is
4 August 21 of 1995. That's when this
5 letter is dated, and this is a report
6 about the T&S of PCB contamination and
7 provides some recommendations, does it
8 not, from NIOSH?

9 A. Yes, in general, that's
10 correct.

11 Q. You talked to us earlier
12 that NIOSH, when requested, is required
13 to write such a report; am I right?

14 A. They do. I assume they're
15 required by somebody to respond.

16 Q. Yes. So in this letter that
17 NIOSH responded to Mr. Jannetta by, there
18 is some background. Would you bring that
19 up for us, if you would, Mr. Ziegler.
20 Back that up a little bit. Focus it. On
21 June 16th, 1994, a structural fire began
22 on the sixth floor. The fourth, fifth
23 and seventh floors were also damaged in
24 the fire. Your Honor, I'm reading from

1 the first page of this document.

2 THE COURT: I see that.

3 BY MR. MCCLAIN:

4 Q. Did I read that accurately?

5 Did I read that accurately?

6 A. Yes, so far.

7 Q. And there's no mention in
8 this at all about any transformer fire;
9 am I right?

10 A. That's correct. It's just
11 structural fire.

12 Q. And structural fire is
13 different from a transformer fire, am I
14 right?

15 A. I'm not familiar with the
16 term structural fire except burning down
17 a building.

18 Q. So there's no indication in
19 this document that NIOSH thought we were
20 dealing with a transformer fire; am I
21 right?

22 A. That's correct in the sense
23 that a transformer didn't burn, but the
24 terminology we've been using all along

1 for transformer fires is the destruction
2 of PCB that involves creation of dioxin
3 and dioxin like contents, which is, in
4 fact, what he addressed in his report.

5 Q. We'll talk about that in
6 just a minute. It's true, isn't it, that
7 he doesn't discuss any transformer fire
8 in this report, and none occurred?

9 A. In the sense that we've been
10 talking about transformer fires he
11 certainly did.

12 Q. Read for the jury then any
13 part where he says something about a
14 transformer fire. Just go ahead and read
15 that to the jury.

16 A. No. He doesn't use the term
17 transformer fire. That's why we've been
18 explaining what that really means.
19 That's a term of art to those of us who
20 do this for a living.

21 MR. MCCLAIN: Your Honor,
22 can we have that last part of the
23 answer stricken?

24 THE COURT: You may give an

1 answer yes or no and then explain.
 2 THE WITNESS: I'm sorry,
 3 your Honor, I thought I was.
 4 THE COURT: What you omitted
 5 was the yes or no part.
 6 THE WITNESS: I will work on
 7 that. Thank you.
 8 BY MR. MCCLAIN:
 9 Q. Let's do this by the book.
 10 He does not say anything in this letter
 11 about a transformer fire, does he?
 12 A. I don't recall him using the
 13 term transformer fire in the letter. I
 14 can't recall if he used it as one of the
 15 footnotes or citations when he talked
 16 about the dioxin issue, which I just
 17 alluded to.
 18 Q. Let's go over to PCB on
 19 surfaces, if we, can Page 3, your Honor.
 20 It's titled PCBs on Surfaces; am I
 21 correct?
 22 A. PCBs on Surfaces, yes.
 23 Q. And it says -- if you can
 24 move that and center it, Jim. "NIOSH

1 recommends that occupational exposure to
 2 carcinogens be reduced to the lowest
 3 feasible level." Do you see that?
 4 A. Yes, sir.
 5 Q. It says NIOSH recommends
 6 that.
 7 A. Yes. Which is well below
 8 the safe level we've been discussing that
 9 EPA has proposed on a risk assessment
 10 basis.
 11 Q. It's below the level in the
 12 spill policy, right, that's what you are
 13 talking about, the spill policy?
 14 A. The level that was
 15 originally cited in the spill policy and
 16 is now widely used on everything.
 17 Q. Spill policy, that's the
 18 level we are talking about.
 19 A. We can call it the spill
 20 policy level, sure.
 21 Q. Sure. It goes on, "Results
 22 of several investigators of PCB surface
 23 contamination in office buildings
 24 indicate that there is a background level

1 of surface contamination in the range of
 2 50 to 100 microns per square meter." Am
 3 I right? Did I read that accurately?
 4 A. Yes. You said micron. I
 5 think it's micrograms. 50 to 100
 6 micrograms in several office buildings.
 7 Not in Harrisburg, of course, but
 8 somewhere in Santa Fe and elsewhere.
 9 Q. If we convert that into 100
 10 square centimeter calculation, that's .5
 11 to one microgram per 100 square
 12 centimeters. Do I have that conversion
 13 correct?
 14 A. Yeah. You got the city
 15 wrong, but the conversion is correct.
 16 Q. What do you mean I have the
 17 city wrong? I didn't say anything about
 18 the city; you did.
 19 A. No, not at all. Let's get
 20 back to the citation. It referred to --
 21 what page are we on again?
 22 Q. It says, "Results of several
 23 investigations of PCB surface
 24 contamination in office buildings

1 indicate that there is a quote-unquote
 2 background level of surface contamination
 3 in the range of 50 to 100 micrograms per
 4 square meter." Did I read that
 5 accurately or not?
 6 A. Yes. And my point was the
 7 results of several investigations of PCB
 8 surface concentration or contamination in
 9 office buildings, those buildings were in
 10 Boston, they were in Santa Fe, New
 11 Mexico. There is no relationship to the
 12 situation in Harrisburg.
 13 Q. Why does Mr. Echt put it in
 14 his letter if there is no relationship?
 15 MR. GOUTMAN: Objection.
 16 This witness can't read Mr. Echt's
 17 mind.
 18 THE COURT: Sustained.
 19 BY MR. MCCLAIN:
 20 Q. Does Mr. Echt say this
 21 doesn't apply to your buildings?
 22 A. No. What Mr. Echt is doing
 23 in this letter is giving the state a
 24 collection of background information that

1 they can use to better understand the
2 situation that they're in.

3 Q. He never says in this
4 letter, does he, this doesn't apply to
5 your building, does he?

6 A. He never says it does.

7 Q. Okay. He never says it
8 does. Now will you agree with me that he
9 never says that it does not?

10 A. No. There has been -- there
11 is only probably two, three studies of
12 background PCB levels and he cited them
13 in this range. He is trying to help
14 out. He is trying to help out.

15 Q. And he cites these
16 quote-unquote background levels to try
17 and help out; am I right?

18 A. Yes. He is trying to get
19 them acquainted with the whole issue of
20 background, which is important.

21 Q. My question in regard to
22 this conversion is to use the same
23 measurements we've been talking about, he
24 says it's .5 to one microgram per 100

1 Q. And that converts again to
2 the one microgram standard per 100 square
3 centimeter standard that we were -- that
4 we have been talking about is the NIOSH
5 standard; am I right?

6 A. No, it's not a standard.

7 It's a recommendation or a guideline
8 based on basically no PCBs above
9 background. It's not health risk based
10 at all.

11 Q. It's the NIOSH level we have
12 been talking about for surface.

13 A. The NIOSH guideline, yes.

14 Q. And he says here that -- he
15 talks about risk assessment down here,
16 doesn't he?

17 MR. GOUTMAN: Excuse me,
18 your Honor, if I can ask the next
19 sentence be read for the rule of
20 completeness. The last sentence
21 of that paragraph.

22 MR. MCCLAIN: Sure. It
23 reads, "It must be emphasized that
24 this recommendation does not

1 cubic -- square centimeters, do I have
2 that right?

3 A. Close enough. The two goes
4 after the M, the other M.

5 Q. This M. Okay.

6 A. And the other M is a U.

7 Q. Whatever.

8 A. I think we all understand.

9 Q. It's the one standard we
10 have been talking about.

11 A. This is beyond spelling.

12 Q. Okay. Now, so then he goes
13 on he say, "Therefore, for surfaces in
14 occupational environments that may be
15 routinely contacted by the unprotected
16 skin, NIOSH investigators have
17 recommended that PCB contamination not
18 exceed 100 micrograms per square meter;
19 am I right?

20 A. Yes, that's correct.

21 Q. The lowest feasible level
22 considering background contamination; am
23 I right?

24 A. Yes.

1 represent NIOSH policy, paren,
2 although, it is a logical
3 extension of the NIOSH carcinogen
4 policy. It is merely a guideline
5 used by NIOSH investigators in the
6 conduct of health hazard
7 evaluations. And that's true,
8 isn't it, Mr. Woodyard.

9 THE WITNESS: Yes. It's
10 just a starting point and should
11 be backed up by risk assessment
12 work or use of other risk based
13 standards.

14 BY MR. MCCLAIN:

15 Q. We are talking about what he
16 said here now. He says that it's used by
17 NIOSH investigators in the conduct of
18 health hazard evaluations, doesn't he?

19 A. That's correct.

20 Q. Then he does talk about risk
21 assessments here in the next paragraph
22 and he says in his letter, "The risk posed
23 by this level of contamination was
24 assessed by the U.S. Environmental

1 Protection Agency in its PCB spill clean
2 up policy, and that was the document we
3 just looked at; am I right?

4 A. Yes.

5 Q. And he doesn't call it the
6 EPA safe level, does he? He calls it the
7 EPA spill clean up policy, doesn't he?

8 A. He is not talking about the
9 standards when he says that. He is
10 talking about the policy in its broadest
11 sense. Like I said before, talking about
12 little spills, regular cleanups every day
13 of relatively routine events.

14 Q. He refers to it as the EPA
15 PCB spill clean up policy, doesn't he?

16 A. Yes. And I think I made a
17 very clear distinction between a clean up
18 number and that policy, which is that
19 document you were showing us before,
20 which is much broader than just the
21 numbers.

22 Q. Go to the document if you
23 want. Cite me any place in the document
24 that says safe limit. It doesn't say

1 that, does it?

2 A. The term "safe" is
3 throughout the document. In terms of
4 safe limit as the definition? No, they
5 prefer to call it the clean up standard
6 or clean up criteria.

7 Q. And none of them include the
8 EPA safe standard, am I right? None of
9 the phrases they use say that.

10 A. No. I don't believe that's
11 typically EPA terms for it.

12 Q. Then it goes on in the
13 development section of the policy,
14 paren,"Risks posed by leaks and spills of
15 PCBs. The EPA states that the estimated
16 level of oncogenic, paren, cancer causing
17 risk associated with dermal exposure of
18 50 grams per square meter of PCBs on hard
19 indoor high contact surfaces is between
20 one times ten to the fifth and one times
21 ten to the negative sixth." Am I right?

22 A. Yes, yes.

23 Q. Between one and 100,000 and
24 one in a million excess testing usually

1 stated in terms of workers with 30 year
2 work history; am I right?

3 A. That's correct.

4 Q. They say that at one -- at
5 the one microgram standard the EPA under
6 the NIOSH guideline, to use your phrase,
7 that EPA predicts excess testing between
8 one in 100,000 and one in one million
9 using EPA's risk assessment, am I right?
10 At the one microgram level. That's what
11 he is saying.

12 A. Yes, that's what the ten to
13 the fifth and ten to the sixth refer to,
14 that's correct.

15 Q. Now, I want to take you over
16 to --

17 MR. GOUTMAN: Well, your
18 Honor, once again, the next
19 sentence states what the NIOSH and
20 what the EPA policy is. I ask
21 that that be read.

22 MR. MCCLAIN: Sure. How
23 much of it would you like me to
24 read? The whole paragraph.

1 MR. GOUTMAN: Although the
2 EPA guideline.

3 MR. MCCLAIN: Just tell me
4 what you want me to read.

5 MR. GOUTMAN: That sentence.

6 MR. MCCLAIN: I understand
7 what the sentence is. I was
8 asking you for some limit. If you
9 want me to read the whole
10 paragraph I will be happy to read
11 it all.

12 MR. NEAL: I think it's Mr.
13 Goutman's serve.

14 MR. GOUTMAN: I asked you to
15 read that sentence. I don't know
16 how I could be clearer.

17 MR. MCCLAIN: "Although the
18 EPA document did not provide a
19 risk assessment for the cleanup
20 criteria, it's believed for high
21 contact indoor surfaces 1,000
22 grams per square meter. It did
23 state that EPA also believes that
24 the surface standards of 10,000

214 1 grams per square meter for indoor 2 low contact surfaces and bulks and 3 high contact surfaces in a 4 restricted access industrial 5 facility would not present 6 significant risk to workers or the 7 general population." Is that the 8 sentence you wanted? 9 MR. GOUTMAN: I think you 10 misread it, but that's okay. 11 MR. MCCLAIN: What did I 12 misread? 13 MR. GOUTMAN: You keep on 14 mixing up what a gram is and 15 microgram and so forth. 16 BY MR. MCCLAIN: 17 Q. I'm confident about that. I 18 read that correctly, Mr. Woodyard, or 19 close? 20 A. Close enough. I think the 21 point has been made, and it's an 22 important one. The EPA has, regardless 23 of whatever the risk level is that they 24 explain has recommended these standards,	216 1 we're on Page 8. These results 2 indicate that PCBs exceeded or 3 exceed the guideline used by NIOSH 4 investigators of 100 micrograms 5 per square meter for surfaces that 6 may be routinely contacted by the 7 unprotected skin on all 14 8 floors. That's what he said. 9 MR. GOUTMAN: Can we have 10 the next sentence? 11 MR. MCCLAIN: Yes, you can. 12 THE COURT: Let him finish. 13 THE WITNESS: But his 14 statement was incorrect and he 15 goes on to explain why it was 16 qualified. 17 BY MR. MCCLAIN: 18 Q. Well, first of all, did he 19 say it? 20 A. You read it correctly. 21 Q. Now, the next sentence is 22 what Mr. Goutman would like me to read. 23 It says, "However, the SLPCBW data set 24 includes surfaces such as floors,
215 1 which are the standards we have been 2 talking about all along as the safe 3 level. 4 Q. You referred to them that 5 way and EPA didn't? 6 A. Yes. I think it's a lot 7 easier to understand that way. 8 Q. Now, let's go over to -- I 9 want to go to the-- now, Mr. Echt 10 reviewed the data taken from the building 11 in terms of the wipe samples that were 12 taken; am I correct? 13 A. He reviewed the data as it 14 was presented to him; that's correct. 15 Q. And look over at Page 8, if 16 you would. 17 A. Yes, sir. 18 Q. And it says, "Table 8, 10 and 19 13 present the results of the analysis of 20 the PCB wipe samples in the data sets 21 SLPCBW and ELSPCB." Correct? I read 22 that correctly? 23 A. Yes, that's correct. 24 MR. MCCLAIN: Your Honor,	217 1 ceilings, air filters, floor troughs and 2 computer subfloors; am I right? 3 A. That's what the next 4 sentence says. As I pointed out, the 5 data was mixed up so it was impossible 6 for Mr. Echt to decide whether the 7 standards applied to the right locations 8 or not. 9 Q. Well -- 10 MR. GOUTMAN: Your Honor, 11 could we just have the rest of the 12 paragraph read? 13 MR. MCCLAIN: Fine. 14 THE COURT: Are you asking 15 for the remaining sentence? 16 MR. GOUTMAN: It just puts 17 in context the one sentence. 18 MR. MCCLAIN: Your Honor, I 19 don't object to it. I don't need 20 a speaking objection. The results 21 for furniture and office items 22 should be separated from these 23 others for a more detailed 24 analysis. These results should be

1 compared with the EPA clean up
2 criteria of 100 micrograms per
3 square meter.
4 MR. GOUTMAN: It's 1,000.
5 BY MR. MCCLAIN:
6 Q. 1,000 micrograms per square
7 meter for high contact indoor surfaces
8 and 10,000 micrograms per square meter
9 for indoor low contact surfaces; correct?
10 That's what he said?
11 A. That's correct.
12 Q. Now, then finally, Mr. Echt
13 says at Page 9, "However, the Pennsylvania
14 Department of General Services in concert
15 with the Health Department and
16 representatives of the employees in the
17 building needs to decide whether the goal
18 of the clean up should be reaching the
19 guidelines used by NIOSH investigators or
20 the clean up criteria established by the
21 EPA." Am I right?
22 A. Yes, that's what it says.
23 Q. And then it says, "Dioxin
24 sampling results indicate that dioxin

1 clean up should be the focus of the sixth
2 floor." Am I right?
3 A. Yes. Highlighting again
4 that dioxins don't come from PCBs. It's
5 a different issue of clean up.
6 Q. When we come back tomorrow
7 we'll talk about that subject. So I'm
8 going to leave it to one side except to
9 say you know in this case that the
10 Pennsylvania Department of Health
11 recommended the NIOSH level of clean up
12 for the T&S Building; isn't that true?
13 A. Well, what I know, going
14 back to your sentence, is that none of
15 the people who were involved in making
16 any decisions on this project had any
17 experience with similar work. So putting
18 it back on the state to make a decision
19 without competent help was not helpful,
20 in my view.
21 MR. MCCLAIN: Your Honor, I
22 ask that that comment be stricken
23 and the witness be admonished to
24 answer my questions.

1 THE COURT: Can the question
2 be answered yes or no that was
3 asked?
4 THE WITNESS: I think I
5 began that way and went on to
6 explain it.
7 MR. MCCLAIN: No, your
8 Honor. Read my question back.
9 THE COURT: Could you read
10 the question back?
11 (The reporter read back from
12 the last record.)
13 MR. MCCLAIN: That was my
14 question, your Honor, and I'd like
15 an answer to it.
16 THE COURT: And what was the
17 answer?
18 (The reporter read back from
19 the last record.)
20 THE COURT: We didn't get a
21 yes or no answer, as I had
22 directed, but the Court will tell
23 you that you may give an answer
24 yes or no, and if an explanation

1 is required, you may answer it.
2 You may state it.
3 BY MR. MCCLAIN:
4 Q. Mr. Woodyard, the question
5 is you know, do you not, that the
6 Pennsylvania Department of Health
7 recommended the NIOSH level?
8 A. Yes, they did. But as I
9 pointed out, they had no experience,
10 their consultants, contractors had no
11 experience with similar work. So it was
12 inappropriate for them to make that all
13 by themselves without some help.
14 Q. Well, Mr. Woodyard, NIOSH
15 directed the Pennsylvania Department of
16 General Services, the consultant of the
17 Pennsylvania Department of Health, didn't
18 they?
19 A. Yes, they did. And the
20 answer they got back was, well, you can
21 use the NIOSH standard, or you should
22 look at the EPA standard, too, because
23 that's good. That was not a conclusive
24 recommendation.

1 Q. Then the NIOSH -- then the
2 Pennsylvania Department of Health
3 recommended that the NIOSH clean up
4 standard be used at the T&S Building,
5 isn't that true, by the Pennsylvania
6 Department of Health? That is a true
7 statement, isn't it?

8 A. That's correct based on lack
9 of experienced input to that decision.

10 MR. MCCLAIN: Your Honor,
11 I'd like to hand this up. This is
12 Exhibit 3524.

13 MR. GOUTMAN: Could I see it
14 before it's put up, please?

15 MR. MCCLAIN: Sure. Your
16 Honor, I'd like to put up 3524.
17 Any objection, Mr. Goutman?

18 MR. GOUTMAN: A foundation
19 has to be laid as to whether this
20 witness is familiar with it,
21 whether he relied upon it and so
22 forth. The same foundation has to
23 be made with every expert.

24 MR. MCCLAIN: Your Honor,

1 this is in evidence already, but I
2 will ask the witness.

3 BY MR. MCCLAIN:

4 Q. Mr. Woodyard, are you
5 familiar with the Department of Health's
6 recommendation in this very case?

7 A. I am not -- I don't recall
8 seeing this document, but I am familiar
9 with the recommendation we just
10 discussed, yes.

11 Q. All the work you've done on
12 this, the \$250,000, the hours you spent,
13 you have never been shown this document,
14 never?

15 A. No. My point is I haven't
16 tried to memorize everything I read over
17 these past several years. What I have
18 seen is numerous documents with the
19 recommendation in it.

20 Q. Do you believe or not that
21 you saw this document in the many hours
22 that you spent on this case?

23 A. I believe I saw that
24 document.

1 Q. Thank you. Your Honor, I'd
2 like to put it up.

3 THE COURT: It may be
4 admitted.

5 BY MR. MCCLAIN:

6 Q. It's dated October 6th,
7 1994, top, if you will go down to after
8 "consultation". This is written by
9 Allan S. Noonan MPH. Dr. Noonan is an
10 M.D. doctor, isn't he?

11 A. That's correct.

12 Q. He has a Master in Public
13 Health.

14 A. Yes, sir.

15 Q. You have neither of those
16 degrees?

17 A. No, that's correct.

18 Q. And he is the Secretary of
19 Health or was at the time?

20 A. Yes.

21 Q. Of the Commonwealth of
22 Pennsylvania?

23 A. Yes.

24 Q. Am I right?

1 A. Yes, that's true.

2 Q. And he states that, "After
3 consultation with NIOSH, we have reviewed
4 available PCB information from a number
5 of sources, paren, NIOSH, OSHA, EPA, and
6 are able to recommend that the
7 Commonwealth follow the same
8 recommendations issued by NIOSH relating
9 to potential exposure levels to workers
10 and the public in the air and on
11 workplace surfaces." Doesn't it?

12 A. That's what he says, yes,
13 sir.

14 Q. And he cites the NIOSH
15 recommendation as the third bullet point,
16 doesn't he?

17 A. That's correct.

18 Q. He says, "NIOSH recommends
19 that the occupational exposure to PCBs be
20 reduced to the lowest feasible level.
21 Results of several investigations of PCB
22 surface contamination in office buildings
23 indicate that there is a quote-unquote
24 background level of surface contamination

226 1 in the range of .5 to one microgram per 2 100 square centimeter. Therefore, for 3 surfaces in the occupational environment 4 that may be routinely contacted by 5 unprotected skin, NIOSH investigators 6 have recommended that PCB contamination 7 not exceed one microgram per 100 square 8 centimeter, the lowest feasible level 9 considering background contamination." 10 That's what he wrote. 11 A. Yes, sir. 12 Q. And that was the standard 13 that was adopted at the T&S Building for 14 clean up; am I right? 15 A. Yes. But as far as I can 16 tell from this document he could have 17 done it by flipping a coin. All the 18 documents I reviewed that you cited, 19 there is nothing in there that is related 20 at all to a risk assessment. Any 21 scientific input to that decision at all 22 is as though they simply set all this 23 stuff on the table and picked one. There 24 is no basis. I respect the gentleman's	228 1 leave the courtroom. 2 (The proceedings concluded 3 at approximately 4:15 p.m.) 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
227 1 degrees and all that, but the fact is 2 they need to exercise them and show that 3 there's some risk and some basis for 4 making that decision. 5 Q. You may think it's flipping 6 the coin, but the reality is that NIOSH 7 issued a report and said consultant to 8 the Department of Health, that's what was 9 done. And then Department of Health 10 recommended that NIOSH's clean up 11 standard be applied; am I right? 12 A. That's what happened, 13 although the basis for that is not clear 14 in any of the evidence. 15 MR. MCCLAIN: Your Honor, 16 this will be a good stopping point 17 for the day. 18 THE COURT: I think you're 19 right. 9:30 tomorrow morning. 20 MR. MCCLAIN: Yes. 21 THE COURT CRIER: Court now 22 stands recessed until tomorrow 23 morning at 9:30. All parties 24 remain seated while the jurors	229 1 CERTIFICATE 2 3 4 5 I hereby certify that the 6 witness was duly sworn by me and that the 7 deposition is a true record of the 8 testimony given by the witness. 9 10 11 12 13 Megan McKay, RPR 14 Dated: February 2, 2000 15 16 (The foregoing certification of this 17 transcript does not apply to any 18 reproduction of the same by any means, 19 unless under the direct control and/or 20 supervision of the certifying shorthand 21 reporter.) 22 23 24

LAWYER'S NOTES

PAGE LINE

3 — —

4 —————

5 — —

6 —————

7 — —

8 —————

9 — —

10 —————

11 — —

12 —————

13 — —

14 —————

15 — —

16 —————

17 — —

18 —————

19 — —

20 —————

21 — —

22 —————

23 — —

24 —————

A	111:1,13	190:17	171:5 172:7	153:17,18	1:11
abatement	112:1,2,23	195:17	address 30:9	155:11	amount
102:12	113:14	absorb 47:6	53:12 56:6	agree 87:21	120:15
103:15	117:19	absorber	138:16 148:5	90:21 91:3,6	129:16
ability 47:5	120:17 127:6	46:14	148:9	116:17	153:18 171:2
62:3 138:16	128:15 129:2	absorbing	addressed	145:16 166:5	amounts
able 49:2	129:3 130:6	29:8	201:4	168:1 206:8	67:14
78:19 87:18	130:20	absorbs 25:2	addressing	agreed 149:3	analogous
140:7 147:11	132:24	27:16 37:4	109:8	187:9	153:24
163:13 225:6	137:22,24	abstract	administrator	agreement	analysis
about 11:23	138:3,5,12	115:13	173:22	186:20 188:6	215:19
16:3,6,7,10	138:14 139:7	accept 174:7	175:17,24	188:10	217:24
16:21 18:17	139:11	accepted	admissible	agrees 115:14	analytical
19:6,21	140:14,19	175:6	97:17 138:24	ahead 132:13	142:22
21:23 24:5	141:10,11,21	access 214:4	139:5 140:3	201:14	and/or 171:16
24:10,12	141:24	according	140:5 144:1	air 154:12	229:19
25:6 26:1,14	142:13 143:4	7:10 146:18	admission	181:11 184:4	animal 15:12
27:10,14	143:10 146:2	accumulate	116:22	190:20 217:1	16:3 18:6,8
28:19 29:3,7	146:10 151:6	114:21	admitted	225:10	19:6
29:21 30:13	152:6 153:10	119:17 120:1	43:24 224:4	airborne	animals 16:11
31:22 32:2,5	154:1,6,13	accumulates	admonished	180:9 185:4	announce
32:20 34:1,5	154:23 156:6	121:12	219:23	185:8,11	150:10
34:6,21 35:8	156:9 157:12	accumulation	admonition	Alabama	another 20:22
35:24 36:3,6	158:16	120:11 121:8	135:21	105:4,9	41:24 42:17
37:4,6,10,20	160:21	121:17	adopted	Allan 224:9	55:3 58:6
39:2,21	162:24	accurate	226:13	allege 30:19	59:4,8 60:9
41:23,24	164:22 165:2	107:13	ADVANCE	alleged 45:19	105:3,8
42:1,10,15	165:7,8,12	accurately	1:12	138:22	135:14 151:5
42:18 43:6	166:6,11,16	161:13 200:4	advised 12:24	allegedly 30:3	156:7 184:21
43:11,16	167:22 168:3	200:5 204:3	advising	30:14	195:22
44:5,14	168:9,21	205:5	136:3	Allen 197:12	answer 25:21
45:15 46:1,2	169:8,18,18	acknowledge	aerospace	198:4	115:2 166:23
46:11,12	175:14,15	145:15,21	1:10 2:19	allow 43:18	167:1,9
47:15,16,20	177:7 181:12	acknowledged	afield 63:18	54:5 100:18	168:11 182:1
49:9 50:6,7	182:20,22	15:6	after 61:22	allowed 31:21	201:23 202:1
51:19 52:1	183:1,12,13	acknowledges	62:13 63:24	33:22 35:5	219:24
55:2,5,8	183:14,18	15:4	94:5 111:7	35:10,18	220:15,17,21
56:17 57:4	184:7,17,17	acquainted	135:4,5	39:7,18,20	220:23 221:1
59:23 60:21	184:21	206:19	143:24	53:14 72:13	221:20
61:5,20	185:10,11	acres 171:9	148:13 177:2	72:23,23	answered
63:23 64:7	190:12,19,22	act 92:12	207:4 224:7	87:17 96:1	27:2 220:2
64:11,20	192:16,18	94:14 108:21	225:2	137:9	answering
65:13,14,23	193:2,10,18	109:22 110:1	again 9:11,13	allowing	69:17
66:7,13,14	199:6 200:8	110:11 113:9	15:20 19:8	44:22 46:24	anybody
67:21,23	201:5,10,13	action 29:7	21:18 38:12	alluded	130:5 188:16
68:1,6,19,21	202:11,16	36:15 163:9	41:22 59:1	202:17	193:22
68:23 72:12	203:13,18	actions 36:18	65:4 69:16	almost 184:23	anyone's
72:14,17,19	204:17	141:7	75:5 79:23	alone 102:16	115:20
73:6,23 74:3	206:23	actual 129:9	93:21 111:24	180:19	anyplace
74:5,13,14	207:10 208:4	129:11	127:23 139:6	182:18	61:19 62:1
74:15,19,22	208:12,15	actually 30:7	141:12	along 14:5	anything
75:3,18,20	209:15,20	50:9 70:19	147:19	82:8 108:18	13:15 18:14
76:5,10,12	210:8,10,11	70:19 97:18	161:16	183:21	19:5 28:23
77:6,8 78:1,2	214:17 215:2	102:8 104:5	191:22 199:3	200:24 215:2	35:7 44:8
78:11,18	219:7	105:6 137:3	204:21 208:1	already 94:15	66:11 68:19
79:3,4,14	above 46:21	180:12	212:18 219:3	95:23 98:24	72:5 81:8
80:14,24	46:22 89:22	186:15 191:5	against 13:5	117:6 155:13	87:9 118:24
81:2,4 82:17	89:22 208:8	add 71:22	62:22 116:22	155:20 175:1	132:9,13
85:9,19	above-captio...	addition	131:10	187:13	141:24
86:19 89:23	1:17	35:19 44:10	agencies	197:13 223:1	144:11
91:17 94:16	abrupt 121:24	142:10	80:22	although 20:3	145:21 154:6
95:5,13,23	122:19	172:24 173:6	agency 1:6	53:5 178:14	177:2,18
97:7,8,10,13	125:10,12,19	173:23	56:1 210:1	180:6 184:12	178:2,23
98:15 99:4,7	125:24 145:5	additional	ages 47:3	194:19 209:2	187:17
99:9 105:18	absolutely	35:20 86:12	ago 106:8	213:1,17	192:16 193:2
106:21 107:6	73:18 106:20	175:18 177:2	110:23 111:1	227:13	193:10
107:15	125:5 132:1	additionally	111:4,14	always 47:12	202:10
110:19,22	163:17 166:1	51:1 170:4	129:21	165:5 184:6	204:17
	169:16		138:20 150:3	AMERICA	anyway

101:24	29:19 64:8	assumed	220:18	139:17 141:8	194:14
anywhere	64:12 66:6	170:12 171:2	221:20	147:16	better 130:15
61:18 63:15	93:4 97:7	171:7,13	backed	148:23 149:2	206:1
158:1	126:12	173:15	209:11	151:17 154:1	between 114:6
apart 89:6	180:14	assuming 15:5	background	155:17 160:9	114:11
apologize	189:20	63:23	48:16 54:15	170:10	145:24
8:21 112:10	art 21:11 45:7	assumptions	153:24	180:14	166:23
167:4 172:13	52:10 156:1	172:18	154:13,23	189:21 192:7	183:15
apple 9:21,21	186:2 201:19	attached 6:2,3	155:4,13,17	210:11,19	210:17
apples 195:21	article 21:6,10	attempt 9:20	156:5 190:3	222:14	211:19,23
applicability	22:3 24:8	attempted	191:16,20	began 199:21	212:7
63:3 169:19	27:14,20,24	23:2 28:9	194:4 199:18	220:5	beyond
applicable	38:5 48:18	30:23 41:10	203:24 205:2	begin 148:23	207:11
18:10 95:21	51:21 56:15	49:19 113:24	205:24	160:9	bias 104:13
application	57:3,6 62:17	attention	206:12,16,20	beginning	big 53:21
47:24 48:19	65:6 67:13	11:20 20:17	207:22 208:9	1:19 7:2	bioaccumulate
applications	68:24 74:5	96:13 151:24	225:24 226:9	14:22 21:19	98:12 114:21
59:15 85:12	78:8,20	189:14	banned 96:18	50:2 91:14	119:5,12,20
90:23 91:4	114:18 133:2	attributes	117:19,20	130:3 145:7	120:13 127:1
111:20	190:13,14,15	46:16	121:24	152:16 172:6	bioaccumulates
137:14,17	190:21	August 50:5	122:19	172:23	120:22
143:8 152:17	articles 34:5	50:23 141:3	125:11,12,20	beginning"pa...	bioconcentrate
176:8	45:5	199:4	126:1 128:4	144:21	98:11 119:12
applied 217:7	asbestos 7:6	author 13:5	145:6	beginning"P...	119:14,19
227:11	7:13,22,24	15:6 122:13	bantered	144:24	120:2,7,9
applies 8:19	33:4 102:4	authoritative	115:6	begins 77:19	126:24
48:9 86:3	102:12	15:5,7	bar 113:19	113:20 123:1	bioconcentrat...
87:19 161:6	103:14	authority	133:14	133:15 145:2	98:9
175:5 194:14	ascended	173:8	188:13	145:10 160:5	biomagnificat...
apply 100:3	149:2	author's 13:3	base 56:2	being 5:24	98:15
162:22 163:3	ascribed 85:4	13:6	based 39:24	8:13 10:7	biomagnify
166:7 167:18	ascribing 85:7	automatically	44:23 48:12	16:6,7 21:19	98:12 114:22
167:21	87:10	175:5	48:15 54:14	24:14 26:2	119:13 121:5
205:21 206:4	aside 94:6	available	129:7,8	31:10,23	121:6,7,11
229:17	asked 6:6	129:13	139:12	44:11,13	121:14 127:1
appropriate	10:13 25:13	130:13	191:19,23	63:13 114:10	biphenyl
100:1 179:24	25:15 31:18	146:24	194:4 208:8	115:12,15	158:13,21
approximately	33:13 74:3	166:18 225:4	208:9 209:12	117:6,19,20	birth 14:10,11
1:20 102:23	91:7 115:12	avenue 2:7	222:8	123:21 158:3	15:24 16:1
104:4 228:3	118:14 138:3	105:13	basically	165:6 183:13	16:14,15
arc 195:15	147:1 168:12	aware 10:15	174:22 208:8	192:2 193:16	127:9,9
area 20:8,21	186:17	19:2 76:18	basis 40:3	believe 5:9	128:21
34:4 77:2	213:14 220:3	196:1	81:3 128:9	12:10 49:2	bit 190:2
80:21 118:4	asking 76:5	away 62:6	136:21 139:1	60:12 85:5	199:20
142:21 143:2	163:15 213:8	a.m 1:20	142:4 175:8	86:8 91:12	bite 9:20
144:6 152:2	217:14		203:10	95:2,20	black 124:9
162:10	asks 99:24		226:24 227:3	96:21 121:4	blast 27:19
175:19	141:17		227:13	139:10	34:3 35:14
areas 123:6	aspects	B 2:3 144:22	bear 45:17	140:22 141:2	blasted 25:10
171:7,10	102:11	150:22	bears 125:23	141:6 149:19	29:2 32:9,12
173:15	assessed	back 60:17	128:24 133:7	157:11	33:9,22 40:6
174:10	209:24	81:24 82:2	become 40:6	169:20	49:1 70:20
175:19 176:1	assessment	89:8 106:5	becomes	170:21 179:3	blasting 25:7
183:3,10	56:3 174:17	109:19	36:21	183:4 190:24	25:15,16
184:8,9,24	203:9 208:15	111:24 115:6	beebees 25:17	211:10	28:10 29:3
aren't 18:9	209:11 212:9	126:14	before 1:14,20	223:20,23	31:23 32:7
20:13 27:13	213:19	129:12	14:23 53:7	believed	34:7 41:1,4,5
88:1 90:23	226:20	153:20 174:9	64:1 68:4	213:20	48:21 71:3,9
132:22 183:7	assessments	174:13,13	70:7,8 71:1	believes	71:14 72:18
argue 33:14	175:10	176:3 183:8	71:13 74:8,9	143:18	blew 55:6
43:19 133:24	209:21	183:14	90:22 91:18	213:23	187:8
141:4 175:12	associated	188:21	100:20	below 22:17	blocked 49:20
argument	182:7 211:17	190:11,21	105:16 108:3	76:24 203:7	blow 52:24
8:13 36:3	association	192:3 193:8	109:20	203:11	53:15,20,21
57:24 67:7	36:1,21 40:2	195:5 197:14	112:24 116:8	bench 149:3	58:3,15 59:3
93:16 140:21	105:2,7	204:20 219:6	122:9 127:24	159:22 186:5	59:18 60:3,6
arise 43:13	assume 23:17	219:14,18	131:15	beneath 18:4	60:22 91:19
arises 107:21	126:22 134:5	220:8,10,11	134:14	19:4	186:21 190:6
around 9:18	199:14		135:19	best 187:4	blown 14:6

22:7 36:14 59:20 60:22 89:2 92:8 97:20 107:10 108:17 179:11 blows 186:22 blowups 41:20 83:3 blow-ups 11:9 149:1 blue 122:10 124:22,24 126:4 board 126:14 body 120:1,18 120:19,21 Bond 25:13 26:19 32:8 Bond's 24:3 25:22 70:21 book 11:12,17 15:5 16:22 17:6 82:9,20 106:1,4,8,23 107:6,19,20 108:12 115:16 116:1 116:2,3 117:24 122:10,22 124:6 125:23 126:4 129:23 130:4,4,9 131:6,14 132:18 133:3 137:22 144:23 145:2 145:10,12 151:6,21 156:1 159:17 159:24 176:10 177:6 180:17 181:13 182:20 190:20 202:9 Boston 205:10 both 24:2 160:17 164:18 176:5 bottom 52:21 98:4 160:5 186:22 bought 106:8 124:12,15 129:23 Boulevard 1:23 boundaries 175:4 box 9:16 boxes 80:10 break 134:10 135:7 196:16 breaks 189:4 bring 51:2 68:10 199:18 bringing	123:17 brings 96:12 Broad 2:17 broaden 210:20 broadest 210:10 broke 151:4 197:8,11 broken 132:18 building 7:16 8:10 16:6,18 18:3,11 19:3 22:3,22 23:1 23:14 24:15 24:23 25:4 25:11 26:3,7 26:12 27:18 29:5 31:20 35:2 36:8 37:14 38:9 38:12 42:19 43:7,23 44:10,15 45:18,20 46:1 47:9 50:1 51:9 55:19 56:6 62:11 63:21 64:4 68:14 69:7 70:4,5,8 70:9 72:1,7 73:12 76:16 84:1 86:16 87:1 91:5 93:18 95:21 96:24 97:1 102:5 103:2 116:12 143:11 153:9 163:4 165:4 165:4,24 166:8 167:8 167:14,19 168:5 169:15 170:17,20 194:24 195:10,18 196:4 200:17 206:5 215:10 218:17 219:12 222:4 226:13 buildings 8:1 9:8 24:12 56:20,23 85:17 153:3 203:23 204:6 204:24 205:9 205:9,21 225:22 bulk 5:15,20 6:13 8:15,24 37:12 38:11 73:6,7,14 bulks 214:2 bullet 225:15 bunch 34:21	189:24 burn 200:23 burning 200:16 business 92:20,23,24 93:5,9 94:17 109:1,7,10 buy 106:1,4 C C 2:1 145:1 150:22 229:1 229:1 calculation 204:10 call 20:16 21:1 104:19 104:21 106:13 112:8 136:13 155:23 196:20 203:19 210:5 211:5 called 16:23 21:2,11 98:20 151:8 156:10 157:20 158:7 158:12,20 174:21 183:4 186:1 calling 176:7 calls 71:8,9 104:16 210:6 came 43:10 76:2 162:13 190:3 193:13 193:21 Canada 95:6 95:15 97:3 cancer 211:16 cap 65:24 capacitor 169:13 capacitors 84:19 88:6 90:8 168:22 168:24 169:9 capillary 29:7 36:15,18 Capitol 2:22 capped 65:19 capping 64:16 74:13 77:9 77:12,20 carbon 153:19 154:7 155:9 carbonless 85:14 86:4 87:3 89:24 91:2 153:17 carcinogen 209:3 carcinogens 203:2	career 17:12 careful 184:22 carriers 85:14 86:4 87:3 90:1 91:2 carry 157:2 case 10:6,11 21:21 25:23 26:1 27:3,5 28:2,17 34:16 37:7 37:11 38:14 41:24 42:1,2 44:7 45:15 45:17 48:1 48:22 49:8 51:14 59:7 59:11 61:8 64:6 65:14 66:5 67:1,3 67:18 78:22 80:17 86:21 93:20 94:10 95:9 102:15 103:21 105:4 105:8,11 107:20 114:1 114:5,13,14 135:22 138:23 144:5 159:3 219:9 223:6,22 cases 59:16 73:23 casting 85:13 86:3 87:2 90:1 91:1 catastrophic 165:23 167:13 caulk 30:4,13 30:14 41:12 43:21 50:8 50:10,14 causing 211:16 ceilings 76:22 77:2,3 217:1 cells 74:20 79:15 center 187:23 202:24 centimeter 185:13 204:10 208:3 226:2,8 centimeters 54:12 191:10 191:18 194:2 204:12 207:1 certain 59:14 113:5 119:17 120:1 137:13 certainly 20:13 27:4 28:22 51:15 54:5 142:15 170:18	175:22 201:11 certainly 1:9 3:3 99:22 100:4 certification 229:16 Certified 198:9,17,19 certify 229:5 certifying 229:20 cetera 25:2 90:2,2,2 chain 6:15 8:18 98:13 98:16 119:13 121:6,8,12 121:15 127:2 chance 6:5 104:24 107:14 change 130:1 changed 144:6 changes 13:5 changing 47:4 chapter 133:21,21 characteristics 46:20 111:21 112:13,17,22 characterizati... 27:24 characterize 165:21 characterized 94:23 111:14 charged 103:20 charles 1:15 5:5 147:23 chart 53:18 53:19 55:14 check 131:10 chemical 92:11 94:13 108:20 109:21 111:9 112:16,23 chemicals 17:8 92:13 108:21 110:2 110:6 111:15 112:17 113:24 114:7 119:4 121:10 173:11 chemistry 142:22 CHEMREX 1:10 children 97:11 chlorinated 98:10 113:13 113:16 114:20,24 118:15,18,23	119:4,10 145:3 chosen 19:17 chuckling 132:18 CIH 198:9 Cincinnati 198:3 Circle 2:7 circulated 124:16 circumstance 162:9 circumstances 18:7 175:11 citation 40:22 51:4 172:9 193:18 204:20 citations 202:15 cite 48:6 56:21 165:9 192:24 210:23 cited 31:3 48:4 54:21 57:16 73:17 79:20 128:23 174:5 189:16 191:3 192:15 193:23 203:15 206:12 226:18 cites 31:17 55:3 206:15 225:14 city 1:18 55:16,22 204:14,17,18 clairvoyance 143:17 clarification 5:12 clarify 91:9 class 92:11 94:13 108:20 109:21 110:10 clean 24:24 33:18 35:14 56:2,20 57:8 65:8 72:15 73:12 93:7 158:13,17,21 163:9 167:12 171:19 173:22 174:23 175:18 176:6 178:16 180:7 182:23 183:2 183:10,16 184:9,13,24 185:3,15 191:6 194:13 210:1,7,15 210:17 211:5
---	--	--	---	---	---

211:6 218:1 218:18,20 219:1,5,11 222:3 226:14 227:10 cleaned 25:9 33:8 65:20 76:8 cleaning 25:11 38:6 49:12 68:21 132:24 142:24 167:15 182:21 184:5 192:19 cleans 107:2 cleanup 48:14 130:7 155:18 157:24 174:15 175:7 213:19 cleanups 109:15 185:8 210:12 clear 9:14 54:1 102:13 138:20 139:12 174:6 210:17 227:13 clearer 213:16 clearly 45:3 144:3 165:9 166:12 167:14 168:7 175:5 clients 93:5 close 83:24 207:3 214:19 214:20 closely 172:2 closing 117:22 141:15 coating 60:13 60:19,23 62:6 63:2,5 64:16 77:10 77:17,21 coatings 63:12 coffee 178:3 coin 226:17 227:6 collateral 80:23 collection 205:24 college 106:18 124:20 colored 85:15 87:4 89:24 column 55:24 55:24 172:6 172:10,23 187:24 columns 172:2	combined 46:17 combustion 21:4 come 13:24 23:22 42:6 76:16 80:9 93:12 109:18 120:19 139:21 174:20 176:3 188:12 219:4 219:6 comes 130:10 coming 31:9 50:9 65:4 commence 100:19 comment 52:1 79:24 219:22 commentary 130:24 commercial 84:16 88:19 89:17 COMMISSION 1:5 common 23:10 36:12 114:24 commonly 48:3 54:21 57:15 180:8 185:3 189:16 190:15 191:3 192:15 193:23 commonwealth 1:1,18 5:2,3 65:15 80:21 147:21 224:21 225:7 company 1:9 1:12,13 105:4 109:7 136:24 compared 218:1 comparison 114:11,16,19 competent 219:19 completely 94:1 105:12 completeness 208:20 component 47:9 103:1 components 119:11 compound 120:16 154:18 comprise 92:10 94:12 108:19 computer 217:2 conceived	174:13 concentrating 49:10 concentration 129:1,3 161:8,10,24 162:2,3 205:8 concentrations 156:5 161:11 195:11 concept 153:1 153:5 154:1 166:12 169:12 183:18 concern 30:12 110:14 112:2 128:5 129:20 137:19 166:17 concerned 10:9 47:15 47:19 64:22 66:1 78:3 99:7 112:24 128:3 143:9 183:13 concerning 17:15 22:1 23:4 29:20 38:5 41:18 51:12 67:20 137:2 139:13 concerns 16:19 35:24 36:23 65:15 66:23 74:4 74:15 79:4 136:22 concert 218:14 concluded 138:19 228:2 conclusion 44:3 conclusive 221:23 concrete 21:5 21:12,23 22:2,9,12,15 22:24 23:9 24:6,9,14,20 25:1,7,21,22 26:1,9,16 27:6,9,11,16 27:19 28:4,7 28:18,21 29:2,3,8,16 30:3,15,16 31:8,14 32:2 32:7,10 33:7 33:20 34:2,8 34:13,18 35:14,17,23 36:9,11,20 37:2,4,13 38:7,11,17 38:21,22	39:3,15,19 40:1,10 41:10,19,22 42:10,12,23 43:11,12,18 43:21 45:8 45:11,17 46:10,13,16 46:20,23 47:3,7,16,20 48:21 49:11 49:17,24 50:12,15,18 51:8,13,20 52:11 54:19 56:9,11,14 56:17,18,24 57:5,7 59:10 59:17 60:1 61:7,23 62:2 62:14,18,24 63:20 64:2 64:17,23 65:24 66:13 66:18,22 67:3,8,16,22 67:24 68:3 68:22 69:20 69:24 70:20 70:24 71:10 71:11 72:6 72:18 73:19 73:24 74:6 74:14,17,21 75:8 76:11 77:9,21 79:5 79:17,18 80:16,19,22 80:24 81:6 81:10,14 85:22 186:3 186:7 192:19 conditions 175:4 184:23 conduct 136:23 137:3 138:21 142:3 144:4 209:6 209:17 conductivity 111:17 confident 214:17 confirm 6:5 78:15 107:12 confirmed 5:22 confirms 65:5 confront 115:24 confronted 116:13 confused 185:10 confusing 43:8 44:4 confusion 9:2 43:9 congress	92:12 94:14 108:21 109:23 110:5 110:11,15 125:13 129:21 conjecture 45:1 consider 39:8 39:16 104:23 166:4 consideration 44:21 considering 107:1 207:22 226:9 consistent 94:1 consult 130:7 consultant 221:16 227:7 consultants 221:10 consultation 224:8 225:3 consumption 121:9 contact 22:19 132:6 159:5 171:11,12 211:19 213:21 214:2 214:3 218:7 218:9 contacted 5:18 10:12 207:15 216:6 226:4 contain 83:24 121:9 162:18 contained 29:6 82:14 114:17 containing 24:19 33:5 87:2 162:24 185:22 containment 183:4 contains 153:18 contaminants 47:2,6 166:19 contaminated 33:21 35:17 36:22 39:15 48:24 70:24 72:21 84:12 131:23 132:2 143:11 contamination 14:8 15:22 18:23 22:14 24:22 27:12 34:1 35:24 45:11 46:10 46:19 48:5 57:17 63:4	64:17 71:10 83:17 84:14 84:21,23 85:8,21 86:9 88:17 89:15 122:2 126:3 126:7,15 127:7 128:14 128:19 151:9 152:6 153:3 153:8 154:10 154:24 155:4 155:22 160:24 165:8 165:9 166:15 167:22 168:7 171:7 173:13 173:15 180:9 183:8 185:4 191:4 195:13 199:6 203:23 204:1,24 205:2,8 207:17,22 209:23 225:22,24 226:6,9 contaminations 85:3 contend 46:5 46:6 contends 46:4 contents 201:3 context 107:21 153:12 176:21 177:5 179:5 180:19 181:5,10,14 181:19 182:6 183:11 217:17 continue 7:12 65:18 66:6 continuing 81:19 99:24 125:15 continuously 47:3 114:12 contractors 50:8 221:10 contradicts 130:17 contravention 116:6 control 110:1 110:16 142:20 229:19 controlled 25:18 92:12 94:14 108:20 109:22 110:11 controls 95:5 conversations 136:3 conversion
--	---	--	--	---	---

204:12,15 206:22 convert 204:9 converts 208:1 cookbook 167:12 copied 68:9 copies 10:24 157:5 copy 26:20 83:9 87:4 107:8 124:16 133:11 153:17 157:8 157:9 161:18 186:4 197:10 copying 161:19,22 corner 198:1 corporation 1:9,12 2:13 3:4 correct 7:3 14:18 31:12 35:19 38:18 39:12 70:3 89:18 100:5 105:15,18,24 109:4,16 111:12 127:3 131:17 145:17 146:9 156:3,3 159:4 166:9 168:6 169:7 169:11 170:15,24 171:19,20 172:21 174:1 191:1 198:11 198:20 199:10 200:10,22 202:21 204:13,15 207:20 209:19 212:3 212:14 215:12,14,21 215:23 218:9 218:11 222:8 224:11,17 225:17 correctly 146:7 191:14 214:18 215:22 216:20 correspondence 10:14,17 cost 103:2 142:24 counsel 2:5,9 2:13,18,24 3:3 7:4,6,8 7:12 10:24 12:9,21 13:1 23:2,18 27:1	34:19 40:21 41:2 51:10 52:17 66:9 78:24 79:19 92:7 107:13 108:16 117:11,23 122:24 136:2 136:7 141:9 143:18 145:24 counsel's 6:20 9:20 27:23 130:23 country 124:7 124:11,17 193:8 County 55:17 55:22 couple 106:14 189:20 course 7:9 96:7 99:22 179:18 204:7 court 1:1,18 5:1,4,8,14 6:21,24 7:5,8 7:21 8:11 11:1,13,15 11:18,22 12:4,12 13:10 19:22 20:3,16 21:14 23:23 24:1,7 26:18 29:9,24 30:1 30:5,10 31:5 31:7,10,12 31:13,21 32:1,4,23 33:22 35:10 35:18,19 36:3 38:15 38:15,23 39:1,6,10,18 40:12,16 41:13,16 42:5 50:19 50:21 52:6 52:12 54:2,4 54:9,18,23 55:10,16 56:5,8,12 57:10 58:1,8 58:11 60:4,8 60:14 69:2 70:3 71:13 71:20 72:13 72:23,23 74:8 75:16 75:21 77:14 79:1,20 80:4 81:7,12,13 81:14,16,22 82:2,12 84:3 84:5 88:1,11 88:24 89:5,8 89:11,12,20 91:10,20,23	92:5 94:24 95:11,16 96:1,21 97:16,21 98:5,24 99:11,18 100:3,16,24 101:4,5,6,7 101:10,14 103:9 104:14 107:24 108:6 112:7 113:11 113:23 114:12 116:24 117:6 117:9 118:2 118:9 122:23 123:3,5,11 123:16 124:1 125:8 127:18 130:14 131:1 133:14 134:5 134:11,16,21 134:23 135:2 135:6,11,23 136:15,24 137:9 138:19 138:24 139:10,23 140:2,20,22 141:1,5 144:10,13 146:1,14,19 147:1,3,7,13 147:17,20,22 148:2,4,8 149:2,7,14 149:21,24 150:4,8,12 150:17,22 151:14,20 152:13,14,19 154:19 156:13,24 157:1,6 160:8,11,14 166:22 168:16 171:21 172:1 172:8 173:2 176:13,16 177:6,9,12 178:7 179:16 179:23 181:3 181:6,17 182:2,2,4 186:6 187:10 188:14,19 189:2,9 196:11,17,19 196:19,24,24 197:5 200:2 201:24 202:4 205:18 216:12 217:14 220:1 220:9,16,20 220:22 224:3 227:18,21,21	courtaulds 1:10 2:18 100:4,6 courtroom 1:18 104:19 104:24 115:7 136:16 228:1 Court's 10:16 11:20 30:1 40:19 69:8 69:17 182:15 covered 176:2 cream 178:8 create 49:21 92:19 108:24 119:2 created 80:15 81:5 94:8 126:15 creation 201:2 credentials 15:14 credibility 18:15 19:12 93:3 104:13 116:16 crier 5:1 101:4,7,10 147:20 148:4 148:8 196:19 196:21,24 227:21 criteria 21:3 56:2 180:9 185:3 211:6 213:20 218:2 218:20 crop 83:19 crops 171:17 173:20 cross 18:13,18 48:19 67:14 78:17 80:13 87:14 100:17 103:8 123:21 125:6 179:18 179:23 188:2 Crowell 64:21 66:10 74:2 75:1,18 78:1 79:11 80:23 Crowell's 65:22 68:8 75:13 79:4 CT 2:23 cubic 54:12 180:13 191:10,18 207:1 Cup 178:3 current 130:8 130:8 180:10 currents 184:4 custody 6:15 8:19 cut 83:12 137:12,16	138:6 cutting 35:22 D D 4:1 145:4 150:23 daily 171:11 damaged 199:23 DANAHER 2:21 dangerous 17:7 data 30:18,20 34:15,15 35:6,9 37:17 44:1,2,2 49:16,23 67:6 70:1 215:10,13,20 216:23 217:5 database 102:19 date 75:22 dated 199:5 224:6 229:14 daughter's 106:17 124:20 day 147:14 182:24 195:20 210:12 227:17 days 146:6,11 153:20 DDT 113:15 114:3,5,11 114:13 115:1 118:18 deal 24:9 72:2 82:13 151:5 165:17 174:16 dealing 78:10 86:7 87:16 87:23 200:20 deals 20:21 24:10 56:16 57:7 88:4 dealt 17:22 96:9 debate 19:16 130:20 decades 126:23 decide 19:14 116:15 217:6 218:17 decided 93:21 decision 44:23 219:18 222:9 226:21 227:4 decisions 130:6 219:16 deck 33:7,16 33:20 34:2 decking 76:23	76:24 declared 5:4 decontaminate 24:19 26:2,9 27:17 29:4 31:20 36:7 61:23 62:13 102:5 decontaminat... 26:11 56:23 69:7 185:22 decontaminat... 21:12,23 45:7 47:10 52:10 55:4 56:18 57:4 61:1 70:7 186:3,6 189:17 192:16 193:24 deep 59:9,16 60:1 defect 96:2 137:10 139:21,22 140:2,17,17 141:5 144:9 defend 114:4 defendant 2:13,18,24 3:3 46:4 85:6 defendants 1:13 93:22 137:4,5 defendant's 45:9 defense 136:2 define 163:8 defined 160:16 163:6 definition 159:16,23 161:3 162:14 163:3,11 167:18,20 211:4 degree 46:24 degrees 224:16 227:1 demolition 47:11 72:3 demonstrate 24:20 demonstrates 20:15 demonstrating 16:10 department 1:2,3,6 55:21 93:18 94:2,4 197:21 218:14,15 219:10 221:6 221:15,17 222:2,6 223:5 227:8 227:9
--	--	---	--	--	---

deposition 1:23 104:22 117:1,4,13 117:14,16,17 229:7	difficult 22:16 24:21,23 26:8,15 33:18 121:1	113:20 118:11 123:1 124:3 133:15 135:9	dose 18:9 doses 18:9 double 148:21 down 31:20 32:13 55:14 62:23 64:9 65:20 70:8,9 72:15 73:13 81:21 105:4 200:16 208:15 224:7	edited 53:3,3 122:11 editing 57:13 edition 12:10 12:22,23 14:2,2 editions 13:2 editors 122:14 effect 10:14 129:20 effects 17:20 130:10 eight 13:16 67:12 either 8:12,19 47:1 50:12 141:2 146:17 152:10 elected 174:19 185:14 electric 168:22 electrical 74:20 79:15 111:17,18 132:4 137:14 ELECTRONI... 1:11 elicit 23:2 34:6 142:11 eliciting 43:15 elmo 54:4 elsewhere 174:4 204:8 ELSPCB 215:21 elusive 24:21 embarrassed 133:9 EMERGENCY 1:5 emphasized 208:23 emphasizes 6:14 employee 198:21 employees 218:16 enacted 53:6 95:12 encountered 22:16 end 50:2 127:16 141:2 149:10 ends 118:11 124:3 135:9 engineering 109:12 enough 45:15 66:2 181:1 207:3 214:20 entered 28:5 entering 28:4 entertained 73:21 entire 17:11 20:11 53:18	53:19 57:19 58:2,21 93:2 107:20 176:20 178:20 179:5 179:8,14 186:21 187:9 entirely 59:5 entombed 74:16 entombing 76:6,10 entries 52:15 53:23 environment 110:24 111:11,23 112:15,20 113:1 128:7 137:20 138:13 140:12 153:23 226:3 environmental 66:12 92:21 93:1,11 94:19,20 109:2,8,11 126:22 209:24 environments 207:14 EPA 19:19 52:20 53:4,5 125:14 156:9 156:10,16 157:20,23 158:7,12,15 159:20 165:5 165:16 168:8 170:11 173:8 174:3,5,16 174:19 175:5 175:16 189:21 203:9 210:6,7,14 211:8,11,15 212:5,7,20 213:2,18,23 214:22 215:5 218:1,21 221:22 225:5 EPA's 166:16 167:11 212:9 epidemiology 17:20 epoxy 62:6 equally 8:19 equipment 84:19 131:23 132:5 160:22 163:23 164:23 165:3 171:15 173:17 195:7 error 6:12,22 6:22 escape 138:12 166:17
deposits 22:20 depth 173:9 depths 23:10 36:12 derived 22:5 deriving 21:2 dermal 171:12 211:17 describe 167:7 designations 198:6 designed 166:4 174:12 desk 154:7,8 desks 153:22 destruction 201:1 detailed 217:23 detected 26:16 determine 119:8 131:11 162:8 determined 50:13 56:2 161:9 162:1 develop 125:14 developed 110:22 111:3 111:13 113:4 144:24 171:14 developing 170:12 171:8 173:16 development 211:13 developmental 99:2 device 192:11 devote 67:9 devoted 67:15 DGS 94:5 196:5 dictate 23:11 different 12:23 82:20 105:13 115:23 117:1 117:12 119:19 132:16 158:10 174:8 183:1 185:16 189:24 190:2 191:6,7 192:24 194:10 195:13 200:13 219:5	difficulty 24:11 49:11 49:12 Digest 130:12 dioxin 48:13 201:2,3 202:16 218:23,24 dioxins 192:9 219:4 dire 15:14 direct 11:20 15:12 17:22 21:22 43:4 44:12 55:6 68:15 98:15 117:18 139:8 175:14 187:17 198:21 229:19 directed 50:22 125:14 220:22 221:15 directing 69:12 directly 159:19 167:15 directs 189:2 dirty 184:10 disadvantage 45:4 disagree 87:19 116:18 disagrees 115:14 discharge 164:5 discharges 160:19 164:20 disclose 85:20 155:3,7 disclosed 86:8 86:17 disclosing 153:2 discovered 126:8 154:14 discovery 122:1 126:2 discuss 18:6,7 153:6 201:7 discussed 10:8 136:5 153:1 153:16 192:7 195:23 223:10 discusses 173:6 discussing 135:21 203:8 discussion	dismissing 183:21 disposal 47:12 disregard 50:22 disruptive 188:2 distinction 8:8 210:17 distinguishing 114:6 distributed 126:20 disturbed 77:5 disturbing 77:6 doctor 224:10 document 11:24 12:16 47:23 52:7 52:24 53:1,7 53:15 69:5,9 69:23 81:10 91:13 92:6 158:2,8,20 158:24 159:10,11 168:20 169:1 169:18 170:8 172:10 175:15 181:20 186:9 188:7,15 189:6,15,16 192:13,14,18 193:1 200:1 200:19 210:2 210:19,22,23 211:3 213:18 223:8,13,21 223:24 226:16 documents 6:6 14:23 137:1,15 139:1,12,24 192:20 223:18 226:18 doing 27:15 85:6 105:8 129:5 131:15 183:16 185:1 205:22 done 5:23 8:4 9:4 24:5 27:8 30:4 41:6 54:7 72:5,19,20 85:2 103:24 115:10 130:2 177:3 223:11 226:17 227:9 doors 183:6	dose 18:9 doses 18:9 double 148:21 down 31:20 32:13 55:14 62:23 64:9 65:20 70:8,9 72:15 73:13 81:21 105:4 200:16 208:15 224:7 dozen 38:4 41:20 dozens 109:14 Dr 97:9 129:3 129:17,24 224:9 draw 151:23 178:6 dries 47:4 drill 76:19 ductboard 39:22 ducts 86:14 ductwork 46:3 86:10 183:19 due 146:3 duly 148:14 229:6 during 27:3,5 46:7 86:10 86:13 135:16 136:6 163:20 171:16 173:18 178:23 dust 22:19 183:9,14 184:6,10 duty 139:14 dye 85:14 86:4 87:3 90:1 91:2 E E 2:1,1 4:1 11:21 101:19 145:7 148:17 150:23 229:1 229:1 each 172:9 173:21 earlier 153:16 199:11 early 106:6 141:3 early '80s 193:8 easier 82:8,10 215:7 easily 190:14 Echt 197:12 198:4,16 205:13,20,22 215:9 217:6 218:12 Echt's 205:16		

especially 183:15	evidence 21:24 23:12 27:2 28:3,5,5 28:16 40:17 42:21 43:6 44:7,13 49:20 69:5 73:18 80:3 80:18 86:18 87:1,5,9 139:21 149:11,12,16 150:7 197:14 223:1 227:14	177:21 excess 176:1 211:24 212:7 exchange 145:23 excise 91:21 excuse 122:7 133:6 135:19 154:5 178:17 186:16 208:17 excused 136:19 exercise 227:2 exhibit 11:21 53:8,24 81:12 83:6 108:2 133:18 144:19,22,24 145:3,17 148:24 150:16 196:9 197:14 222:12 exhibits 10:23 41:20 67:11 67:12 100:10 145:18 150:18 157:3 exist 84:15 88:18 89:17 162:9 existed 86:10 153:9 existence 128:6 exists 34:17 177:21 experience 39:24 219:17 221:9,11 experienced 222:9 expert 15:3,18 17:17,19 19:7 34:4 43:24 45:9 48:23 66:10 66:12,16 73:11 75:2 79:12 83:22 140:4,5 142:19,20 143:2 194:13 222:23 expertise 144:7 experts 39:7 expert's 144:6 explain 129:4 142:9 181:19 182:1 202:1 214:24 216:15 220:6 explaining 169:12 201:18 explanation 220:24	explicitly 92:11 94:13 108:20 109:22 110:10 explore 41:2 49:3 140:8 140:15 explosion 195:2 exposed 16:11 63:13 exposure 63:7 203:1 211:17 225:9,19 express 30:24 expressed 61:15 74:4 129:20 extension 209:3 extent 47:17 181:18 extenuating 175:11 exterior 41:12 43:12 50:7 external 160:22 163:23 164:22 165:2 168:4 extra 157:5 extreme 26:4 extremely 126:11,20,21 155:20 184:22 195:11 eyesight 187:4 e.g. 171:8,14 173:9	facts 39:9 40:7 70:12 factual 35:3 38:2 51:6 79:12 failure 14:9 15:23 16:13 127:8 128:20 failures 195:7 fairness 194:8 fall 9:12 familiar 120:11 123:20 136:8 136:9 157:16 170:8 196:6 200:15 222:20 223:5 223:8 far 26:5 63:17 200:6 226:15 farmland 173:19 farmlands 171:17 FARRINGT... 2:2 fast 120:18 fat 119:23 120:11 121:3 Fe 191:14 194:18,23 195:4,8 204:8 205:10 feasible 203:3 207:21 225:20 226:8 feather 114:2 February 1:16,19 229:14 federal 160:4 feeling 76:12 feet 170:13,17 170:23 171:9 175:20 few 43:10 60:16 fiat 30:11 field 22:6 66:12 130:6 143:16 fifth 199:22 211:20 212:13 filed 140:23 fill 81:1 filling 65:23 74:19 78:4 filters 217:1 final 132:17 158:14,21 finally 218:12 find 12:13 19:20 24:22 51:3 70:15 85:3 151:8 152:10,14 153:8 155:14	160:8 172:3 172:11 finding 152:7 fine 20:12 29:18 35:2 58:5,17,18 75:8 100:24 107:24 108:9 149:7 150:17 152:19 172:8 188:23 217:13 finish 216:12 finishing 62:20 fire 46:8 48:13 85:1,4 85:8 86:8,16 151:7 153:7 154:14 155:3 155:6 163:21 165:23 193:16 194:23 195:3 195:4,14,16 199:21,24 200:8,11,12 200:13,16,20 201:7,14,17 202:11,13 fireproofing 5:16 6:1 8:16 fires 48:9 84:17 85:17 85:20 88:5 90:7 153:2 192:7,17 193:2,7,10 195:7 201:1 201:10 firm 102:17 102:22 103:23 first 22:8 24:8 42:24 46:22 52:15 55:23 57:18 58:21 59:12 62:18 71:19 83:12 88:7,15 89:13 91:12 92:9 97:16 97:24 108:8 111:3 119:6 155:15 170:7 172:5 186:21 186:23 187:14 189:15 195:24 197:16 199:3 200:1 216:18 fish 121:19 five 100:14,23 150:3 five-minute 101:1 flammability
-----------------------------	--	--	---	---	---

111:16	19:9 22:21	168:24	95:6,15	46:13 76:13	147:6 148:23
flip 122:15	22:23 28:21	169:10	gets 15:17	101:6,15,17	149:18,22
flipping	29:13 34:24	171:15,22	121:12 142:3	101:22	150:2,6
226:17 227:5	35:3 37:12	172:4 173:17	getting 9:22	221:23	151:10
floor 1:23	38:3 75:2,9	176:10,16	43:14 51:13	227:16	154:16 156:8
2:11 32:3,5,6	83:22 90:22	181:11,23	give 167:12	gotten 104:6	157:10,21
42:15 64:24	91:8,11,18	184:9,21,24	201:24	105:3	166:21
170:24	91:24 142:16	187:11	220:23	goutman 2:11	168:14
199:22 217:1	222:18,22	189:14 190:3	given 31:17	5:13,21 6:19	176:19 177:1
219:2	foundational	193:13,21,23	40:21 142:15	8:3,9,14,21	177:17,24
flooring 29:6	29:22	194:3 199:8	157:10 229:8	9:4,6 10:21	178:2,3,17
66:15	four 45:12	199:24	gives 147:8	11:5,19 12:1	178:22 179:2
floors 42:13	160:6	200:13	giving 205:23	12:7,19	179:13 180:1
43:11,18	fourth 199:22	215:10	glasses 161:20	13:12,17,21	181:4,24
45:18 62:20	Francisco	217:22 219:4	161:22	14:1,15,20	186:16 187:2
199:23 216:8	55:17,23	220:11,18	glue 28:6	17:3 18:19	187:16,19
216:24	frankly 22:5	225:4 226:16	go 28:1 29:19	20:7,20 21:7	188:4,23
focus 54:5	114:9	front 52:4	47:22 61:18	21:17 22:11	195:24
92:14 108:22	free 143:10	57:24 107:19	61:24 63:15	26:23 27:21	205:15
110:14	frequently	133:8 174:9	68:4 72:9	29:9,12 30:7	208:17
139:22	22:15 85:1	full 88:15	88:22 89:8	30:22 32:15	212:17 213:1
164:16,24	85:20	148:4	95:13 113:18	32:18 33:10	213:5,14
199:20 219:1	Friday 146:5	fumes 45:24	119:24	34:9 37:8	214:9,13
focusing	146:13,14,17	46:1,3,7	132:12	40:11,18	216:9,22
187:22	146:20,21,24	fund 106:18	139:17 141:7	45:22 50:4	217:10,16
follow 20:5	friendly 104:7	124:21	141:13 156:7	52:8,13	218:4 222:13
82:8,14	from 5:16,22	fundamental	183:2 189:5	56:10,13	222:17,18
225:7	6:16 7:2,16	141:13	195:22 198:3	57:1 58:5,10	Goutman's
following 85:1	7:22,24 9:7	funny 132:19	201:14	58:12,17,20	6:10,16
88:10 151:7	9:17 11:12	132:20,21	202:18	58:24 59:23	213:13
153:7	11:17,23	133:4,7	210:22 215:8	59:24 60:9	government
follows	14:21 17:1,5	furan 48:13	215:9 224:7	60:16 61:11	96:5,15
148:15	20:24 21:10	furniture	goal 218:17	61:16 62:15	gracious
food 98:13,16	21:18 22:5	217:21	God 114:3	63:9,16 66:8	178:22
119:13 121:5	22:18 23:3	further 7:14	goes 19:11	69:11,15	gram 214:14
121:8,12,14	24:12 25:5	25:10,10	23:8 40:19	70:10 71:2	grams 180:10
127:1	30:14 32:13	31:19,23	52:21 77:5	71:12,21	211:18
foot 170:20	35:12,24	32:12 33:8,9	92:17 93:2,4	72:9 73:2	213:22 214:1
footnotes	38:5 39:22	41:1,3,5	99:3,6	74:7,10,18	Grant 2:7
202:15	43:16 46:3	72:17 81:8	104:12	74:24 78:23	gravity 42:16
foregoing	46:18 55:14	144:11	138:14	79:10 81:9	great 178:4
229:16	57:3 60:17	Furthermore	140:16 141:4	81:18,23	greater 17:12
forget 165:6	62:7 65:4,6	77:11	144:8 161:5	82:4,18,19	23:10 36:12
184:19	67:10,12	future 62:22	169:22	82:24 83:4	52:16 161:8
forgot 51:1	69:3,5 71:4	64:9	186:13	83:10 85:24	162:18
form 118:9	83:11,17		203:21 207:3	86:22 87:8	grinding
125:3 154:17	84:15,21	G	207:12	90:10,18	22:19
formed	86:10 88:17	garbled	211:12	92:3,7 93:14	gross 182:23
171:16	89:15 97:9	161:19	216:15	95:1,12,19	ground
173:19	97:13 100:7	gas 138:17	going 9:24	96:20 98:2,7	173:10,12
192:10	102:14 105:2	gave 7:6,13	13:8 19:20	99:15,19,23	grown 171:18
former 10:10	106:1 107:5	72:11 127:24	23:18 27:17	102:1 103:4	173:20
forth 18:11,23	107:6 112:9	197:10	50:7 60:2,7	104:2,8	guess 18:19
23:12 52:17	117:24 127:5	geared 132:4	66:19 73:21	105:3,7,17	23:18 26:24
87:5 95:7	129:17	general 1:3	79:16 81:24	107:17 108:1	34:20 73:2
115:7 183:6	130:14	55:20 57:8	82:2 100:11	108:7 113:17	194:19
183:8,14	132:14,16	99:8 152:2	106:21	113:22 115:8	guideline 73:8
188:21	136:1 142:11	159:7 167:20	110:18 118:5	117:8 123:7	73:9 165:15
214:15	144:16,20,22	197:21 199:9	135:11,13,15	123:23	185:9 208:7
222:22	145:1,2,4,9	214:7 218:14	135:17,23	130:22	208:13 209:4
forward 42:6	145:11	221:16	149:10	133:13,17	212:6 213:2
86:12	148:24 154:2	generally	150:13 176:3	135:1 136:7	216:3
found 17:9	154:11	120:3	182:13	136:13,20	guidelines
45:20 50:5	159:19	gentleman's	190:11	138:18	52:2 53:5
74:2 129:7	160:24	226:24	194:13,15	140:20	178:16 180:8
133:20	161:19	gentlemen	195:5 219:8	143:14	184:13
152:23	162:12	101:16	219:13	144:12	218:19
191:24	165:10	Germany	gone 32:21	145:15,20	guy 93:3
foundation	167:23 168:7		good 5:7,8	146:8,16,22	

H	209:18	156:21	60:10,12	215:24	impeaching
half 50:11	hazardous	169:22	61:13 63:16	217:10,18	15:8 118:10
186:22	17:8	high 18:9	64:14 66:8	219:21 220:8	impeachment
Haliwell's	hazards 109:8	111:19 132:5	66:16 67:5	220:14	15:3,18
25:5 39:5	heading 37:2	159:5 173:12	68:5,24	222:10,16,24	17:24 28:23
40:4,22	77:17 132:23	176:8 195:11	69:15 70:11	224:1 227:15	51:17 115:11
70:23 72:10	133:21 198:1	211:19	70:18 71:12	honorable	115:19
Hall 1:18	headings	213:20 214:3	71:19,22	1:14 5:5	116:21
Halliwell 23:3	122:16	218:7	72:8 73:3,15	147:23	141:23 142:2
23:5 24:4	132:15,19,22	higher 171:13	73:17 74:1	hope 182:10	important
28:9 30:23	health 17:20	highlight	75:11,17	hopefully	83:15 84:13
31:18 32:10	55:22 93:19	174:10	76:1 78:23	105:1	88:16 89:14
34:13 35:15	94:3 111:22	highlighted	79:21 80:7	hospital	91:15 107:18
39:14 41:8	112:14,19	123:6,19	80:12 81:18	184:23	129:4 155:16
50:6	113:6 119:9	157:9	81:23 82:7,7	hours 223:12	179:4 206:20
hand 21:13	129:19	Highlighting	83:4,18	223:21	214:22
24:6 69:9	130:10 198:3	219:3	86:23 87:7	hour's 73:22	importantly
74:9 79:7	198:5,16,18	highly 66:23	87:13 88:10	house 53:21	46:6 47:7
156:11,23	208:9 209:6	67:17	90:10,14,17	HOYLE 3:1	imposed 95:4
196:8,10	209:18	him 6:6,14	92:3 93:15	human 63:7	impossible
222:11	218:15	23:17,19	94:6 95:2	111:22	84:10 217:5
handbook	219:10 221:6	25:14,15	96:21 98:3	112:14,19	impression
11:4,10	221:17 222:2	35:11 37:6,9	99:21 100:6	113:6 114:22	8:12
16:24 82:1,5	222:6 224:13	41:3 57:11	100:8 101:13	HUMPHREY	improper
96:14 105:22	224:19 227:8	57:13 69:12	103:6,7	2:2	45:1 117:24
110:20	227:9	72:11,13	104:10,13	hundred	inadvertently
113:10 127:5	Health's	74:9 78:5	107:17 112:4	54:12 110:22	84:20
131:7,14	223:5	85:18 91:7	113:9,18,22	111:1,4,14	inappropriate
138:2 176:11	hear 61:12	91:17 93:7	115:8 118:8	185:13 194:2	221:12
176:17	75:16 149:24	104:7 107:19	121:23 125:7	hurts 76:4	inc 1:10,10
178:12	heard 8:8	115:2,24	127:5,22	hygiene 106:2	2:19
handed 197:8	29:9 42:4	136:13 138:5	131:2,19	131:19,21	inch 25:20
handle 17:11	45:14,21,24	140:8 142:19	133:17,23	Hygienist	45:21
handled	94:15 97:6,8	142:21 143:1	134:20	198:10,17,19	inches 44:6
116:11	97:10,13	150:7 151:13	135:18	hype 112:1	50:11
handling	109:19 129:3	202:12	136:12,20	hypothetical	incident
10:11	129:17,24	215:14	137:7 138:19	29:20	167:13
hands 36:6	130:14	216:12	139:6,9,19		191:15
93:6	hearing	hire 93:7	141:14 142:6	I	incidentally
hang 77:3	112:23	history	142:18	idea 76:7,13	141:17
hangers 77:1	hearsay 14:24	134:24 212:2	143:15 144:2	86:13 120:22	include 91:4
happen 44:22	15:19 142:12	hold 12:22	144:9 148:22	124:18	211:7
64:3	143:3	holding 11:13	149:19,23	138:15 195:6	included
happened	heart 40:20	holds 137:6	150:9,20	identification	110:6
44:9,18,18	heat 111:15	Honest 89:1	151:11,17	181:7	includes
44:19 167:19	heating 86:11	Honor 5:7,11	152:2,17	identified	102:18,18
169:14	heaven's	6:19 8:2	156:16,23	5:24 28:14	164:4 216:24
227:12	16:22	9:13 10:2,3,5	159:21 160:4	126:10	incorrect
happens	held 1:17	10:21 11:8	160:13	identifies	47:21 216:14
43:17 57:5	hello 147:18	11:11,19	166:21 167:5	121:18	increase
155:7	help 13:24	12:8,21 14:4	168:10,14	identify 23:6	120:17
happy 57:22	42:16 206:13	14:21 16:4	170:4 171:24	84:10 150:18	increased
58:1 107:23	206:14,17	17:4 18:12	173:1 176:12	182:5	14:10 15:24
151:16 189:3	219:19	20:2,7,10,20	176:19,24	Illinois 148:11	16:13 127:8
213:10	221:13	21:8,17 22:7	177:17 178:5	illustrate	128:20
hard 211:18	helped 56:1	23:22 26:23	178:9,18,21	195:19	increment
hardly 165:22	92:19 108:24	27:22 28:8	179:22 180:2	illustrates	103:14,18
Harrisburg	helpful 24:14	29:13 30:8	181:2,21	63:17	indeed 139:5
97:2 204:7	164:11 173:5	30:23 33:3	182:10 186:3	imagine 45:13	Independence
205:12	219:19	34:9 35:4	186:17 187:8	155:8	2:4
Hartford 2:23	HENDERSON	38:2,13,20	187:19 188:1	immediately	Indian 106:19
having 26:10	2:6	40:18 41:23	188:5,11,24	20:4 76:3	indicate 36:13
136:1 148:13	heralds 25:17	42:3 45:2	189:11 196:9	impacts 19:15	203:24 205:1
166:22	HERSCHEL	46:21 49:4	196:15 197:4	116:16	216:2 218:24
hazard 92:22	3:1 49:4	49:13 50:3,4	199:24	impeach	225:23
93:2,11	80:6,12	50:18 51:2,5	201:21 202:3	23:17 98:18	indicated
94:19,20	99:21 115:3	51:24 52:3	202:19	impeached	88:12
109:2 209:6	125:2 134:6	53:13 57:1	208:18	21:20 117:21	indicates 26:8
	144:2 156:17	58:6 59:1,8	212:18		indication

200:18	interrelated	184:16	136:18	kind 80:20	77:12,21
indoor 170:13	78:9	202:16	139:18	114:14	Lane 148:11
171:9 211:19	interrupt 8:4	206:19 219:5	140:10 141:8	161:18,20	language
213:21 214:1	interrupting	issued 225:8	143:19	195:13	125:21
218:7,9	179:1,3	227:7	147:11 158:1	kinds 75:3	132:11
industrial	intrical 47:8	issues 16:20	159:21	King 105:23	largely 110:13
59:14 61:2	introduce	61:4 66:4	163:22 164:1	144:20 145:5	141:19
62:20 84:16	137:2	119:7 144:5	164:9 176:21	176:11	larger 121:13
88:19 89:17	introduced	169:18	177:20 179:4	Kingdom	171:3,6
106:2 111:19	137:24	items 217:21	179:7,14	95:14 97:4	173:14 175:7
134:23	introduction		186:12,18	King's 144:23	175:19
198:10,17,19	14:3 17:14	J	187:20 188:8	145:1,9,12	last 5:18
214:4	92:4	J 105:23	192:12,13	knew 142:14	14:16 43:10
industrialized	investigations	James 97:9	196:3,15	knocking	55:24 88:3
95:3 123:9	204:23 205:7	105:23 129:4	201:12,15	155:18	90:14 98:8
industry	225:21	129:17,24	jury's 36:6	know 6:22	102:2 118:3
158:11	investigators	Jannetta	43:13	8:11 10:18	127:19
information	203:22	196:5 197:13	just 7:23	10:23 17:23	140:21
106:24	207:16 209:5	197:20	11:12 14:4	19:16 33:13	172:23
129:16	209:17 216:4	199:17	14:21 20:21	45:16 61:10	177:11 190:8
130:11,13,16	218:19 226:5	jargon 195:5	21:13 22:17	68:18 73:3	198:4 201:22
193:19	investment	Jim 13:23	23:18 30:10	78:13 92:15	208:20
205:24 225:4	85:13 86:3	164:15	40:15 48:9	94:22 95:7	220:12,19
informative	87:2 91:1	169:21 170:6	49:5 54:20	104:8 109:20	late 10:6
78:13	invitation	202:24	56:17,24	118:20	latitude 87:17
informed	44:16	john 4:3 101:9	69:9 72:11	120:10	laughter
194:13	invite 181:22	105:22 148:6	78:24 82:20	124:12	145:23
inherent	invites 176:5	148:13	85:15,24	133:10 136:6	law 14:24
54:24	inviting	joins 99:22	90:24 99:13	136:9 137:12	39:12 110:12
inherently	175:10	100:6	99:16 100:11	138:7 146:10	125:13 132:3
52:23 53:9	involve 84:18	journalistic	102:13	153:10	138:20
inhibit 63:7	88:5 90:7	122:15	106:22	155:16	139:13
63:13	127:7 128:19	JOYCE 2:16	107:11 108:5	157:14	laws 113:3
initially	131:22	JR 1:15	108:7 115:3	162:24	LAWYER'S
140:22	141:19	Judge 19:20	124:10 134:3	166:24 179:9	230:1
initiated	involved 14:7	37:1 47:22	136:2 142:7	188:6,9	lay 29:13
113:3	15:21 18:22	48:9 55:14	143:22 146:1	193:12	34:23 79:11
inks 85:15	65:1 105:10	77:13	149:12	194:21 197:9	90:21
87:4 89:24	109:15	July 28:8	151:17,21	213:15 219:9	layer 74:17
input 222:9	153:13	June 75:23	174:11 175:9	219:13 221:5	laying 40:15
226:21	219:15	140:23	176:22	knowledge	leached 50:14
inside 42:23	involves 153:2	199:21	177:19	10:7,19 13:6	50:17
49:24 104:23	201:2	Junior 5:6	178:19 179:2	106:12 113:5	leak 169:10
195:16	involving 61:2	147:24	181:12 184:3	144:4	leaking 169:9
installation	153:7 171:6	juror 146:16	186:12	known 155:12	leaks 160:19
86:14	171:10	146:23	190:11	193:7	164:19
instance 96:3	173:14	jurors 227:24	192:10	knows 10:5	168:23 169:4
Institute	irrelevant	jury 9:24	200:10 201:6	95:23 114:3	169:13
198:2	23:14 49:6,8	19:12,14	201:14	140:13	211:14
instructions	51:14 97:5	25:6 39:6,8	202:16	Kominsky	learned
106:24	98:21	39:10,16	209:10 210:3	86:11 194:21	116:19
intend 118:21	isolate 184:7	43:9,20	210:20 213:3	Kominsky's	least 7:9 45:12
intended	isolated 59:16	44:16,22	217:11,16	6:3	45:22 49:7
167:21,23	isolating	45:23 48:10	223:9	L	63:6 66:11
171:4 172:19	184:21	48:15 50:22	J.F.K 1:23	lab 9:18	67:9 135:13
intent 167:11	issue 8:18	54:1 57:14	K	102:18	137:4
intentional	16:8 20:6	57:20 59:4	keep 62:6	laboratory	leave 65:7
160:18	26:10,14	66:19 68:4	65:3 81:21	6:17 111:4	219:8 228:1
164:18	36:9 37:6,11	71:1 73:21	113:24	129:9,11	leaving 94:6
interested	40:8 45:16	78:13 94:15	214:13	lack 49:12	left 22:6 33:4
90:6 192:20	48:21 62:7	94:21 95:23	keeping	222:8	64:23,23
interior 48:12	62:14 63:11	101:17 103:1	139:11	ladies 101:16	101:23,24
54:14 159:6	65:7 73:20	105:17	ken 2:21 83:9	LAGNESE	116:12
191:19 192:3	79:22 81:11	108:18	2:21	2:21	left-hand
194:3	95:22 96:2,2	109:13	KENNETH	laid 39:6 80:4	187:24
interpretation	96:7 98:24	113:14 114:9	2:3	222:19	legal 125:17
165:13,14	99:3,9 107:2	116:8,15	KERR 3:1	landfill 64:16	legible 82:11
interpreted	137:10 156:8	134:1 135:13	Keystone 70:5		legislators
165:5	163:14				112:3

length 64:22 68:6 lengths 26:5 lenient 175:12 less 17:7 100:13 162:19 171:8 174:7 175:24 177:14 let 53:12 75:14 78:13 82:16 115:1 131:3 196:8 216:12 letter 129:22 185:14 197:9 197:11 199:5 199:16 202:10,13 205:14,23 206:4 209:22 letting 160:8 let's 32:20 57:22 159:9 161:16 164:8 164:9 168:18 176:9 195:24 202:9,18 204:19 215:8 level 65:12 72:16 122:2 126:2,7,15 126:22 128:13 129:1 138:11 153:21 155:13,20 156:9,10 157:23 191:16 203:3 203:8,11,14 203:18,20,24 205:2 207:21 208:11 209:23 210:6 211:16 212:10 214:23 215:3 219:11 221:7 225:20,24 226:8 levels 16:7 18:2,3 19:3 121:21 126:11,20 128:8 132:5 155:17 171:19 184:19 185:12 206:12,16 225:9 levity 76:3 79:23 Lexington 2:3 liability 61:4 Liberty 2:11 148:11 life-span 47:4	lifted 59:19 lightweight 65:24 74:20 79:17 like 7:3 10:4 14:24 26:18 34:6,19 37:16 39:19 42:9 44:8 59:10 61:10 61:12 64:15 74:7 77:12 77:20 78:19 98:9 100:21 107:5 108:8 110:4 113:13 114:2,19 117:10 119:4 119:10 120:5 120:12 121:20 124:10 125:10 130:4 130:7,11 132:7,8,14 133:2,18,19 145:2 149:8 153:14 157:22 167:13 181:23,24 184:3,8,17 184:23 187:20,23 192:5,20 195:20 201:3 210:11 212:23 216:22 220:14 222:11,16 224:2 likewise 167:17 limit 54:15 182:3 210:24 211:4 213:8 limits 48:16 191:20 194:4 line 14:17 33:3 75:9 77:20 90:15 98:8 178:6 188:22,22 189:6 230:2 liquid 42:12 42:15,20 43:17 47:1 liquids 195:9 list 189:24 193:4 listed 191:8 191:13 listening 142:8 lists 57:17 literature 120:6 130:9 little 10:8	37:22 76:3 106:22 134:2 174:14 190:2 199:20 210:12 liver 120:7 129:6 living 119:17 201:20 LLP 2:16 located 97:1 locating 13:9 location 155:9 locations 69:10 84:20 126:12 217:7 logical 209:2 long 58:12,20 76:14 82:12 104:2 155:10 181:1 184:18 190:10 long-term 59:13 61:3 64:18,19 65:1,2,9,10 66:3 74:14 77:22,23 look 10:17 12:2 32:20 32:22 45:6 48:1 64:13 107:15 110:20 119:7 132:10 159:9 159:20 165:19 168:19 169:2 169:17 172:22 176:9 193:14,14 215:15 221:22 looked 42:8 107:13 119:2 120:6 210:3 looking 12:5 13:14 68:7 152:22 159:2 192:23 197:11 199:2 looks 124:10 lot 33:17 56:16 102:20 128:11 129:17,18 130:15,15,17 130:18 153:19 174:14 215:6 low 14:11 16:1,14 111:16,16,17 112:16 121:20 122:2 126:2,7,11 126:14,20,21 127:9 128:13 128:21,24	138:11 153:21 155:13,20 178:15 180:7 184:12 191:24 194:16 214:2 218:9 lower 19:17 lowest 203:2 207:21 225:20 226:8 lunch 100:20 135:7,12,14 135:24 136:1 136:6 144:14 151:5 luncheon 100:18 144:15 M M 101:19 148:17 180:10 207:4 207:4,5,6 machine 25:16 made 8:9,14 13:5 99:24 112:22 114:18 116:7 153:17 157:5 210:16 214:21 222:23 mainstream 96:4 maintain 65:16 maintaining 74:15 maintenance 64:18 65:2 65:10 74:6 76:17 77:22 major 20:23 21:1 92:21 93:1,10 94:19,20 109:2,8 134:11 make 5:12 44:23 46:17 51:5 53:24 57:10 82:17 114:15 122:14 130:6 139:4 146:17 193:15 219:18 221:12 makes 84:24 174:5 making 111:17 128:7 219:15 227:4 man 126:16	126:19 management 1:6 11:3,10 16:24 81:24 82:5 96:14 102:19 105:21 125:14 131:7 131:13 176:11 190:20 manner 12:15 115:9 121:16 manual 69:6 manufactured 111:6 126:17 126:19 manufacturer 23:7 28:13 many 24:10 111:18 114:5 126:23,23 170:19 223:21 man-made 111:1 marked 11:10 156:11 Market 3:2 55:4,8 56:3 193:6 Master 198:5 198:16,18 224:12 mastic 23:7 25:18 27:8 28:6,11,13 29:5 35:15 38:20,21,23 69:21 71:4 71:16 material 51:18 63:6 65:4 118:1 119:1 141:23 142:2 161:10 161:12 162:2 162:4,11,12 materials 5:21 6:13 33:5 84:11 matter 1:17 40:20 85:10 85:11,19 86:6 87:15 87:16 100:2 135:15 136:4 181:8 may 8:17 9:1 12:19 17:7 19:23 42:3 49:19 91:24 97:24 101:4 101:12 122:23 136:13 148:1 149:14 157:11 171:12,18	173:7,11,22 175:17,24 189:9 197:3 197:5 201:24 207:14 216:6 220:23 221:1 221:2 224:3 226:4 227:5 maybe 9:9 62:16 64:1 66:9 153:22 188:12 mcclain 2:2,3 4:5 5:11 7:19 8:2,5 9:5 10:13 11:2,6,16 13:13,19,23 14:13,19 15:13 16:4 18:12 19:11 20:1,9,18 21:5,8,15 22:10 23:21 27:7 29:1 31:9,11,16 32:3,6,16,19 33:1,12 35:4 37:18 38:19 38:24 39:4 40:14 42:9 43:19 45:2 49:5 53:12 54:11,20 55:1,12,20 56:7,15 57:21 58:14 58:18,22 59:22 60:2,6 61:9,13 62:16 63:1 63:10 64:13 68:5 69:4,13 70:6,17 71:7 71:17 72:8 74:1,12,23 75:11,23 77:16 79:8 79:21 80:8 80:13 81:3 82:6,16,22 83:1,8 84:2,8 87:7,13 88:9 88:21 89:2,7 89:10,19 90:17,20 91:16,22 92:2,17 94:11 95:10 95:18,22 97:6,18 98:1 98:23 99:13 99:16 100:8 100:21 101:12,15,21 103:7,10 104:12,15 107:22 108:1 108:4,9,10
---	--	---	--	--	---

112:4,8,11	mean 20:12	150:14,24	misleading	190:15	34:7 35:13
113:12 114:1	20:15 36:18	196:12	52:23 53:10	motion 36:5	39:17 72:17
114:15 116:5	96:4 115:6	MI 2:4	83:19 181:8	130:23	need 6:15
118:7,13	119:14 121:6	microgram	182:8,11,14	motivated	25:9 33:8
123:7,15,23	121:11 137:8	55:13 185:12	182:19	122:1 126:1	34:2 40:8
124:5 125:6	198:7 204:16	194:2 204:11	misread	move 9:24	93:7 100:9
125:22 128:1	meaning 16:8	206:24 208:2	214:10,12	14:4 50:20	100:11
131:2,4	132:3	212:5,10	misrecollected	61:17 62:4,9	116:10 122:8
133:23 134:9	means 62:19	214:15 226:1	8:7,22	149:12,15	133:24 135:3
134:13,18,22	87:11 119:16	226:7	misrepresent	184:4,10	150:13 170:5
135:4,8,18	120:4,14,15	micrograms	84:22	202:24	188:12
136:17 137:7	121:14	52:16 54:11	missing 75:12	moved 41:15	196:16
139:19 142:9	160:17 162:7	180:13	mixed 217:5	43:20	217:19 227:2
142:18 144:8	162:15	184:18	mixing 214:14	moving 64:7	needed 33:21
144:18	164:18	191:10,17	mode 45:10	64:11 149:10	40:5 49:1
145:22	201:18	194:12 204:5	modes 46:9	150:7 183:9	63:12 72:20
146:10	229:18	204:6 205:3	moldy 9:22	183:14	110:15
147:15,18	measure	207:18 216:4	moment 118:2	MPH 198:4	needs 80:6
148:2,19,22	113:2	218:2,6,8	130:12 196:1	224:9	96:17 196:15
149:8,15	measured	micron 204:4	Monday	much 23:10	218:17
150:10,15,20	185:12	microns 204:2	146:17,21,22	36:11 93:13	negative
151:1,3,15	measurements	microphones	146:24	99:11 129:13	211:21
152:1,4,15	206:23	150:13	monitor 65:18	136:22	neither 73:16
152:20	measuring	mid 174:13	monsanto	169:10 171:3	198:12,18
154:22	192:11	middle 14:16	1:13 2:13	210:20	224:15
156:15,17,19	mechanisms	14:17 33:2	19:23 105:4	212:23	Netherlands
156:22 157:4	36:16,19	36:24 48:3,7	105:9,14	must 47:10	97:10
157:7 160:12	media 92:15	64:15 83:12	131:16	208:23	never 5:15 7:1
160:15 167:3	94:8 108:23	83:13 95:9	136:23	M.D 1:2	7:11,13,15
168:10,17	110:14 112:1	127:15	137:12 138:6	224:10	7:21 44:17
169:24	meet 147:12	152:12	139:7,16		76:4,8
171:23 172:5	Megan 1:20	might 13:1	141:22	N	198:22 206:3
172:13,14	229:13	22:4 41:24	142:13,14	N 2:1 4:1	206:6,7,9
173:3 176:15	memorize	44:18 55:18	143:20,21,23	101:19,19	223:13,14
176:18,24	223:16	66:20 67:11	143:24	148:17,17	new 70:4
177:8,11,22	memory 5:22	68:2 82:7	MONTGOM...	name 5:2 80:1	74:17 147:12
178:1,5,9,11	30:1 146:2	90:5 97:3,5	2:15	101:8 124:7	191:15
178:21 179:9	mention 12:5	113:15	month 106:8	124:17	205:10
179:17,21	80:22 200:7	120:17,19,23	months	125:24 133:4	news 92:14
180:3 181:2	mentioned	121:20 132:6	138:19 150:3	133:7 147:21	94:8 108:23
181:15,21	31:10,15	153:15	more 26:5	148:5	129:17
182:9 183:22	40:12 87:11	155:10,12	37:23 46:6	names 158:10	newspaper
186:8,24	168:20	migrate	47:7 51:19	naming 55:18	133:2
187:7,12	185:17 196:3	178:13 180:5	72:20 88:1	narrative	next 20:8,11
188:1,11,18	mere 139:3	183:24	90:5 122:15	169:12	20:21 31:6
188:24	merely 20:16	mike 75:15	130:11,15	National	55:13 95:1
189:10,12	115:15 209:4	milligrams	133:2 134:2	198:1	98:2 123:12
196:13,14	met 105:16	184:18	156:18	nations 95:3	123:13 146:5
197:3,6	metal 33:16	million 73:13	170:16	123:10	147:9 150:21
200:3 201:21	meter 180:13	102:4 161:7	171:18 173:8	natural	166:24
202:8 205:19	204:2 205:4	162:9,19,20	175:12 176:6	110:23	208:18
208:22	207:18	211:24 212:8	177:5 187:15	naturally	209:21
209:14	211:18	mind 43:14	189:7 193:7	111:10	212:18
212:22 213:3	213:22 214:1	76:2 118:24	217:23	nature 46:12	216:10,21
213:6,17	216:5 218:3	143:17	morning 5:7,8	140:16	217:3
214:11,16	218:7,8	205:17	7:20 101:6	neal 2:21,21	night 5:18
215:24	methods	mine 122:18	101:15,17,22	6:4 10:3	195:20
216:11,17	26:11 51:12	mineral 1:8	149:17	83:6 134:7	nine 33:3
217:13,18	142:23	2:24 162:17	227:19,23	146:13	NIOSH 19:18
218:5 219:21	Mexico	162:23	MORRIS 3:1	213:12	48:7 54:13
220:7,13	191:15	minute 19:21	mortality	Neal's 5:17	57:18 73:7
221:3 222:10	205:11	88:24 100:12	14:10 15:24	necessary	168:21
222:15,24	meyers 2:16	152:11	16:14 127:9	26:2,6,22	180:10 185:4
223:3 224:5	30:8,17 31:1	159:10 165:1	128:21	29:4 31:24	185:8,10
227:15,20	36:2 41:12	201:6	most 22:15,16	36:7 72:15	190:19 191:9
MCCRACKEN	42:3,7 45:3	minutes 43:11	95:3 114:23	79:12	191:18 192:3
2:15	50:15,20	100:23	123:9 130:7	necessity	193:9 194:3
McKay 1:20	100:5 104:9	mirarchi 1:15	130:8 163:2	27:11,15	196:1,2
229:13	142:7 150:9	5:5 147:24	180:8 185:2		197:12,24

198:22,23	210:18 225:4	occurred 9:15	oncogenic	140:12 143:7	160:19,23
199:8,12,17	numbered	22:22 23:13	211:16	147:23	163:24
200:19	12:18	46:7 71:4,15	one 2:7,11	150:21	164:19,23
202:24 203:5	numbers	71:15 142:8	12:7 13:2	openings	165:3 168:19
207:16 208:4	145:17	201:8	22:10 25:12	33:17	173:6 176:10
208:11,13	148:24	occurring	31:7,21	opine 72:13	182:24
209:1,3,5,17	150:16	111:10	32:13,14	opined 41:8	185:18 207:4
212:6,19	210:21	occurs 29:11	42:14 44:5	opines 46:11	207:6 209:12
216:3 218:19	numerous	162:17	45:12 47:23	opinion 18:15	others 95:24
219:11 221:7	137:1 139:1	October	48:1 50:11	19:15 30:24	96:6 128:4
221:14,21	223:18	224:6	51:19,22,22	31:19 33:7	217:23
222:1,3		odd 180:19	51:23 52:4	33:23,24	otherwise
225:3,5,8,14	O	off 25:8 35:14	55:3,4,8,10	34:6 35:16	114:8 182:7
225:18 226:5	O 101:19	83:12,19	55:12,13	35:18 39:5,8	ought 49:2
227:6	148:17	101:23,24	56:3,20 57:9	39:13 40:4	72:9 138:3
niosh's 192:6	Oak 2:22	122:17	57:12 59:2	61:14 70:23	140:7
227:10	oath 101:11	138:16 147:2	63:19 65:9	72:22 140:9	out 19:21 22:6
none 17:21	197:2	154:7 160:21	65:20 67:13	143:5	39:6 40:15
27:4 34:11	object 20:10	160:21	72:16 73:5	opinions	43:20 49:14
34:13,17	53:10 58:22	163:22	73:13 82:6	33:19 39:9	51:13 53:3
35:10 40:13	123:8,24	164:22,22	99:5 105:20	39:21 48:23	56:19 59:20
51:9 72:7	133:18 150:6	165:1,2,7,7	110:6 118:16	49:9 67:19	65:4 68:9
201:8 211:7	177:1,23	166:10,11	118:18 123:4	143:4	80:4 96:3,11
211:8 219:14	217:19	168:2,3,3,13	123:8,9,12	opposed 19:18	96:15 100:10
nonelectrical	objected 23:4	178:20	123:13,14,14	161:11 162:3	106:5,13
143:8	28:11 41:13	offer 33:19	135:2 156:18	opposite	112:9 113:7
nonmanufact...	objecting	39:20	156:24 157:2	129:19	114:1 116:24
48:17 54:16	28:12 134:4	offered 15:10	159:24 160:2	option 47:12	119:3 122:9
191:20 194:5	objection	15:11 123:5	183:3 184:21	oral 6:8	123:12
nonsuit 36:5	19:22 26:24	offers 35:16	185:4,12,21	orally 41:15	126:13
Noonan 224:9	28:15 31:1	office 6:16	186:10,13	oranges	129:16
224:9	41:14 50:18	153:15,20,23	187:11	195:21	130:16 133:1
NORTH 1:11	52:22 72:24	203:23 204:6	189:14 190:5	order 73:10	133:10 134:1
Norway 95:15	81:16,20	204:24 205:9	190:13 191:8	73:11 100:15	134:15
97:12,14	83:18 97:21	217:21	193:6,6	108:5 170:21	138:24
Notary 1:21	99:23 100:1	225:22	196:12	organism	139:11 146:7
Note 145:22	103:4 104:9	officer 147:13	198:12	119:22	146:12,15,20
noted 149:9	113:17 118:6	off-gas 86:13	202:14	organisms	151:22
notes 51:2	125:2 130:22	off-gassing	204:11	119:18	155:14,19
146:18,23	133:13	183:20	206:24 207:9	organize	164:3 175:9
230:1	136:21 142:5	often 47:8	208:2 211:20	100:12	180:18 181:5
nothing 19:4	144:10	62:19	211:20,23,24	original 69:17	181:11,14
23:15 38:13	149:18	of 99 75:24	212:4,5,8,8,8	102:7	184:16
44:24 51:15	151:10	Ohio 198:3	212:10	originally	190:12
56:10,12,14	154:16	oil 162:17,18	214:22	203:15	192:22 195:9
59:6 64:6,11	205:15	162:23	217:17 219:8	ornamental	197:8 206:14
66:24 69:16	217:20	okay 13:12	226:1,7,23	46:15	206:14,17
69:18,22	222:17	14:20 52:12	ones 132:16	OSHA 185:7	217:4 221:9
79:6 81:9	objections	58:24 60:8	149:4	225:5	outrageous
98:13,16	100:7	82:16 89:7,9	ongoing 61:1	other 6:13 7:6	114:9
105:6 116:24	observation	91:16 92:2	only 11:8 24:9	7:13,15 8:1	outside 30:4
117:18 129:2	18:21	98:1 108:15	31:5 50:9	8:15,24 9:7,9	30:16 32:2
139:7 141:11	observations	127:21 135:6	51:22 79:18	10:18,22	42:24 43:3
141:21 168:2	17:14 57:4	135:8 152:13	83:19 86:2	17:7 20:23	43:22 98:19
183:17	obviously	152:19	92:11 94:12	21:9 24:15	104:18
226:19	17:4 130:14	160:11	97:16 102:4	30:5 31:14	136:15
notice 123:11	152:9	172:22 173:5	108:20	36:15 51:3,4	over 14:22
number 63:18	occupancy	206:7 207:5	109:21	53:23 81:11	47:4,22 62:2
67:10 71:18	55:21 176:8	207:12	110:10 118:4	84:19 85:12	68:10 72:24
73:5 83:7	occupants	214:10	135:2 147:8	85:16 90:23	100:10
102:2 103:11	62:12	old 9:22	169:22 185:6	91:3 97:10	102:15 108:5
119:3 125:18	occupational	161:20	186:22	97:12 106:3	124:7,11,16
126:11	198:2 203:1	omitted 59:19	206:11	106:24	126:23
156:14	207:14	202:4	onto 154:3	108:12	166:23 169:2
158:10,16	225:19 226:3	once 15:4	161:12 162:4	113:24	169:17,20
159:1 177:15	occupy 73:11	34:22 38:6	171:17	114:14	171:1 172:22
180:14	occur 46:5	41:11,21	173:19	119:24 136:7	175:6 180:4
193:20	66:20 68:2	139:5 141:12	open 5:4	146:11	197:24 199:2
196:10		212:18	18:17 59:13	152:16 154:3	202:18

212:15 215:8	179:5,7,8,14	part 34:16	125:12,19,24	113:5 114:3	1:18,19,24
215:15	181:1,23	73:1,13	126:2,7,14	114:11,20	5:3 15:1
223:16	182:4,5	83:13,14	127:7 128:13	117:19	93:18 94:2,3
overblown	186:21,23	89:13 92:8	128:19 130:7	119:11,16	97:2 138:20
68:20	187:9,14,21	92:23 93:8	131:7,13,22	120:5,12	139:13
overhead 46:3	189:15	94:17 109:18	132:2,5	121:18	147:22
overreaction	197:16 198:4	119:22	137:5 142:20	125:16,18	218:13
96:5	199:3 200:1	123:21	142:21 145:6	126:10,18	219:10 221:6
overruled	202:19	159:13,15	153:7,19	128:4,6	221:15,17
19:23 36:4	204:21	168:11 189:1	155:9 160:23	137:13 143:1	222:2,5
81:17 94:24	215:15 216:1	201:13,22	161:9 162:1	144:21 154:2	224:22
99:18 103:9	218:13 230:2	202:5	163:24	160:21 161:8	people 62:7
104:14 118:6	pages 11:7,12	participation	164:23 165:3	161:8,11,12	63:13 68:18
125:8 150:8	11:16 12:20	102:21	167:15,24	161:24 162:3	76:16,19,21
168:16	13:9 50:24	103:21	169:5 173:13	162:4,24	97:9 106:12
own 16:22	60:11,17	particular	176:11	164:6,21	112:24 128:8
43:24 65:6	79:19 82:10	26:12 119:22	189:17	165:24	129:23
95:4 116:20	82:13 83:2	122:10 190:4	190:20 191:3	166:17	165:16
185:15	177:13,15	190:7 191:23	191:15 192:6	178:13 180:5	175:10 183:7
Oxford 2:7	186:14,15	particularly	192:8,15,17	183:24 184:3	185:7 190:1
o'clock	paid 102:15	18:16 175:18	193:2,7,10	185:22	191:2 192:19
135:17	102:17,22	184:5 192:22	193:16,24	192:10	194:9 219:15
	panels 35:23	parties 227:23	195:8 199:6	202:20,22	per 54:11
	43:13,22	partly 92:10	201:2 202:18	208:8 211:15	73:13 161:7
P	paper 26:7	94:11 108:19	203:22	211:18 216:2	162:9,19,20
P 1:15 2:1,1	52:9 86:5	121:24 126:1	204:23 205:7	219:4 225:19	180:13
105:22	87:4 89:24	partner 5:17	206:12	PCDDs	185:13
147:23	153:17,20	7:17 10:10	207:17 210:1	171:16	191:10,17
PA 2:8,12,17	154:7 155:9	parts 58:15	210:15	173:18	194:1,2
3:2	185:21 186:4	119:17 120:1	215:20 225:4	PCDF 171:16	204:2,11
page 4:1 7:2	189:19	161:7 162:8	225:21 226:6	PCDFs	205:3 206:24
11:21,23	193:15,23	162:19,20	PCBs 16:11	173:18	207:18 208:2
12:6,14,14	papers 85:15	passage	17:6,11,21	Pen 71:20	211:18
13:10,20,22	91:3 115:5	151:12	21:3 23:8	197:14	213:22 214:1
14:14,15	185:18	passed 110:1	24:11 25:2,8	penetrate	216:5 218:2
22:7,11 25:8	Paradise	125:13	26:15 27:16	23:9 28:20	218:6,8
25:12 33:1,2	148:10	past 223:17	28:17,20	36:11 41:21	226:1,7
45:6 48:2,3,7	paragraph	PCB 11:10	29:6,8,15	43:17 67:16	Perfect
52:5,13	14:16,17	14:7 15:22	30:14 33:4	80:16	164:16
58:11,13,21	20:11 22:8	16:23 18:23	34:12,22	penetrated	perfectly
59:9,24	22:12 26:13	19:2 21:3,12	36:1,21 37:5	34:23 38:7	125:17 174:6
60:10,18	36:14 37:1	22:14 24:19	38:6 40:3	42:22 45:23	performed
68:24 69:1	46:22 59:21	27:6 28:4	41:9,18,21	69:24 80:19	38:16 47:11
71:19 77:13	60:23 62:18	34:18 35:1	42:22 43:17	81:6	perhaps 13:8
82:17 83:5	64:7,15	36:10 37:14	43:20 46:14	penetrating	42:16 47:7
88:15 92:4	77:16,18	38:17 45:7	49:10,17,24	30:13,15	140:23
95:2,10,11	83:13 84:4	48:4,9,13	54:22 61:15	42:15	195:12
98:3,8,9	85:23 87:10	51:7 57:16	61:21 62:2	penetration	period 100:19
108:13,14	87:12 88:4	59:14,16	63:22 64:7	27:6 28:17	permission
110:20,21	88:12,15	63:3 64:16	64:11,23	29:15 30:3,6	69:8
112:5,7,9	89:21 92:9	66:17,21	67:15 69:23	34:12,18	permit 179:17
113:7,9	95:9,17	67:2,7 69:20	72:22 74:15	35:1 37:15	permitted
118:4 121:22	96:19 97:23	70:13,16	76:11,21	38:18 39:2	96:22 186:18
127:4,13,14	99:12 123:3	73:19,23	77:7,21 78:6	40:24 41:9	186:20
131:13,19	123:18,24	75:4,7 81:24	79:5 80:16	41:18 44:6	persistence
132:10,14	127:16,17,20	82:4 84:11	80:18 81:5	47:1 51:7	113:1
133:8,20	136:22	84:17 87:2	83:24 85:2	59:17 63:22	person 151:21
134:14,21	152:12,16,21	88:4,22 90:6	85:13,16	63:24 66:18	187:4
135:3 144:19	172:11	91:1 93:17	86:13 92:10	66:21 67:2,8	personal
144:23 145:2	208:21	93:22 96:13	92:21 93:1	67:22,24	131:18,20
145:4,9,11	209:21	102:11 103:1	93:10 94:12	68:3 69:20	persuasive
151:19 152:5	212:24	103:13,17	94:18,23	70:14,16	37:23
152:10,17	213:10	105:21 107:2	98:11 102:6	73:19,24	pesticide
160:3,4	217:12	109:14 110:6	102:10	75:5,7 79:5	113:16
169:2,20	Pardon	112:22	105:18	79:14	118:15,19,23
172:23	149:21	114:13	108:19 109:1	Penn 52:11	pesticides
176:11,13,20	paren 209:1	120:16	109:21 110:4	69:6	98:10 113:14
177:10,11,19	211:14,16	121:21,24	110:8,11,22	pennsylvania	114:20 115:1
178:12,20	225:5	122:2 125:11	111:13 112:2	1:1,2,3,4,5,6	119:4,10

145:3	43:1 51:19	211:14	61:20 178:15	140:18	186:15
petition	57:9 72:14	position 78:16	180:7 184:12	products 1:9	188:14
140:24	73:16 75:10	possession 9:1	presumably	91:5 116:9	193:19
Philadelphia	75:12,13	possibility	48:11 54:14	153:15	205:13
1:18,24 2:12	84:24 111:8	76:20 77:4	191:18 194:3	professes	222:14,16
2:17 3:2	113:7 122:9	possible 155:2	presumed	137:11	224:2
PHILIPS 1:11	123:10	171:14	162:18	professional	puts 217:16
phrase 212:6	128:10,11	postsale	pretty 104:6	1:20 115:5	putting 30:11
phrases 211:9	135:12 179:1	136:23 137:3	prevent 64:9	professionals	64:1,8
physical 36:16	179:16	137:9 138:21	previous 86:9	107:1 108:13	219:17
36:19	197:23 205:6	139:11,14,20	116:14	program	P.C 2:2
pick 89:9	209:10	141:6 142:3	previously	131:18,20	p.m 144:16,17
151:22	214:21	144:3	149:6 153:9	145:11	228:3
194:15	223:15	potential	156:12	project 69:6	
picked 226:23	225:15	80:20 111:22	primary	103:15 190:5	Q
picking 89:5	227:16	112:14,19	128:5	191:23	qualifications
picture	pointed 49:14	171:12	primates	219:16	102:14
178:19	119:3 126:13	173:12 225:9	13:18 14:7	projects 61:2	qualified
pictures 28:10	175:9 217:4	potentially	15:21 18:22	109:14 190:2	17:17,19
70:21	221:9	80:15	99:1 127:6	191:7 194:10	19:7 142:21
piece 49:15,22	pointing	pounds	128:18 129:7	proofing	142:23 143:1
Pittsburgh	151:13	195:12	145:8	62:21	143:16
2:8	points 51:4	practical	Princess	proper 115:20	216:16
place 2:11,22	96:11 184:16	188:16	106:19	115:21 181:9	qualifier
31:7,14 65:8	policy 53:8	practice 60:24	principle 63:5	189:7	127:24 130:5
74:16 96:9	156:16	77:19	78:7	properties	qualifies
100:10	158:14,21	preamble	print 106:5,13	114:6	132:12
210:23	159:20	31:6	printed 172:2	property 61:3	165:22
places 68:21	160:17 161:6	preceded	prize 157:12	proposed	qualify
plaintiff 86:24	162:22	12:14	probably 7:17	203:9	142:19
141:14 150:2	164:18 166:2	precluded	80:9 100:14	proposition	quantity
150:4	166:3 169:19	136:24	181:1 189:20	115:15 137:6	160:20 164:6
plaintiffs 1:7	170:12 171:2	precluding	206:11	protecting	164:21
2:5,9 22:1	171:4,8	136:1	probative	62:21	quarter 25:20
51:10,21	172:16,20	predicate 51:6	43:2	protection	question 15:7
59:18 71:22	173:6,16,20	79:13	problem 12:7	17:10 210:1	18:20 19:24
73:4 93:20	173:24	predicts 212:7	13:8,22 25:3	provide	28:2 31:6
137:1 141:4	174:11,20	preexist 85:17	33:10 38:9	213:18	40:19 53:22
plaintiff's 7:4	175:21,23	preexisting	51:20,24	provides	54:1 55:8
7:5,8,12 9:19	176:2 189:21	85:7,21	52:3 53:17	173:21 199:7	69:18 104:11
10:24 12:8	203:12,13,15	86:15	57:11,12	public 1:4,21	107:20 115:2
12:21,24	203:17,20	preface 172:9	58:9,19 59:4	49:5 92:14	131:3 143:19
23:1,6 27:1	209:1,4	prefer 211:5	63:20 66:4	94:7 108:22	150:14
27:23 30:19	210:2,7,10	prefire 9:16	66:13 67:4	198:5,16,18	152:24
34:16,19	210:15,18	prejudicial	71:24 76:15	224:12	154:17,18
40:21 41:2	211:13	43:8 44:4	78:2 80:20	225:10	160:7 166:24
44:14 49:18	212:20	59:6 66:24	86:22 90:13	publication	167:6 168:15
52:17 78:16	pollution	67:17	90:19 93:6	20:22,23	206:21 220:1
78:24 79:19	138:11	premise 38:2	93:13,15,17	21:1 115:22	220:8,10,14
93:16 117:23	polychlorinated	preparation	124:2 134:12	publications	221:4
141:8 143:18	158:13,20	197:17	141:13	115:21	questioning
plastic 184:8	popping 81:21	prepared	problematic	published	75:3,10
plasticizer	popular 92:13	80:11	58:7	53:7 129:15	questions 22:4
137:16	108:22	presence	problems 22:2	publisher	73:22 81:4
plasticizers	110:13	134:1 173:11	66:20 68:2	13:4 122:12	91:17 141:18
137:23 138:4	population	present 28:3	80:15 81:5	pull 181:10	157:14 177:4
138:7 143:9	214:7	34:14 62:11	99:2	purpose 40:7	219:24
Plaza 55:4,9	populations	67:2 84:1	procedure	51:22 143:12	quite 42:17
56:4 193:6	97:12	117:2 214:5	174:23	purposes 15:3	111:6 129:18
please 5:6	porosity 47:5	215:19	procedures	78:20 98:19	129:19
122:24	porous 46:23	presented	125:15	163:9 176:22	quote 13:14
136:17	portion 88:13	21:24 27:3,4	proceed 81:11	put 26:10	14:5 32:17
154:21	97:23 179:6	34:15 54:8	101:12	44:14 49:20	66:22 83:10
156:20,24	portions 17:5	67:4 80:19	179:17 189:9	54:3 61:16	83:23,24
198:1 222:14	53:15 59:2	86:24 215:14	197:5	61:16 62:1,4	88:14,22
pleasure	107:7 115:16	presents 75:2	proceedings	62:5,5 76:21	89:3 108:14
10:16	pose 173:11	presiding 5:6	228:2	76:24 86:12	108:16
point 8:17	posed 169:4	148:1	process 49:10	100:14 102:2	109:18
9:23 42:24	209:22	pressure	product	176:23 181:9	

110:21	208:19	144:14,15	215:4	95:2 99:8	remind
114:16,23	212:21,24	196:18,20,22	referring	143:7 153:14	101:10
167:1	213:4,9,10	recessed	74:11 88:2	159:11	reminded
quoted 13:16	213:15	227:22	111:24	194:17	79:22,23
17:5 54:17	214:18	recitation	112:15	relating 136:4	remote 43:2
quotes 21:9	215:21	40:16	123:19 138:9	225:8	remotely 44:9
28:19 29:19	216:20,22	recognize	140:1 157:23	relation	removal 22:9
34:21 38:4	217:12 220:8	83:16 84:13	169:3 181:20	162:10	22:13,24
42:8 44:5	220:9,11,18	88:16 89:14	refers 85:23	relationship	25:20 26:1
107:4,12	223:16	91:15	90:11 121:7	105:11	37:2 59:10
quote-unquote	reader 96:13	recognizes	156:4 190:7	128:24	60:1
19:19 155:3	readership	78:7 94:16	210:14	205:11,14	remove 27:11
205:1 206:16	138:1	recollect	reflects 188:9	relatively	27:12 29:18
225:23	Reader's	151:19	refresh 29:24	165:17	34:22 69:21
Q-deck 75:20	130:11	recollection	146:2	210:13	71:4,10,15
76:6	reading 32:24	5:19 6:11,20	refreshing	relaxed 175:8	102:4 120:18
	49:6 60:11	9:10,11	151:18	release 46:2	removed
	60:15 69:3,4	38:16 151:18	regard 8:23	160:20 163:8	25:19 28:7
	77:15,19	recommend	26:6 36:4	164:5,20	179:6
	123:4 143:17	225:6	39:11 40:1,5	165:6,6	removing
	164:14	recommendat...	55:3 77:8	166:14	50:10,11
	171:21 172:4	180:11 185:5	78:6 113:8	167:23 168:8	render 143:3
	177:2 187:11	190:19 191:9	116:8,10	released	rendered
	193:22	208:7,24	120:5 170:14	163:20	39:14 140:9
	199:24	221:24 223:6	206:21	165:23	143:5
	reads 208:23	223:9,19	regarding	releases	reoccupancy
	ready 100:22	225:15	35:13 70:22	126:22	25:12 72:6
	reaffirmed	recommendat...	99:1 138:5	137:19 161:1	reoccupying
	141:1	199:7 225:8	143:5	165:10 195:8	71:24
	real 19:16	recommended	regardless	releasing	repeat 154:21
	93:6 131:10	192:2 207:17	214:22	76:21	repeated
	reality 227:6	214:24	regional	relevance	171:11
	really 8:6	219:11 221:7	173:22	18:20,24	repeatedly
	23:24 42:18	222:3 226:6	175:17,23	21:21 26:17	16:5,17
	72:9 111:5	227:10	register 160:4	84:6 86:20	45:24 53:14
	112:21 119:8	recommends	Registered	92:16 95:8	156:9 157:19
	132:4,9	203:1,5	1:20	104:10	report 6:2,4
	134:3 156:1	225:18	regular 175:8	195:17	196:2,5
	156:4 163:2	reconsideration	210:12	relevancy	199:5,13
	164:10 167:6	140:24	regulate	19:10	201:4,8
	168:9 184:15	record 5:13	110:2,7	relevant 11:7	227:7
	184:19,20	7:4 8:9 9:14	125:16	26:13 35:21	reporter 1:20
	185:7 192:8	10:4 42:21	regulated	44:13 65:13	220:11,18
	201:18	43:6 49:16	99:6 128:9	78:22 85:11	229:21
	reason 12:4	49:22 70:12	regulation	91:13 94:9	represent
	12:13 13:1	71:13 73:1,4	174:22	96:24 162:21	209:1
	123:16	75:24 101:8	regulations	167:15	representation
	137:18	144:19 149:1	95:6,14,20	relied 222:21	6:8 7:10
	reasonable	149:9 220:12	95:24 96:23	relieve 78:5	representatives
	100:18	220:19 229:7	97:3,4 110:4	rely 143:3	218:16
	reasons 99:5	recorded	113:4 130:8	remain 33:5	represented
	110:19 174:9	167:2	132:3	178:19	5:14 79:1
	recall 7:7 30:6	redirect 86:6	regulators	227:24	reproduces
	158:3 159:18	187:18 189:7	112:3 128:3	remaining	52:18
	190:12	reduced 203:2	regulatory	97:22 217:15	reproduction
	191:13	225:20	92:19 93:9	remediating	229:18
	193:20	refer 42:12	108:24	24:11,15	reproductive
	202:12,14	89:21 120:24	110:16	remediation	13:18 14:6,9
	223:7	132:8,11	rejected	21:2 24:13	15:20,23
	recalled	212:13	140:21	63:24 64:1	16:13 18:21
	124:12	reference	relate 176:7	68:14	127:6,8
	recalls 30:2	23:24 79:18	related 97:14	remember	128:18,20
	31:8	83:20 119:1	103:14,18	30:12 31:21	145:8
	received 5:15	193:9,12,15	121:17	71:18 76:9	request 13:4
	7:1,15,21	references	138:17	76:22 102:14	174:11
	9:16 124:19	83:2 139:15	178:15 180:6	113:15	requested
	recess 101:1,2	referred	183:19 192:5	134:17,18	190:15
	135:12,14,16	26:20 158:9	192:6 226:19	146:3,7	199:12
	135:17,24	191:2 204:20	relates 78:9	182:23	require 25:20

64:24 171:18 173:8,22 175:17 required 22:24 29:17 29:17 173:23 199:12,15 221:1 requirements 162:21 173:9 requires 64:17 77:22 129:6 research 128:12 129:6 129:9,11 reserve 182:11 reserved 5:9 reserving 179:19 residual 83:16 84:14,22 85:3 88:17 89:15 90:12 90:15 151:9 152:6 153:2 153:12,22 154:10 155:22 173:13 residually 113:23 resistance 62:23 64:10 111:15 resolve 57:23 respect 9:15 10:22 41:11 226:24 respectfully 17:4 respond 199:15 responded 199:17 responsibility 64:19 65:3 65:11 77:23 78:5 responsible 161:21 responsive 168:15 rest 59:20 146:4 147:13 150:5,11,15 217:11 rested 149:20 149:22 150:3 restricted 85:24 90:24 214:4 result 126:21 195:8 resulted 14:8 15:22 16:12 59:15 127:7 128:19	195:12 resulting 22:18 160:24 165:10 168:7 171:15 173:17 results 160:20 164:5,21 166:15 203:21 204:22 205:7 215:19 216:1 217:20,24 218:24 225:21 resume 197:3 retained reveal 84:21 review 122:13 190:8 reviewed 37:22 197:16 215:10,13 225:3 226:18 RHOADS 2:16 rid 121:2 right 11:13 37:5,9 39:4 52:21 56:7 63:9 74:23 77:14 94:21 102:2,6,10 102:16,22 103:3,16,17 103:18,22 104:7 105:22 106:3 107:2 109:15 110:19,24 111:2 112:18 116:13 117:11 120:2 120:9 121:3 123:15 124:8 124:17 126:3 126:16 128:4 128:15 133:5 134:10 140:15 153:5 153:10 154:24 155:23 158:14 159:3 159:6,22 161:1 162:5 162:13,22 163:1,5,6 167:19 169:10 174:3 175:15,21 176:22 177:3 177:8 178:10 179:19 180:11,16 181:9,18 185:23 186:10	187:12,22 188:18 189:18 191:11,21 192:4 193:5 194:5 198:6 198:10 199:13 200:9 200:14,21 203:12 204:3 206:17 207:2 207:19,23 208:5 210:3 211:8,21 212:2,9 217:2,7 218:21 219:2 224:24 226:14 227:11,19 right-hand 197:24 rise 147:20 risk 17:12 62:11 128:10 174:17 175:10 203:9 208:9,15 209:11,12,20 209:22 211:17 212:9 213:19 214:6 214:23 226:20 227:3 risks 169:4 211:14 roll 66:6 room 184:21 rooms 183:15 184:24 root 171:17 173:20 rose 41:13 rough 33:16 routine 165:17,22 166:2,5 174:23 210:13 routinely 207:15 216:6 226:4 Roux 5:17,18 5:20,22 7:16 7:23 10:9 Roux's 6:7 7:17 79:24 Roy 109:9 royalties 106:15 124:19 RPR 229:13 rub 154:7 rule 15:19 20:14 81:13 118:5 158:14 158:22 176:5 208:19 ruled 98:24	114:12 117:7 117:9 138:24 139:20 140:2 140:22 141:5 144:3 187:13 ruling 141:1 182:15 run 17:1 160:21 164:22 165:2 165:7,7 166:11,23 168:3,13 running 160:21 164:21 166:10 168:2 168:3 rupture 171:15 173:18 195:2 S S 2:1,16 224:9 safe 16:6,7,9 16:17,18 18:16 19:2 19:13,19 99:10 116:12 156:9,10 157:20,23 158:7,15 203:8 210:6 210:24 211:2 211:4,8 215:2 safety 18:2 19:15 44:15 99:3 116:9 128:8 198:2 sake 16:22 sale 106:10 sales 137:13 Sam 147:12 same 8:18 11:23 12:2 20:5 43:9,23 47:23 68:22 78:2 87:15 90:11,13,18 92:5 96:6,8 98:8,23 108:4 137:5 159:24 175:6 206:22 222:22 225:7 229:18 samples 5:16 5:20,24 6:1 6:13,17 7:7 7:14,16,22 7:24 8:10,16 8:23,24 9:3,6 9:10,16 102:20 155:11,15 158:18 215:11,20	sampling 38:11 73:6 218:24 San 55:17,22 Santa 191:14 194:18,23 195:4,8 204:8 205:10 saw 35:22 223:21,23 saying 8:14 28:12 37:18 64:8 89:4 115:17 122:21 212:11 says 15:20 17:6 27:20 36:9 45:10 46:15 48:11 48:15 50:16 54:10 59:9 60:18,19 62:17 63:2 63:11 64:14 69:19,23 73:4 75:24 76:14 77:9 77:20 114:19 115:17,18,22 120:6 125:24 126:5 127:23 130:5 133:1 143:22 145:5 158:2 159:12 161:6 162:16 164:7,15,16 170:3,11 171:5 172:18 173:5 175:21 175:23 182:12 191:17,22 193:5,12 194:1,20 197:24 201:13 202:23 203:5 204:22 206:3 206:6,7,9,24 208:14 209:16,22 210:9,24 215:18 216:23 217:4 218:13,22,23 225:12,18 schedule 146:3 194:20 Schmidt 28:12 scientific 122:14 128:12 129:9 129:11 130:9 132:22 226:21 scientists 119:6	scope 43:4 44:11 screen 167:7 173:4 176:23 179:15 188:15 scrupulous 139:10 seal 61:24 62:13 79:16 183:6 sealant 64:2,9 sealants 61:6 62:19 sealer 62:2 seam 50:12 season 86:11 seated 5:7 101:5 148:1 227:24 second 12:10 12:22,23 13:2 14:2 43:1 47:2 60:23 83:14 88:2 90:14 92:1 122:7 193:4 Secretary 64:21 65:22 68:8 74:2 75:1,13,18 77:24 79:3 79:11 197:12 197:21 224:18 section 77:15 79:9 132:24 168:23 169:4 180:23 182:19,20,22 190:6 211:13 see 12:1,20 25:4 26:18 37:16 52:14 53:1 57:22 58:8 59:12 75:1 102:1 108:8 122:23 133:14 157:15 160:12 164:11 179:4 179:7,14 180:24 186:19,20 187:15,20 188:8 197:15 200:2 203:3 222:13 seeing 116:1 177:13 223:8 seen 137:15 170:10 197:13 223:18 selling 143:6 sense 23:11 36:12 119:21
--	--	---	---	--	--

132:21	short-term	141:7 226:22	some 9:12	sort 141:15	163:6,8,12
200:22 201:9	22:18	since 45:4	11:2 21:9	156:4	163:18,21
210:11	shot 25:7,10	95:4 97:1	23:2 30:2,12	sought 137:2	164:2,3,17
sent 5:20 6:14	25:15,16	129:14 134:7	37:21 43:2	sound 63:5	165:18,22
7:24 9:7,11	27:18 28:10	180:24	46:23 48:3	sounds 133:2	166:2,5,7
9:18	29:1,3 31:23	single 49:15	49:5 54:21	source 9:2	167:16
sentence	32:6,9,12	143:2	57:15 63:3	160:23	169:19
59:13,19	33:9,21 34:3	sir 9:5 101:7	71:23 76:17	161:19	170:12,14
84:7,8 88:2,3	34:7 35:13	103:19	78:14 91:17	163:24	171:4,5
88:7 90:4,11	40:6 41:1,4,5	105:10,19	107:4 109:14	164:24 165:3	172:16,20
91:12,14	48:21 49:1	107:3 110:9	110:16,19	193:18	173:7,13
97:17,24	70:20 71:3,9	122:4 124:14	111:6 113:14	sources 11:8	174:18,24
99:14,17	71:14 72:18	128:16	120:20,23	83:17,21,23	176:2 183:3
118:3 127:19	show 28:9	144:12 153:4	122:17 125:1	84:15,22	184:5 189:21
145:7 151:22	30:19,20	162:15 169:6	128:2,10	85:16 88:18	203:12,13,15
181:11	33:13 34:20	185:20,24	132:19	89:16,16,21	203:17,19
208:19,20	42:9 47:24	186:11	139:24	90:12,16	210:1,7,15
212:19 213:5	51:23 57:22	193:10 197:1	141:17	153:12 154:3	spilled 161:9
213:7,15	58:1,21 59:3	197:19 198:8	153:21	154:11 225:5	161:10,13
214:8 216:10	66:9 68:11	203:4 215:17	155:21 163:9	South 2:17	162:1,2,5,11
216:21 217:4	90:22 91:18	224:14	168:19	so-called	163:19
217:15,17	96:14 108:2	225:13	169:18 176:9	37:23 162:12	spills 42:12
219:14	108:3 117:10	226:11	185:18	space 25:18	62:22 64:10
sentences 20:4	141:16 152:8	situ 60:18	189:16 191:3	170:24	84:17 88:5
89:22 92:1	164:9,9	situation	192:14	speaking	88:23 90:6
separate 80:2	178:23	29:21 54:3	193:23	121:16	133:1 159:11
80:5	186:12 187:9	55:9 87:22	194:10 199:7	217:20	160:18 161:7
separated	187:14 227:2	117:5 151:7	199:18 213:8	speaks 116:3	164:19
217:22	showed 25:6	166:8 167:8	221:13 227:3	special 92:18	167:23
separating	37:14	173:21	227:3	108:23	168:24 169:5
184:24	showing 187:1	194:15,18	somebody	110:12 147:4	171:10,14,17
September	187:3 188:7	205:12 206:2	122:11	species 121:13	173:16,19
141:3	210:19	situations	124:24	specific 39:18	174:14 175:7
sequence	shown 23:8	63:4 153:13	199:15	40:9 132:2	182:21
134:15	36:10 51:10	171:6 173:7	someday	151:12	210:12
sequentially	57:19 72:2	173:14	105:1	153:11 189:5	211:14
12:17 177:13	78:21 115:16	sixth 199:22	somehow	specifically	spill-related
series 28:19	117:10	211:21	43:20 125:1	55:7 110:8	84:23
serve 213:13	129:18 149:5	212:13 219:1	128:9 166:17	121:18	spread 100:9
service 109:12	176:21	size 53:20	someone's	139:23	square 45:21
132:7	177:20	sketchy	165:13	153:14	170:13,16,20
services 1:3	187:24	128:12	someplace	182:22	170:23
1:23 197:22	223:13	skillfully	132:8	specification	175:20
218:14	shows 49:16	57:13	something	26:19 68:7	185:13 194:2
221:16	49:23 58:13	skin 207:16	37:10 59:11	71:8	204:2,10,11
session 101:5	70:1	216:7 226:5	64:3 79:2	specifications	205:4 207:1
149:17 197:1	side 50:12	skipped	115:23	24:5 25:19	207:18 208:2
set 18:2 56:22	113:18	123:13	117:12	68:16,17	211:18
165:15	133:14	skips 52:19	119:23	70:11,15	213:22 214:1
216:23	188:13 219:8	slide 117:10	121:20	72:1,3	216:5 218:3
226:22	Side-bar	141:16	122:19 147:4	speculate	218:6,8
sets 215:20	113:20	slides 25:6	168:21 174:2	44:17	226:2,7
settings 84:17	118:11 123:1	SLPCBW	184:8 201:13	speculation	squared 54:13
88:20 89:18	124:3 133:15	215:21	sometimes	44:24 142:12	stability
seventh	135:9	216:23	29:10 151:8	speech 117:22	111:15
199:23	signal 119:6	small 153:18	153:6 154:10	141:16	112:16
several 46:9	signed 197:22	153:21	somewhere	spelling	stand 91:7
46:16 49:14	198:4,15	184:19 190:6	31:4 153:22	207:11	93:12 117:14
78:21 146:6	significant	snuck 125:1	204:8	spent 223:12	140:6 145:14
203:22 204:6	173:14 214:6	soil 171:9	soot 45:13,14	223:22	180:19
204:22 205:7	significantly	173:10	45:15,19	spewed 195:9	182:17
223:17	171:6,13	sold 106:16	47:14	spill 22:18	standard
225:21	silly 57:24	122:12,22	sophisticated	42:20 53:8	19:18,19
shoot 77:2	similar 219:17	124:7,11	17:10	62:21 155:8	48:8,14
shop 132:7	221:11	solubility	sorry 14:14	156:16	54:24 73:14
short 196:18	simple 178:14	111:16	33:12 51:3	158:13,21	157:20 158:8
shorthand	180:6 184:1	112:16	52:8 102:9	159:17,20	158:15
229:20	simply 34:15	soluble 121:3	161:18	160:16 161:4	174:22
shortly 10:1	51:14 112:24	solution 66:3	193:17 202:2	162:12,17	180:12 185:6

185:7 190:21	states 1:8	17:15 37:4	22:12,17	58:2,10 59:1	156:6 157:12
190:22	96:22 110:3	68:19 74:3	33:17 37:2	186:10,13	158:16 165:8
191:12 192:1	211:15	76:6 80:11	42:23 45:12	187:11	165:12
192:8,9	212:19 225:2	85:10,10,19	45:13,19	189:14,22	166:16
193:16,24	stay 61:16,16	86:5,6,19	47:14 71:5	190:5,12	167:22
194:1,14,16	62:4,5	87:15,15	73:8 160:22	191:13	175:15 177:7
207:9 208:2	195:24	100:2 115:4	162:10	193:11,20	183:1,11,13
208:3,5,6	stepped 167:4	127:23 136:4	163:23	215:18	183:18 184:6
211:5,8	steppingstone	137:8,22	164:23 165:2	226:23	185:11
212:5 221:21	24:17	138:1 140:7	168:4 175:19	tables 56:21	190:19,22
221:22 222:4	steps 183:2	151:6 152:2	185:13	tabs 69:14	193:17
226:12	still 8:17 9:14	162:20 181:7	190:22	tailor 100:17	201:10
227:11	14:10 15:24	195:23 219:7	203:22 204:1	take 25:8	203:13,18
standards	16:14 91:11	subjected	204:23 205:2	32:20 44:20	206:23
18:2,4 19:2	100:16	110:5	205:8 208:12	100:13 101:1	207:10 208:4
48:4 52:2,20	101:11	subjects 14:12	213:24	101:23 102:3	208:12
54:21 56:22	106:10 113:5	16:2 56:16	225:22,24	120:20 134:2	209:15 210:8
57:8,16	127:9 186:4	78:10 127:10	surfaces 48:12	135:15 147:1	210:10,11
157:24 174:8	190:16 197:2	128:22	51:8 54:14	163:14	215:2
174:15 175:7	stillbirth	substance	61:21 154:3	166:14	talks 16:9
175:12 176:1	128:21	16:16 46:18	159:6 170:13	189:13	24:12 27:10
176:6 189:17	stipulate	109:24	171:10	196:17	27:14 29:2,6
189:22 190:1	179:10	111:10	191:19 192:4	212:15	31:22 44:5
190:7 191:3	stopped 143:6	substantial	194:3 202:19	taken 21:10	46:12 47:16
191:6 192:15	stopping	67:10,13	202:20,22	101:2 107:4	56:17 68:23
192:21,23	227:16	successfully	207:13	144:15	72:16 74:13
194:9,11	stores 106:2	49:21	211:19	159:19	74:14 77:8
209:13 210:9	Street 2:17,22	suddenly	213:21 214:2	178:20	132:24 169:8
213:24	3:2	155:14	214:3 216:5	180:18 181:4	169:18
214:24 215:1	stretch 196:15	sue 93:22	216:24 218:7	196:22	208:15
217:7	stricken 31:3	sufficient	218:9 225:11	215:10,12	tape 86:15
standing	50:21 168:12	151:23	226:3	taking 20:24	tar 114:2
134:8	201:23	sugar 178:8	surprise 106:7	155:11,15	target 119:22
standpoint	219:22	suggest 16:15	surviving	158:18 163:9	158:17
46:19	strict 131:18	51:17 70:13	14:11 16:1	talk 42:14,18	targets 92:20
stands 196:20	131:20	suggested	127:10	68:21 77:6	92:24 93:10
227:22	145:10	32:11	128:22	95:5,13	94:18 109:1
start 7:1 11:5	strike 41:15	suggesting	SUSAN 3:1	106:21	technical
14:21 155:11	50:20 130:23	43:14 177:18	suspended	110:18	132:22 133:3
155:17	stringent	suggestion	76:22 77:1,3	137:24	techniques
188:20	171:18 173:9	47:18	sustained	165:16 201:5	24:13 56:19
started	174:7 175:24	suitable	28:15 31:2	209:20 219:7	63:2
131:15	176:6	111:18	41:14 50:19	talked 35:8	technology
starting 21:18	struck 41:16	Suite 2:3,7 3:2	97:22 131:1	37:20 64:20	21:11 24:18
209:10	structural	summary	144:11	65:21 66:14	52:10 60:13
starts 83:15	46:15 119:11	119:2 130:12	151:14	72:19 154:12	60:20,24
92:9	199:21	supervision	154:19	154:23 156:8	77:11,18
state 1:7	200:11,12,16	229:20	205:18	175:13	186:2
21:11 45:6	structure 47:8	supplement	swing 188:21	182:24	TEDFORD
52:9 101:7	98:11	179:19	sworn 148:14	184:16,17	2:21
143:21	studied 37:3	supply 106:2	148:21 229:6	185:10	telephone 6:9
178:13	97:11	support 44:3	sync 96:15	199:11	tell 8:20 12:11
185:14 186:1	studies 17:8	67:6	147:10	202:15	61:9 113:14
205:23	18:6,8 97:7,8	supports	synthetic	talking 11:22	119:15
213:23	129:18	130:19	111:9	16:2 32:1,4	120:13
219:18 221:2	206:11	supposed	system 114:22	32:20 39:2	147:11
stated 182:4	study 97:13	120:24	140:13 143:7	50:6 55:2	150:15
212:1	99:1	sure 61:11	systems 24:16	59:23 60:20	163:22 165:1
statement	stuff 51:20	76:1 82:17		61:5 63:23	192:12,13
39:12 116:19	80:10 96:17	89:1 100:22		67:21 72:12	194:6 213:3
116:21	174:17	107:15 122:8	T	73:6 74:19	220:22
132:12	226:23	128:7 136:8	101:19	74:22 75:19	226:16
180:20,21	subculture	152:9 157:1	148:17 229:1	78:1,2 79:13	telling 19:12
182:18	92:20,24	196:14	229:1	80:24 85:12	194:7,8
183:12 184:2	93:9 94:9,18	203:20,21	tabbed 69:10	89:23 120:16	tells 93:5
216:14 222:7	109:1	208:22	table 47:23	128:14 129:2	temperature
statements	subfloors	212:22	48:1 51:23	130:20	111:19
116:6,7,14	217:2	222:15	52:4,15 57:6	138:12	temporarily
117:7	subject 6:11	surface 22:9	57:9,12,19	141:10 154:1	63:7

ten 32:13 67:12 80:1,4 159:1 211:20 211:21 212:12,13 tend 120:17 tended 122:14 term 119:14 120:24 122:18 125:10 132:1 153:11 155:23,24 156:1,2 160:17 164:17 200:16 201:16,19 202:13 211:2 terminology 122:17 200:24 terms 25:11 66:2 68:13 68:23 157:22 184:17 211:3 211:11 212:1 215:11 terrain 14:23 test 14:12 16:2 37:24 40:9 44:1,2 56:9,19 70:1 127:10 128:22 tested 38:22 129:8 testified 16:5 24:2 26:4 32:8 64:21 67:20 68:6 68:15 75:18 148:15 testify 15:10 35:6,11 39:7 66:13 124:14 testimony 1:17 15:12 17:22 19:1 21:22 23:3 24:3 25:5,14 25:23,24 30:18,21 31:2,22 34:1 34:10 35:12 35:20 38:8 38:10 40:23 41:16,17 43:5,15 44:12 51:11 63:19 65:6 65:14,22 66:17 67:23 68:8 70:18 70:22 71:3,6 72:4,10,14 72:24 75:14 98:22 99:9 100:20	102:24 180:15 183:5 197:17 229:8 testing 37:13 85:2 211:24 212:7 tests 13:18 14:6 15:13 15:21 16:3 16:10 18:14 18:22 19:6 27:8,13 35:9 37:20,21 38:16,19 39:19,23 127:6 128:18 129:5 145:8 Thank 10:1 20:1,19 21:14 89:12 106:9,9 108:3 118:7 127:21 136:11 142:5 150:24 156:21 157:6 177:24 179:21 180:1 189:10 202:7 224:1 Thanks 75:17 their 17:11 39:9 59:18 93:6 95:4 113:1 128:5 137:19 166:18 174:10 185:14 189:21 194:14 221:10 themselves 126:18 157:24 221:13 theory 46:2 thin 181:11 thing 12:2 42:14,17 59:2 98:3 189:24 things 20:13 24:10 44:17 78:14,17 105:20 106:3 110:4 116:23 120:12 121:9 125:18 128:2 130:6 153:14 168:19 176:10 183:20 187:16 198:13 think 6:12,20 8:3 9:8,9,23 11:6 13:15 17:1 21:18	26:21 31:11 37:5,22 38:4 40:19 50:1 55:15 63:17 78:12 80:3 90:20 91:5 93:15 97:19 102:8 107:13 107:18 109:19 114:8 121:7 122:20 127:15 133:24 138:18 146:14 150:12 151:20 153:15 163:13 164:1 164:13 167:9 177:15,19 179:13 184:15 187:3 188:5 191:14 191:24 204:5 207:8 210:16 213:12 214:9 214:20 215:6 220:4 227:5 227:18 thinks 57:14 96:17 third 9:20 47:6 127:19 180:10 225:15 THOMAS 2:6 2:11 though 39:22 43:24 226:22 thought 12:16 23:22,23 90:4 102:3 118:15 178:7 186:19 200:19 202:3 thousands 195:11 threat 113:6 119:9 threats 111:22 112:14,19 three 9:9 68:20 69:13 104:4 172:1 186:15 206:11 through 22:20 28:1 29:14 34:24 36:15 75:6 76:19 100:11 105:12,14 121:8,19 122:15 178:14 180:5 183:2 184:1 189:5 195:10	throughout 45:18,20 158:10 159:2 211:3 thrown 180:14 Thursday 76:1 146:5 147:5,9 tie 71:23 tighten 170:5 tighter 164:16 time 5:9 9:12 20:14 41:8 76:14 93:21 101:3 110:3 111:7 113:3 113:21 118:12 123:2 124:4 129:12 130:13 132:7 133:16,19 135:10 136:19 142:15 144:16 150:21 155:10,15 174:18 190:10 196:23 224:19 times 45:23 49:14 171:1 211:20,20 tiny 25:17 tissue 119:23 title 52:18 53:2 159:14 159:16 titled 52:9 202:20 today 107:8 125:17 together 164:15 174:20 told 6:24 7:20 39:10 48:10 48:14 55:5 105:17 109:13 Tom 33:15 82:22 105:12 tomorrow 219:6 227:19 227:22 top 28:6 52:18 60:17 61:6 64:2 188:20 197:23 224:7 torn 70:8,9 tortfeasor 138:22 total 14:9 15:23 16:12 127:8 128:20 totally 122:16 toward 132:4	174:9 Toxic 109:24 toxicologically 114:7 toxicologist 15:16 toxicology 15:11 17:16 17:18 19:8 tracking 22:20 trade 157:13 traditional 135:20 training 40:1 transcript 6:23 79:3 229:17 transfer 61:3 transformer 1:12 169:13 193:7 195:1 195:7,16 200:8,13,20 200:23 201:1 201:7,10,14 201:17 202:11,13 transformers 84:18 88:6 90:7 153:8 168:22,24 169:9 translates 112:2 transportation 1:4 44:15 94:4 194:23 trapped 183:7 treat 22:17 treated 114:10 treatise 116:20 treatment 60:19 92:18 108:23 treats 115:4 tremendous 129:15 trenches 76:7 76:10,20 78:4 81:1 trial 1:17 136:5 tried 223:16 trouble 60:11 troughs 65:23 217:1 true 7:23 85:22 105:5 109:6,9,23 111:11 121:22 122:5 124:15,21 125:5 126:6 126:9 127:2 128:22 131:5 131:16,23	154:9,15 155:5 159:8 173:24 175:16 183:23 184:2 184:11,14 185:2 191:4 201:6 209:7 219:12 222:5 222:6 225:1 229:7 truly 62:4 trust 27:22 try 43:19 206:16 trying 24:22 53:17 71:23 142:11 155:19 195:19 206:13,14,18 TSCA 135:5,5 137:8 173:6 173:20,24 Tuesday 146:11,20,21 147:1,6,7 turn 108:14 turned 9:17 TV 176:23 179:15 two 11:8 31:17 35:12 51:4 92:1 104:2 126:14 133:22 186:14 190:7 206:11 207:3 type 22:14 128:10 130:9 167:21 173:10 176:8 types 129:5 typical 54:3 170:14 typically 120:11 211:11 T&S 7:15 8:10 18:10 22:3,22 23:1 23:13 25:4 35:2 38:9,12 42:19 43:7 44:9 70:9 84:1 87:1 93:17 95:21 96:24 97:1 163:3 165:4 166:8 167:8 167:13,19 168:4 169:15 170:17,20 195:18 196:4 199:6 219:12 222:4 226:13
---	--	---	--	---	--

U

U 207:6	54:15 191:19	V	wall 43:12	56:19 80:2,5	189:22
Uh-huh 11:18	194:4	vain 80:1	122:17	wear 62:22	190:18,22,23
170:2 173:2	ups 107:2	value 17:24	want 5:12 8:4	64:10	192:9,22,23
ultimately	USA 97:2	43:2	8:20 33:14	wearing 62:23	197:11
52:20	use 53:11,14	vapor 47:2	36:16 51:5	Wednesday	199:23
unaware	58:7,14	61:19 178:15	58:16 67:9	1:16,19	200:19 205:9
154:4,11	59:13 60:3,7	180:7 184:12	82:22 84:9	147:8	205:10 208:3
uncontrolled	61:6 78:19	vaporization	85:18 88:13	week 146:4,6	210:19
160:19 164:4	79:24 107:1	35:8 39:21	88:14 101:23	147:9	215:11
164:20	110:2 111:6	138:15	107:14	welcome	219:15
under 22:8,12	115:20,21	141:10,12	109:18,20	21:16 151:2	weren't 76:18
37:1 59:24	118:1 125:18	142:1	114:4 129:24	156:23	111:5 122:13
60:13,23	158:17	vaporize	138:4 139:2	well 12:19	West 2:3
66:14 77:17	166:18	62:10 140:10	139:22 146:1	13:1 17:3	Weston 109:9
98:9 101:11	167:24	140:11 154:2	151:5 156:7	23:21 24:4	we'll 28:1
169:4 175:4	172:19 173:8	vaporizes	156:11	27:21 29:12	68:11 101:1
182:6 197:2	174:23	140:18	164:24	37:8,19	104:24 135:6
212:5 229:19	175:10,11	vaporizing	165:16	40:11 42:4	150:21
understand	185:15	154:6	174:16 178:1	59:17 62:15	196:17 201:5
15:17 20:18	194:13	vapors 195:10	182:13 189:1	73:2 82:19	219:7
39:3 40:14	201:16 206:1	variety 78:20	189:5,13	88:11 93:14	we're 13:7
42:11 54:9	206:22	174:8	195:22	96:20 98:18	19:20 30:10
84:6 91:22	209:12 211:9	various 17:13	210:23	104:20	39:1 63:22
111:5 122:8	212:6 221:21	18:1 93:19	212:15 213:4	106:17	66:19 73:6
160:10	used 15:2	106:23	213:9 215:9	109:11	75:12 82:2
161:23 164:2	23:16 24:18	121:13	wanted 57:10	125:23 141:4	86:7 87:16
174:12	62:19 63:12	ventilation	67:1 89:13	143:14	87:23 89:23
182:14,17	98:18 125:10	178:14 180:6	110:7 147:10	153:11 155:6	99:7 115:9
185:9 206:1	125:16	183:17 184:1	147:10	155:24	115:24 118:3
207:8 213:6	155:10,23	verify 7:18	151:17 152:1	160:23	118:5 134:7
215:7	156:2 157:22	version 12:9	214:8	166:10 169:1	135:16,23
understanding	160:17	122:10,11	wants 20:10	172:17 174:4	137:23
172:16	164:17	124:9,22,24	40:24 41:3	182:9,16	140:19 143:9
unduly 43:7	177:13 180:8	131:10	52:24 59:3	184:15 185:6	146:3,15,20
unexplainable	185:3,8	versions	60:21 80:13	185:19 188:4	150:12
29:10	190:1,4,16	132:17	81:13,15	203:7 212:17	164:14 165:7
unfirm 67:19	191:7,15	versus 43:12	83:11,14	216:18 217:9	184:6 187:1
Unfortunately	193:19	very 16:20	86:1,2 130:5	219:13	187:10 197:8
111:20	194:10	59:5 98:4	142:9 177:4	221:14,20	216:1
112:12	202:14	132:2,16	178:23	well-known	we've 14:22
unintentional	203:16 209:5	147:4 165:9	187:17	119:5	45:21 54:7
160:18 164:4	209:16 216:3	172:2 174:6	warn 139:14	went 26:4	55:2 65:14
164:19	218:19 222:4	175:8 178:22	warrant	108:5 124:20	78:10,21
unique 46:18	user 64:20	182:18	173:7	140:1 220:5	97:6 103:24
195:9	65:11 77:24	185:15,15	wash 133:1	were 6:2 8:10	109:19
united 1:8	uses 24:17,24	195:12	wasn't 60:2	9:7,10 18:4,9	137:15 159:2
95:14 96:22	48:19	210:17 223:6	113:16	19:3 49:17	175:1 176:7
97:4 110:3	using 12:9	view 6:18	125:11	49:20,23	180:14
unknown	51:21 56:18	78:16 86:17	129:13	68:17,20	197:13
154:13	57:11 58:2	93:4 109:20	water 111:16	70:10 74:16	200:24 201:9
unless 107:7	80:24 117:23	219:20	121:2 173:10	79:15 84:1	201:17 203:8
229:19	119:3 141:15	viewed 111:21	173:13	90:5 110:3	206:23
unprotected	195:6 200:24	112:13,18	waving 29:19	110:23,24	whatsoever
207:15 216:7	202:12 212:9	views 80:14	wax 85:13	111:3 113:3	42:22
226:5	usually	81:5	86:3 87:3	113:4,6	while 106:22
unrelated	211:24	violent 171:15	90:1 91:2	117:20	115:9 145:14
43:5	utilities	173:17	way 8:20	124:11	227:24
untested	174:14,19	voir 15:13	43:23 96:7,8	126:18 128:9	WHITE 2:10
162:17	utility 1:5	vouch 125:20	97:19 113:8	129:7 145:13	whole 36:2,8
until 84:3	132:7	132:17	116:10	145:18 146:7	79:9 88:22
93:21 111:6	U.S 2:24	vs 1:8	131:14	149:3,4	89:3 95:16
135:17	95:24 96:3	W	141:14	152:21 154:1	137:8 143:12
144:16	96:15 121:24	W 2:6	147:12	161:12 162:4	168:23
154:13	122:19	wait 84:2	153:24 162:8	171:16	169:12
182:12	125:10,12,19	88:24 152:11	180:24 187:3	172:17	172:20
227:22	125:24 145:6	WALKER	187:21 188:8	173:18	184:16
unusually	209:24	2:15	194:12 215:5	174:15	187:14
191:24			215:7 220:5	177:16 183:1	188:14
upper 48:15			ways 45:12	187:15	189:23,24

194:11 195:6 206:19 212:24 213:9 wide 47:24 48:18 widely 193:7 203:16 widespread 122:1 126:2 126:7 128:13 wild 129:8 WILLIAMS 2:10 willing 134:9 174:7 win 157:12 wipe 73:8 215:11,20 wise 170:20 wishes 81:12 withdrawing 60:5 withdrawn 12:11 13:3 witness 4:1 15:9,9,15 16:5,9,17,20 23:15 24:17 26:3 27:10 28:24 29:14 34:3,20,24 35:5 36:17 36:23 43:15 43:16 48:5 49:3 51:16 54:2 57:15 61:14 62:8 65:5 66:7 75:6 78:7,11 85:9 86:2,18 87:18,21 90:21 91:6 96:10,11,12 98:14,20,21 99:4 101:9 107:18 114:18 115:11,12,22 116:23 117:11,18 125:4,9 127:21 136:11,18 137:11,21 139:3,6 140:13 141:21 142:12,17,24 145:13,19 148:6,10 149:4,5 152:3 154:20 181:8,12 182:1,16 202:2,6 205:16 209:9 216:13 219:23 220:4 222:20 223:2	229:6,8 witnesses 35:12 49:19 135:21 witness's 19:1 27:14 43:4 167:5 wonder 112:22 Woodward 148:6 Woody 104:16,19,21 136:14 woodyard 4:3 17:16 18:1 37:19,20 39:11,20 42:10 45:9 46:11 77:7 80:14 81:4 93:24 101:9 101:22 103:12 105:23 107:11 108:11 110:21 115:4 118:22 122:3 122:21 124:6 130:2 131:7 135:19 141:18 143:15 144:20,22 145:1,4,9,12 148:3,13,20 151:4 152:6 158:19 161:14 164:8 165:11 166:20 167:10,17 168:18 170:9 175:13 176:10 181:16,18,22 182:3 183:23 190:9 197:7 209:8 214:18 221:4,14 223:4 Woodyard's 44:12 49:7,9 67:19 word 187:5 wording 158:6 words 94:21 119:24 125:1 163:16 164:3 164:10,24 165:7,12,20 166:6,10,13 167:5,6 172:24 work 76:17 102:18,20 103:23	109:12 129:14 131:15,22 185:1 192:6 202:6 209:12 212:2 219:17 221:11 223:11 worked 194:22 198:22 199:1 workers 17:9 132:6 212:1 214:6 225:9 working 104:1 105:5 workplace 63:8,14 131:22 225:11 world 16:23 51:12 97:8 126:12 187:5 193:23 194:6 194:7,9 worldwide 122:2 126:3 126:8,21 128:15 129:1 138:2,10 worried 61:20 81:2 168:9 184:20 worth 73:22 wouldn't 134:16 write 23:20 129:22 151:6 199:13 writes 61:22 written 16:21 17:2 18:17 26:14 34:5 45:8 65:12 66:7 68:18 78:11,15 85:9 86:19 99:4 105:18 105:21 106:23 121:23 122:20 129:13 131:15 137:21 139:4 140:6,14 167:7,14 185:18 189:19 197:11 224:8 wrong 57:2 152:10 204:15,17 wrote 21:10 48:6 108:12 108:19 109:3 111:23 116:18 118:22,22	122:3 127:5 128:11,17 130:1,21 131:6,8,12 151:21 185:21 190:13 196:2 196:5 226:10 W-O-O-D-Y-... 148:7 X X 4:1 101:19 148:17 Y Yeah 21:7 159:13,15 161:5 204:14 year 94:5,5 212:1 years 104:3 106:14 110:22 111:1 111:4,14 129:14,21 153:17,18 175:6 189:20 223:17 yellow 157:12 Yep 135:1 yesterday 5:13 6:9 101:24 Z Zero 35:10 Ziegler 9:17 186:14 197:10,23 199:3,19 \$ \$100,000 102:5,10 103:2,12,13 103:17 \$250,000 102:15,22 103:20 223:12 0 06106 2:23 1 1 69:1 180:9 1,000 213:21 218:4,6 1.0 180:12 1.3 102:3,8 10 50:23 129:14 215:18 10th 50:5 10,000 213:24 218:8 10,702 170:1	10:15 1:20 100 52:16 171:1 191:10 191:18 194:12 204:2 204:5,9,11 205:3 206:24 207:18 208:2 216:4 218:2 226:2,7 100,000 211:23 212:8 101 4:5 10690 160:5 10695 169:2 10702 171:22 10704 172:23 10782 169:20 11 80:6 11/10/83 54:13 110 52:16 113 7:3 118 45:6 12 44:6 129:14 12:35 144:16 122 22:7,11 123 2:17 48:2 52:5,6,14 124 48:2 126 59:9,24 128 60:12,16 64:14 77:11 77:13 13 12:14 68:24 133:20 134:14,21 215:19 13.3 102:8,9 14 216:7 15 45:22 15th 1:23 15219 2:8 158 74:12 159 74:12 16th 199:21 160 74:12 161 74:13 164 25:14 1640 3:2 18th 2:11 1880 1:23 19102 2:12 19103 1:19,24 3:2 19109 2:17 1970 137:17 143:24 1970s 139:17 1976 95:13 110:1 121:24 1983 191:9 192:3 1985 189:20 1990 1:3 1994 199:21 224:7 1995 199:4	1998 9:13 1999 28:8 50:24 2 2 1:16,19 135:17 229:14 2:15 144:17 20,000 37:21 2000 1:16,19 229:14 21 2:22 199:4 215 2:12,18 3:3 221 2:3 247-3666 2:23 25 129:21 2584.1 69:6 71:20 261-6474 2:8 27 83:5 88:15 151:19 152:5 152:18 28 28:8 284 1:2 3 3 92:4 108:13 108:14 144:19 202:19 3rd 75:24 30 153:17 212:1 301 2:7 3221.3A 156:12,15 3524 222:12 222:16 3975 2:7 4 4 110:20,21 112:6,7 144:23 4,008 150:22 4:15 228:3 40 153:18 400 2:3 4006 22:13 52:11 53:9 4008 11:21 144:19,22 145:1,4,7,10 150:22,22,23 150:23,23 402 138:23 408 83:8 412 2:8 453 1:18 4900 3:2 5 5 54:10 95:2 95:10,11 98:3 113:8,9 118:4 121:22
--	--	---	--	---	---

145:2,4
 171:9 191:10
 191:16,17
 194:1 204:10
 206:24 226:1
50 161:7
 162:8,19
 204:2,5
 205:3 211:18
500 162:19
550 170:13,16
 171:9 175:20

6

6th 224:6
610 148:10
64051 2:4
67 176:12,15
 177:10,16
 178:12
69 50:24

7

70 50:24
 138:6
700 2:22
702 170:1
709 169:23
750,000
 170:22
76 126:1
772-7452 2:18

8

8 11:21,23
 12:6,14
 13:10,20,22
 14:14,15
 127:4,13,14
 134:14 145:9
 215:15,18
 216:1
80s 174:13
816 2:4
83 194:20
836-5050 2:4
860 2:23
864-7000 2:12

9

9 131:13,19
 132:10,14
 145:11
 218:13
9:30 227:19
 227:23
90s 106:6
93 25:9,13
 33:1
981-5700 3:3
996 196:9
 197:14