

Page 1 1 IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS 2 STATE OF MISSOURI 3 4 GLENN BROWN, et al., 5 Plaintiffs, 6 -vs- # 862-00694 7 MONSANTO COMPANY, 8 Defendant. 9 10 11 12 13 VOLUME VI 14 DEPOSITION OF DR. R. EMMET KELLY 15 On the part of the Defendant 16 June 16, 1990 17 18 19 20 21 22 23 WALLER REPORTING, INC. 24 REGISTERED PROFESSIONAL REPORTERS 25 515 OLIVE STREET, SUITE 1506 26 ST. LOUIS, MO 63101 27 (314) 621-2571 28 29	Page 3 1 IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS 2 STATE OF MISSOURI 3 GLENN BROWN, et al., 4 Plaintiffs, 5 vs. Cause # 862-00694 6 MONSANTO COMPANY, 7 Defendant. 8 DEPOSITION OF WITNESS, produced, sworn and examined 9 on June 15, 1990, between 8:00 a.m. and 6:00 p.m. of that 10 day, at the offices of Communitronics Corporation, 1907 11 South Kingshighway, St. Louis, Missouri, before Sheila C. 12 Irvin, a Notary Public within and for the State of 13 Missouri, in a certain cause now pending in the Circuit 14 Court of the City of St. Louis, State of Missouri, wherein 15 GLENN BROWN, et al. are the Plaintiffs, and MONSANTO 16 COMPANY is the Defendant; on behalf of the Plaintiffs. 17 A P P E A R A N C E S 18 The Plaintiffs were represented by Mr. David S. 19 McCrea of the law firm of McCrea & McCrea, 119 South Walnut 20 Street, Bloomington, Indiana 47402. 21 The Defendant was represented by Mr. Thomas M. 22 Carney of the law firm of Husch, Eppenberger, Donohue, 23 Cornfeld & Jenkins, 100 North Broadway, St. Louis, Missouri 24 63102. 25 26 27 28
Page 2 1 IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS 2 STATE OF MISSOURI 3 4 GLENN BROWN, et al., 5 6 Plaintiffs, 7 8 -vs- Cause # 862-00694 9 10 MONSANTO COMPANY, 11 12 Defendant. Div. # _____ 13 *** 14 INDEX 15 WITNESS: PAGE 16 DR. R. EMMET KELLY 17 Continued Cross Examination by Mr. McCrea. . . 4 18 Redirect Examination by Mr. Carney 94 19 20 EXHIBITS 21 Plaintiff's Deposition Exhibit # 7 43 22 Plaintiff's Deposition Exhibit # 8 67 23 Plaintiff's Deposition Exhibit # 9 75 24 25	Page 4 1 CONTINUED CROSS EXAMINATION 2 QUESTIONS BY MR. McCREA: 3 Q Good morning, Dr. Kelly. 4 A Good morning, Mr. McCrea. 5 Q Dr. Kelly, when we finished yesterday, we were 6 looking at Plaintiff's Exhibit Six, and I'll try and locate 7 the page. I believe that we were, we had identified a 8 document on page 222, if you could locate that, please. 9 A Do you have 222? I have a 22, but I don't 10 know -- 11 MS. RUTTER: I'm not sure. All the numbers on 12 these are kind of -- 13 A What is the title of the document? 14 Q (By Mr. McCrea) The title is -- It's a letter 15 from the Department of Health, Education and Welfare from 16 Harvey P. Stein, PH.D. to Mr. W. B. Papageorge dated 17 November 4, 1975. 18 A Yes, sir, I have it. 19 Q And attached to that cover letter is what Dr. 20 Stein refers to as a current intelligence bulletin on 21 polychlorinated biphenyls? 22 A Yes, sir. 23 Q And thought document begins at page 224 with the 24 heading "Background information on Polychlorinated 25 Biphenyls" dated November 3, 1975. Do you see that?

Page 5 1 A Yes, I have it. Yes, sir. 2 Q With reference to the document, will you turn 3 to page 229? 4 A Yes, sir. 5 Q There is a heading there titled "Human" in the 6 middle of the page and two paragraphs following that 7 heading. 8 A Yes, sir. 9 Q The first paragraph states, "The known toxic 10 effects of PCBs in humans include an acne like skin 11 eruption, chloracne, pigmentation of the skin and nails, 12 excessive eye discharge, swelling of the eyelids and 13 distinctive hair follicles." 14 A Yes, sir. 15 Q It makes a reference on that to 19? 16 A Yes, sir. 17 Q Which was a study done in Japan by four 18 authors, as I interpret that looking at the bibliography. 19 A That is correct. 20 Q Those symptoms then, in this authors's opinion, 21 would be what was known as a result of the Japanese Yusho 22 ingestion of PCBs? 23 A Of Japanese PCBs contaminated with. 24 dibenzofurans and quaterphenyls, yes, sir. 25 Q The second paragraph states, "For a number of	Page 7 1 ten percent of the chlorinated diphenyl, yes, I'm familiar 2 with them. 3 Q All right. Are you familiar with bibliography 4 reference 22? 5 A That is a review by Schwartz in which he talks 6 about no cases. He just refers -- I think there's one line 7 in there where he says chlorinated diphenyls and 8 chlorinated naphthalene. He does not refer to any cases. 9 He's talking there about dermatitis of a large amount of 10 different chemicals. Yes, I'm very familiar with that. 11 Q Are you familiar with bibliography reference 12 16? 13 A Yes. 14 Q And that was written by Renate Kimbrough? 15 A Yes, that's true, and there again, she is 16 referring to the Japanese work. 17 Q And is it a fact that impotence was a reported 18 symptom of workers exposed to chlorinated hydrocarbons as 19 determined by bibliography reference 16, Renate Kimbrough, 20 and bibliography reference 22, Dr. Louis Schwartz? 21 A Well, I'll have to read that. I mean, I can't 22 attest to what these people have stated. I don't know. 23 In fact, I don't know if Schwartz mentioned it at all, but 24 I'd have to see those two things. I can't just take a 25 reference and say this was a prominent symptom, this was a
Page 6 1 years, chloracne of the face and neck had been reported 2 among workers exposed to chlorinated hydrocarbons. Workers 3 exposed to PCBs in the possess of insulating cables," with 4 a bibliography reference 20, "in the production of 5 condensers," bibliography reference 21, "and in the 6 manufacture of chlorodiphenyls," with a bibliography 7 reference 22, "have reported these skin lesions along with 8 systemic effects such as digestive disturbances, edema of 9 the face and hands, burning of the eyes, impotence and 10 hematuria," bibliography references 16 and 22. Would you 11 refer to bibliography reference 20? 12 A Yes, I would. 13 Q Are you -- were you familiar with that 14 bibliography reference when you worked at Monsanto Company? 15 A Yes, I was. 16 Q Would you refer to bibliography reference 21? 17 A Yes. Do you want me to explain these? Do you 18 have them with you? Do you have these? 19 Q I have them, but I don't have them with me. 20 A Well, I have them and I've read them, and in 21 no case does this refer to diphenyls alone. It has always 22 been in connection with chlorinated naphthalene. In fact, 23 the Mayers case, these three cases of people in New York, 24 two of whom worked exclusively with chlorinated naphthalene 25 and one with chlorinated naphthalene with what she said was	Page 8 1 symptom of one man, this was a symptom of a hundred percent 2 of the people. I can't make a statement like that. I'd be 3 happy to read the article. Show me the article and I'll be 4 happy to answer the question. 5 Q And the Schwartz article was 1936; correct? 6 A That's correct, but . . . 7 Q Isn't it a fact that the worker at Swann 8 Chemical who had the very severe case of chloracne reported 9 loss of libido? 10 A Yes, sir. 11 Q To Dr. Jones? 12 A Yes. You were talking about impotence before. 13 Q All right, sir. 14 A That's two different things. 15 Q All right. And what is the difference between 16 the report by the worker at Swann of loss of libido and 17 impotence? 18 A Quite a bit. The first one, loss of libido is 19 loss of desire for sexual activity. Impotence is a loss of 20 power, of the ability to have sexual intercourse. 21 Q Doctor, were you concerned in 1936 after the 22 report of the worker at Swann and in 1936 after reading the 23 article of Louis Schwartz as to these two symptoms, loss of 24 libido which is loss of desire and impotence which is loss 25 of ability, as that could affect workers exposed to PCBs?

Page 9 1 A No, I wasn't concerned because these were -- 2 The Schwartz was just a review. He reviewed dermatitis. 3 He may have mentioned impotence or loss of libido in, among 4 a basketful of various complaints or symptoms that he had, 5 that he had elicited from various articles, and as far as 6 the one man that Dr. Jones saw, well, when I ever talked to 7 any of the workers at Monsanto in the 38 years, they never 8 mentioned loss of libido, so I really wasn't concerned. 9 Q Did you ever ask them? 10 A No, I didn't ask them, but they -- Let me tell 11 you, people, if they have that will, in the worker 12 environment will tell the doctor. You don't have to ask 13 them. 14 Q What is hematuria? 15 A Blood in the urine. 16 Q Dr. Kelly, would you turn to page 241? 17 A Yes, sir. 18 Q Other than cursory review in preparing 19 for this deposition, have you as an expert witness for 20 Monsanto, an expert fact witness for Monsanto ever been 21 asked to review this document with attachments in detail? 22 MR. CARNEY: Let me object to the 23 characterization of the witness as an expert fact witness. 24 Those are technical terms. I don't know that Dr. Kelly 25 knows those terms other than that he's a witness answering	Page 11 1 A Yes, sir. 2 Q In the third paragraph -- do you know what this 3 document is? 4 A It sounds like an address from Jack Fitzgerald, 5 vice president of Monsanto to somebody. I don't know 6 where. 7 Q In 1971 there was a commitment by Monsanto to 8 remain in the PCB business, was there not? 9 A I don't know what you mean by commitment. 10 Commitment to whom? 11 Q Commitment to the manufacturers of the 12 transformers, capacitors and heat transfer fluids. 13 A There was a commitment by Monsanto to continue 14 the manufacture of PCBs and the sale of PCBs in areas where 15 they considered it unlikely that it would get into the, the 16 material would get into the environment. That was our 17 commitment. 18 Q On January -- 19 A The commitment also -- May I finish? The 20 commitment, also, was that they would try to minimize all 21 possible escape of the material by advising our customers 22 how to handle the problem, even going so far as to make 23 arrangements to have the material shipped back to Monsanto 24 to be incinerated. 25 Q On January 14, 1976 Monsanto abandoned that
Page 10 1 questions that are posed to him. 2 Q (By Mr. McCrea) Are you familiar with the 3 fact -- 4 A What about that other question? 5 Q All right. Are you -- have you reviewed this 6 document in detail as a -- 7 A No, sir, I have not. 8 Q Are you familiar with the fact that the United 9 States Environmental Protection Agency pursuant to Section 10 308 of the Clean Water Act sent a series of questions to 11 manufacturers and users of PCBs regarding the disposal, 12 health effects and so forth? 13 A I don't know any of the details, but I 14 anecdotally have been told that the EPA sends out or the, 15 sends out questionnaires about all sorts of chemicals. So 16 I'm not particularly familiar with this questionnaire. 17 Q All right. With you turn to page 246? 18 MR. CARNEY: Just let the record reflect that 19 this questionnaire came in or the letter attached to the 20 questionnaire is dated December 11, 1975, about a year 21 after Dr. Kelly retired from Monsanto. 22 Q (By Mr. McCrea) Stipulated. Dr. Kelly, would 23 you focus your attention on page 246 which at the top has 24 the heading "F. J. Fitzgerald, Vice President, Monsanto 25 Chemical Company," and the date January 14, 1976?	Page 12 1 commitment and made the public statement in paragraph three 2 by F. J. Fitzgerald, quote, "Let me state at the outset 3 that Monsanto agrees wholeheartedly with EPA's desire to 4 work toward the goal of eventually eliminating all uses of 5 PCBs." Is that correct? 6 A Yes. I believe Mr. Fitzgerald, being a vice 7 president of Monsanto, was stating Monsanto's policy. 8 Q The bottom of that page, the first sentence of 9 the last paragraph Mr. Fitzgerald states, "Let me emphasize 10 that we have no desire to remain in the PCB manufacturing 11 business any longer than is necessary." Is that what that 12 states? 13 A You're reading what he said, yes. I mean, if 14 this is, this is what this states. Jack said this, sure. 15 I believe Jack said, meant it. 16 MR. CARNEY: Let me just object for the 17 record, you know. I certainly agree you've read those 18 statements accurately, and the only question I have is we 19 have a witness here, Dr. Kelly, that had retired over a 20 year before those statements were made, and I'm not sure 21 that he's the witness that would be knowledgeable. I don't 22 think he attended this speech, so I've no problem in 23 having Mr. Fitzgerald testify to it. I just think at this 24 point -- 25 A Well, you would have one big problem. Jack is

Page 13 1 dead. 2 MR. CARNEY: Well, then -- But I think there 3 are other people that are knowledgeable like Mr. Papageorge 4 about the policies of Monsanto at this time period. I just 5 would want to state for the record that Dr. Kelly had been 6 retired and may not be the witness that has the knowledge 7 about this, so I just note that for the record. 8 Q (By Mr. McCrea) Dr. Kelly, based upon your 9 participation on the various committees and you 10 endorsements of the various action plans as we have 11 described earlier and you work as the medical director at 12 Monsanto until your retirement in 1970 -- 13 A '74. 14 Q '74, and based on your numerous involvement in 15 cases in which Monsanto had been sued as a defendant, do 16 you know the reasons for this decision announced by Mr. 17 Fitzgerald? 18 A Yes. The reason was they found out that the 19 material was still getting into the environment, that there 20 were disposal problems of capacitors. There were disposal 21 problems of the transformer oil, and they were getting out 22 of it for environmental reasons and it, as soon as the 23 industry was satisfied with a substitute, whether that was 24 from Monsanto or anybody else, we'd be happy to get out. 25 Monsanto is a company and I'm sure their workers as	Page 15 1 A 1971 or '72, one of those meetings with the 2 corporate or the executive committee. 3 Q And you found out it could not be solved? 4 A Beg your pardon? 5 Q And Monsanto found out it could not be solved 6 and did walk away? 7 A That's it. 8 Q Will you turn to page 256? 9 A Yes, sir, I have it. 10 Q Ask does this show the amount of pounds of 11 PCBs sold by Monsanto to Westinghouse for the years 1954 12 through 1977? 13 MR. CARNEY: I'm going to object to the 14 question unless there's a foundation this witness can 15 identify this document and knows, either identify it or 16 knows in his own mind what the amounts were in these years. 17 I'm not saying those are incorrect numbers. All I'm saying 18 it I'm not sure that Dr. Kelly has any basis for being able 19 to answer that question. 20 Q (By Mr. McCrea) Dr. Kelly, I'll ask you to 21 assume that these numbers are correct; all right, sir? 22 A Yes, sir. I mean, I'm assuming that what is 23 written down here, all these figures are correct. 24 Q Monsanto recognized in 1969 that PCBs were a 25 potential environmental problem. Is that correct?
Page 14 1 individuals feel just as strongly about a safe environment 2 as anybody else. 3 Q Was there any change in data from the time in 4 1971 in which there was a commitment to remain in the PCB 5 business and supply PCB fluids for transformers, capacitors 6 and heat transfer fluids in 1976? 7 MR. CARNEY: By change of data, do you include 8 in that question alternative materials that would allow for 9 transformers to be made with a material that wouldn't be 10 flammable? 11 Q (By Mr. McCrea) No. I include in that 12 question a change of data as far as environmental 13 contamination is concerned. Was there any new information 14 that you obtained between the year 1971 and 1976? 15 A I think that's a question that you should ask 16 Mr. Papageorge, but it is my impression that the disposal 17 problem was the main factor. You mentioned also, Mr. 18 McCrea, about my involvement in these various committees, 19 and I'll have to say what Ed Bock, the president of 20 Monsanto, said at one of the meetings that I was there. He 21 said if this problem can't be contained, we'll walk away 22 from the business regardless of any profit we will lose. 23 That came from the president of the company when you I was 24 there. 25 Q When did he say that?	Page 16 1 A Yes, sir. 2 Q In 1969 Monsanto sold eight million pounds of 3 PCBs to Westinghouse. Is that correct, by this number? 4 A Yes, sir. 5 MR. CARNEY: Wait a minutes. Oh, I didn't hear 6 you say assume that these are the amounts of pounds of PCBs 7 going to Westinghouse. 8 MR. McCREA: It says to Westinghouse. 9 MR. CARNEY: Yeah, but I don't think the jury 10 had access to it. I think we need to clarify that we're 11 not talking about pounds to Westinghouse. 12 MR. McCREA: We are talking about. 13 MR. CARNEY: Okay. Again, I'm just clarifying 14 it for the jury. They don't see this document. 15 Q (By Mr. McCrea) All right. This is the 16 amount of PCBs manufactured by Monsanto and sold to 17 Westinghouse Electric Corporation, all locations, according 18 to the caption on page 256? 19 A Yes, sir. 20 Q Ask this document shows that in 1969 when 21 Monsanto acknowledged the environmental problems -- Did 22 Monsanto recognize there were environmental problems before 23 1969? 24 A No, sir. 25 Q In 1969 Westinghouse sold eight million pounds

Page 17 1 to Westinghouse. Is that correct? 2 A Well, Monsanto sold -- 3 MR. CARNEY: Are you asking -- I thought you 4 asked him to assume that. 5 A I'm assuming -- 6 Q (By Mr. McCrea) Yeah, this indicates that 7 8,038,072 pounds. 8 A Yes. 9 Q The next year it increased to nine million? 10 MR. CARNEY: I think you ought to ask, Mr. 11 McCrea, if Dr. Kelly has any knowledge as to the amount of 12 PCBs going to Westinghouse. If not, I'm not sure he's the 13 witness that would contribute anything to the amount of 14 pounds. I mean, this is a piece of paper that hasn't been 15 authenticated by Dr. Kelly. I don't think he was in 16 marketing and knew how many pounds of PCBs were shipped in 17 any year. 18 MR. McCREA: This is a document we got from 19 you. 20 MR. CARNEY: I'm not disputing the -- All I'm 21 saying is we have a witness here that I don't think has any 22 knowledge about the amount of pounds. 23 MR. McCREA: Well, I'm asking him to assume 24 that these numbers are correct, and the basis for the 25 question is that these numbers will be established as being	Page 19 1 that those years, '71 to '77 they are selling a product 2 1016 which they thought was biodegradable. 3 Q Was it? 4 A It was more biodegradable than the others, but 5 I'd have to ask Papageorge on that. 6 Q And is that because it contained 16 percent 7 chlorine? 8 A I don't know. You'll have to asked Papageorge 9 on that. Pardon me. 10 Q To make a long story short, there wasn't any 11 dramatic cutoff to Westinghouse and, in fact, there was 12 increases in certain years after '69? 13 A Well, that is making the story a little too 14 short, I believe, because there were decreases in some of 15 the years and they were changing the formulation that they 16 were selling. They were you selling them an Aroclor that 17 they thought was biodegradable. 18 Q Dr. Kelly, no furthers questions on 19 Plaintiff's Exhibit Six. Did Monsanto, you say, recognized 20 that PCBs were environmental, a potential environmental 21 problem. Is that correct, in 1969? 22 A Sometime in 1969, I believe, or the first part 23 of '70. 24 Q Did you also recognize that dioxins were an 25 environmental problem?
Page 18 1 correct as soon as you authenticate this document. This 2 document came from you. 3 MR. CARNEY: You know, we've given you a lot 4 of documents. I'm not disputing what you're saying. All 5 I'm saying is I don't think Dr. Kelly has the knowledge of 6 what the pounds were in any year. You can ask him to 7 assume it, but he doesn't know it for a fact, so I don't 8 know why we're wasting everybody's time. There are 9 witnesses that do know what the pounds are, and they can 10 testify to this and say it's accurate or it isn't accurate. 11 I'm not disputing that, but Dr. Kelly is not the person. 12 Q (By Mr. McCrea) Dr. Kelly, this chart shows 13 that five years after Westinghouse recognized that PCBs 14 were a potential environmental contaminant -- Did I say 15 Westinghouse? 16 A Yes, sir. 17 Q Five years after Monsanto recognized that PCBs 18 were an environmental contaminant, you were selling a 19 million more pounds to Westinghouse in 1974 than you were 20 in 1969? 21 A Yes, but in 1976 they were selling 1,000,600 22 pounds less. 23 Q And in 1977 it goes down to only 693,000 24 pounds and then it stopped? 25 A Yes, and also you have neglected to mention	Page 20 1 A When? 2 Q In 1969? 3 A No. 4 Q When you did you recognize that dioxins were an 5 environmental problem? 6 A Sometime in the '70s. 7 Q How many pounds of dioxins did Monsanto dump 8 into the Mississippi River in the 1970s? 9 MR. CARNEY: I'm going to object to that. 10 Obviously, there's been lots of questions that are totally 11 irrelevant. I'll object to the relevancy. 12 Q (By Mr. McCrea) Do you know? 13 A No, I don't know at all. 14 Q Did you dump dioxins into the Mississippi 15 River after you recognized dioxins were an environmental 16 contaminant? 17 A You mean you're equating me with Monsanto? 18 Did Monsanto? 19 Q Not you, Monsanto. I know you didn't dump 20 dioxins in the Mississippi River. 21 A I don't know that they dumped any, so I don't 22 know. 23 Q All right. 24 A If you, there may be -- I believe you're 25 phrasing it, you're phrasing it as though you were saying

Page 21 1 that Monsanto had this tankful of dioxin and dumped it in 2 the river. 3 Q No. 4 A Well, that is what you're saying, dumped 5 dioxin in the river. There may have been dioxin in some of 6 the affluents in parts per million or parts per billion. I 7 don't know, but that's a lot different than saying did 8 dioxin, how many pounds of dioxin did they dump into the 9 river. 10 Q Did you have any information they were dumping 11 30 to 40 pounds of dioxins on a daily basis into the river? 12 A No, I do not. 13 Q Dr. Kelly, did Monsanto secretly test fat 14 samples from several deceased St. Louis area residents who 15 had died in accident and not as a result of illness and the 16 test results showed that every such cadaver contained 2378 17 dioxin in the fat tissue? 18 A I know nothing of the details. If they tested 19 it, it was after I left. 20 Q Did anybody at Monsanto inform you that they 21 secretly tested for dioxin in cadavers? 22 A First of all -- 23 Q Of St. Louis residents? 24 A First of all, it was no secret when they did 25 it. They took -- They had a pathologist give them samples	Page 23 1 Q Why did they test the cadavers for PCBs? 2 A I do not know. 3 Q Did Monsanto report the results of this 4 testing to the public? 5 A I do not know. I do not know. I was not 6 associated with them at all. I only heard about it 7 goodness knows when. I don't know. 8 Q Who told you? 9 A I believe Dr. George Roush told me. 10 Q What did he tell you? 11 A Well, he said we had some samples tested and 12 it didn't show anything unusual, but I don't know if he -- 13 I don't recall him saying we tested for dioxin. 14 Q When did he tell you? 15 A Sometime after 1974. 16 Q Did they determine that the -- Did anybody, 17 from Monsanto tell you that they had tested for dioxin and 18 that it could have come from the Krummrich plant? 19 A No, sir, nobody ever told me that. 20 Q This is the first time 55 information has been 21 brought to your attention? 22 MR. CARNEY: Well, I'm assuming -- 23 A That that statement has been brought. I don't 24 know if that's information. 25 Q (By Mr. McCrea) Did Monsanto --
Page 22 1 of fat of individuals who were not at all exposed to PCBs. 2 They were not transformer workers, capacitor workers, 3 Monsanto workers. They were the average citizen who died, 4 and the tissue was furnished by the city pathologist or the 5 city medical examiner and they found levels which were in 6 accord with, not -- I'm not sure whether they tested for 7 dioxins or not. 8 Q Did they test for PCBs? 9 A They may very well have tested for PCBs, but I 10 don't know if they tested for dioxins. You'll have to ask 11 somebody else. 12 Q Why did you do this? 13 MR. CARNEY: Well, again let me object. 14 Q (By Mr. McCrea) Why did Monsanto test? 15 MR. CARNEY: Do you have a time period? 16 MR. McCREA: 1970s. 17 MR. CARNEY: Was it before Mr., Dr. Kelly 18 retired or after? I mean, if -- 19 Q (By Mr. McCrea) When did they test the 20 cadavers for PCBs? 21 A I do not know, but it was not before December 22 the 1st, 1974. 23 Q When did they test the cadavers for dioxin? 24 A I don't know. I said I do not know if they 25 tested them for dioxin.	Page 24 1 A And anyway, we manufactured agriculture 2 chemicals at the Krummrich plant, so much more in -- We 3 were not manufacturing. I don't know when they tested, but 4 we were manufacturing -- Well, we had manufactured 5 agricultural chemicals, but I believe it was stopped by, 6 after '74. 7 Q That is Santophen, S-a-n-t-o-p-h-e-n? 8 A That's an antiseptic or a germicide. 9 Q Was it contaminated with dioxin? 10 A I don't know. 11 Q Do you have any information that Monsanto knew 12 that Santophen was contaminated with dioxin and sold it to 13 a company for use in Lysol? 14 A No, sir. That's a double question, isn't it? 15 Q Yes. 16 A First of all, I don't know -- 17 MR. CARNEY: I'm going to object to the form. 18 A Oh, sorry. If they ever sold it for use in 19 Lysol, and secondly, I don't know if they ever knew it was 20 contaminated with dioxin and sold it. 21 Q (By Mr. McCrea) Did anybody from Monsanto 22 inform you that they knew Santophen was contaminated with 23 dioxin and continued to sell it for use in Lysol? 24 A No, sir. I believe your word contaminant, 25 contaminated can be viewed differently by other people, by

Page 25 1 other individuals. If you have trace amount of a product 2 in there, whether that's called contamination or not, I 3 believe, depends on who's talking. I would not think 4 that's a contamination. 5 Q When did Monsanto first know that dioxin was 6 in 245T? 7 A I'm not sure. They -- I don't know if they 8 knew it was in 245T. They knew it was in 24 -- Did you say 9 245T or 24D? 10 Q 245T. 11 A Oh, 245T. 12 Q T, T as in Tom? 13 A Gee, I think sometime in the '60s. I'm not 14 sure, though. I'd have to look that up. 15 Q Did anybody from Monsanto discuss a spill at 16 the Krummrich plant which contaminated the plant with 17 dioxin? 18 A When? 19 Q 1979, February 1979? 20 A No, sir. How big was the spill? 21 Q It was in department 237 at the Krummrich 22 plant. OSHA ran tests on the walls and found dioxin. 23 Monsanto conducted tests and found dioxin and nevertheless 24 did not, lifted the protective measures and work proceeded 25 as normal.	Page 27 1 to the form of these questions where you're reading 2 statements and I guess in an attempt to try to inflame the 3 jury, reading statements that you are contending are fact 4 when there's no, nothing in the record to support these 5 things and trying to get, in effect testify yourself when 6 most of these things that you're claiming occurred were in, 7 were after Dr. Kelly retired. 8 So you know that he doesn't have the knowledge. He 9 wasn't with the company to be able to refute them, but if 10 you had the right witness here who, like Phosha Park or 11 somebody that has the knowledge, they can refute these 12 charges you're making within these questions. So could I 13 have a standing objection to this type of questioning? 14 MR. McCREA: Yes. 15 MR. CARNEY: Where you're reading these 16 statements where you're, that are after Dr. Kelly retired 17 from Monsanto. Okay. 18 Q (By Mr. McCrea) Did Monsanto ever test dioxin 19 in its laboratories? 20 A I'm sure they did, but I can't give you any 21 dates. You mean -- 22 Q Do you have any information from Monsanto that 23 Monsanto considered dioxin too toxic to test in its 24 laboratories? 25 A No, I don't think so. I never had any
Page 26 1 MR. CARNEY: I'm going to object to your 2 reading a bunch of information into the record. You're not 3 testifying. You're not under oath. 4 MR. McCREA: Stipulated. I'm not testifying, 5 but I'm just trying to supply the doctor the information. 6 THE WITNESS: Will you also supply me the 7 relevance that this has to PCBs? 8 MR. CARNEY: Doctor, I don't want to get a 9 speech. We're trying to finish this thing. 10 THE WITNESS: Oh, okay. I'm sorry, but . . . 11 MR. CARNEY: I can tell you there is no 12 relevance, but Mr. McCrea will disagree and we'll have a 13 big argument and it may take an hour. 14 Q (By Mr. McCrea) Do you know if OSHA issued 15 formal charges against Monsanto for not reporting what it 16 found? 17 A No, sir. I do not. 18 Q Did anyone inform you that Monsanto's 19 attorney, Phosha Park, lied to the workers in the Krummrich 20 plant about the presence of dioxin in department 237? 21 A No, and if they did, I wouldn't have believed 22 it. Phosha Park does not lie. 23 MR. CARNEY: Let me just object to -- 24 Q (By Mr. McCrea) Did Monsanto -- 25 MR. CARNEY: Let me just object for the record	Page 28 1 information of that. 2 Q Did you test dioxin while you were medical 3 director in the laboratories? 4 A No, sir. 5 Q Did you do any analytical work with respect to 6 dioxin before 1970 at Monsanto in which it was brought into 7 laboratories? 8 MR. CARNEY: Let me object. When you say did 9 you -- 10 MR. McCREA: Monsanto. 11 MR. CARNEY: Again Dr. Kelly, if you're saying 12 -- You're mixing up you, he as the medical director, he as 13 an individual versus Monsanto when you say did -- I think 14 you ought to clarify that in the last couple of questions. 15 Otherwise, I think there's confusion. 16 Q (By Mr. McCrea) That's a fair statement, Dr. 17 Kelly, and sometimes it's interchanged, you meaning Dr. 18 Kelly, you meaning Monsanto. I'll try to clarify that. 19 A Fine. 20 Q And when I refer to Monsanto, I'll say 21 Monsanto because that is misleading and your can't answer 22 the questions if it's not understood, you, Dr. Kelly, or 23 Monsanto. Did Monsanto test dioxin in its laboratories 24 before 1970 to determine contamination of products, levels 25 in its products or any other thing? If you know.

Page 29 1 A I'm not certain. 2 Q Are you familiar with the study done by 3 Dr. Raymond Suskine called the Suskine-Hertzburg study? 4 A Where was it published? 5 Q "Journal of the American Medical Association". 6 A When? 7 Q About 1985. 8 MR. CARNEY: Do you have the article so he 9 could look at it? It might refresh his recollection. 10 MR. McCREA: No, I do not have the article. 11 A I may have seen it. I'm not certain. 12 Q (By Mr. McCrea) Was it fraudulent? 13 A Beg your pardon. 14 Q Was it fraudulent? 15 A Was it what? 16 Q Fraudulent, fraudulent? 17 MR. CARNEY: I'm going to object. 18 A I don't understand. I can't hear. 19 Q (By Mr. McCrea) Was it fraudulent? 20 A Fraudulent? 21 Q Yes, the Suskine-Hertzburg study? 22 MR. CARNEY: How can he answer that when he 23 says he's not even sure he's saw it? 24 A I know Dr. Suskine. He's a tremendous, 25 reputable individual. He was head of the Kettering	Page 31 1 A Well, is there a reference in whatever you're 2 reading from to it? 3 Q No. 4 A Well, my answer is I don't know. 5 Q Did anyone report to you that Dr. John 6 Nestmann six years after the explosion examined many of the 7 exposed Nitro workers and found that most of them had 8 severe psychoneurosis? 9 A No, sir, nobody ever did because we also had 10 individuals who were psychiatrists examine the workers and 11 they didn't find any such illnesses. 12 Q Did anyone inform you that in November 1955 13 Dr. Raymond Suskine met with McClain and Wagar of Monsanto 14 and at that meeting Suskine, McC.ain and Wagar decided that 15 Monsanto and its medical witness, Dr. Suskine, would delete 16 any reference to Nestmann's findings of psychoneurosis? 17 MR. CARNEY: Objection to the form. 18 A Are you asking me do I know of a meeting? 19 Q (By Mr. McCrea) Yes, sir. 20 A I do not know of such a meeting. 21 Q Dr. Kelly, are you familiar with a study -- 22 I'm having trouble with my glasses -- by Zack and Gaffey, 23 a mortality study of the cancer death rate of the Nitro 24 workers who were exposed to dioxin in 1949 as a result of 25 the explosion?
Page 30 1 Laboratory, a professor at the Cincinnati Medical School. 2 He would not do anything fraudulent. I can't understand 3 the basis of your questions. 4 Q (By Mr. McCrea) In 1955 did Dr. John Nestmann 5 examine workers at the Nitro plant? 6 A John who? 7 Q Nestmann, N-e-s-t-m-a-n-n. Do you know Dr. 8 John Nestmann? 9 A We had doctors examine the Nitro workers. The 10 name does not ring a bell with me, but I could be mistaken. 11 We did have quite a number of workers examined by a number 12 of doctors. We had doctors from the University of West 13 Virginia Medical School examine a number of workers. 14 Q Are you familiar with a study of the Nitro, 15 West Virginia workers done in 1955 by Dr. John Nestmann, 16 N-e-s-t-m-a-n-n which related to the 1949 explosion where 17 the Nitro workers suffered chloracne. 18 MR. CARNEY: This didn't have to do with PCBs, 19 did it? 20 MR. McCREA: No. 21 A I may have. He maybe one of the authors of 22 the study. I don't remember. Where was that study 23 published? 24 Q (By Mr. McCrea) I don't think it was ever 25 published.	Page 32 1 A No, sir, I'm not. I may have seen it, but I 2 don't -- When was this done? 3 Q I do not know? 4 A Well, I don't know, either. 5 MR. CARNEY: Just again for the record, when 6 we're talking about Nitro, we're not talking about a plant 7 that manufactured PCBs. 8 Q (By Mr. McCrea) That's been described on the 9 record. It manufactured a herbicide in farming? 10 A Yes, or railroad right-of-ways, a weed killer. 11 Q Which was later found out to contain dioxin? 12 A That's correct. You're also quoting studies. 13 You're not quoting any of the material that was found by 14 other doctors concerning these workers, and when all the 15 evidence was set before the jury, they decided that these 16 workers had not suffered any injury outside of chloracne. 17 Q Do you know if the evidence of Dr. Nestmann 18 was presented to that jury, Nestmann? 19 A Well, I don't know. I was on the trial there 20 for seven days and -- 21 Q You testified for -- 22 A I don't recall bringing it up. 23 Q You testified for seven days? 24 A Yes. 25 Q Did anyone during that seven day period ask

Page 33 1 you about the Nestmann evaluation of the workers in 1955? 2 A They may very well have. I do not know. 3 Q Dr. Kelly, there have been a number of 4 occasions when Monsanto has supplied PCB for scientists to 5 conduct tests including Renate Kimbrough. Is that a fair 6 statement? 7 MR. CARNEY: Objection to the form as to what 8 you mean by number. 9 A Yes. I don't know how many. I know she got 10 it from Monsanto, certainly. 11 Q (By Mr. McCrea) How was that PCB selected to 12 be sent to Dr. Kimbrough and others and who were the people 13 responsible for preparing the PCB and sending it out? 14 A Well, I can't answer that. It was my 15 impression that these were regular run of the mill 16 production types. They certainly were not laboratory 17 specimens. They would call up Anniston and say send a 18 quarter of 1242 to Kimbrough or 1260. 19 Q Were you ever involved in the process of 20 selecting the chemical and sending it out to various 21 scientists who were interested in doing tests? 22 A I was involved with Drinker, but I would, I 23 said to Dr. Drinker, "We'll send you some regular 1262 or 24 1268," whatever it was. So I called up Anniston and said, 25 "Send some out to them." There may have been other people	Page 35 1 MR. CARNEY: Just for the record, what we have 2 in K-9 is a xerox copy which wouldn't, I don't think, pick 3 up the colors if there were any. 4 Q (By Mr. McCrea) That's my point. Do you know 5 if the colors of the letter were other than black? 6 A I don't know. This is a letter -- No, I don't 7 know. 8 Q All right. Does this label contain the word 9 warning? 10 A No, sir. 11 Q Does this label contain a skull and 12 crossbones? 13 A No, sir. 14 Q Does this label tell you what can happen to 15 you? 16 A No, sir. 17 Q Does this label tell you when to stop 18 exposure? 19 A No, sir. 20 Q Does this label tell you it's a systemic 21 poison? 22 A No, sir. Are you -- I'm answering your 23 question yes or no, but you are, you want all this on a 24 label? 25 Q Just if you could answer the questions.
Page 34 1 that called me up and said, "Send me a quart of 1260, 2 1254," and I'd call up Anniston and say, "Send them some." 3 Q Did Monsanto keep a portion of that sample that 4 was sent out to Drinker? 5 A I can't answer that. 6 Q Do you know if Monsanto in sending PCBs to 7 Kimbrough years later kept a portion of the sample and did 8 any analytical work to determine the chemical content, 9 chlorine content, various isomers of PCB, etc.? 10 A Well, there's two questions there. 11 Q Yes, sir. 12 A First of all, I don't know whether they kept a 13 sample or not, and if I don't know whether they kept a 14 sample or not, I don't know whether they did any analytical 15 work. I don't know if they did any analytical work. 16 Q All right. Dr. Kelly, in direct examination 17 you made reference to Exhibit K-9 through K-18, and I'll 18 ask your counsel to provide you with those copies. 19 A I have them. 20 Q All right, sir. Will you refer to K-9? 21 A Yes, sir. 22 Q What colors where the letters on that warning? 23 A What colors? 24 Q Yes, sir. 25 A I don't know.	Page 36 1 A The answer is no. 2 Q Yes, I do. I definitely want all that on a 3 label. 4 MR. CARNEY: How big a label are you going to 5 have? 6 Q (By Mr. McCrea) Not very big. Does this 7 label give you the early warning signs of systemic 8 poisoning? 9 A No, sir. 10 Q Does this label tell you the routes of entry 11 into the body? 12 A No, sir. 13 Q Does this label tell you that PCBs can cause 14 death? 15 A No, sir, it does not. That is never put on 16 labels. As I said earlier in my testimony, we don't put 17 that label on aspirin, but aspirin can cause death. We 18 don't put -- People don't put that on iron pills. That 19 could cause death. 20 Q Will you go to Exhibit K-10? do you know the 21 color of the letters on this exhibit? 22 A No, sir. 23 Q Does this exhibit have a warning sign? 24 A No, it has a caution sign. 25 Q Does this have a skull and crossbones?

Page 37 1 A No, sir. 2 Q Does this exhibit tell you when to stop using 3 the product? 4 A No, sir, it doesn't. 5 Q Does it tell you that the product is a 6 systemic poison? 7 A No, sir, it doesn't. 8 Q Does -- 9 A It's not -- the problem -- 10 Q Just a second. 11 MR. CARNEY: Let him finish. 12 A I've got to explain. You were asking me 13 questions that have no relevance to what should be on a 14 label. What should be on a label is how to avoid any 15 injury. As I said, if you have a gasoline truck you say 16 don't smoke around here. You don't say don't smoke around 17 here or you'll blow the truck and yourself up. You say 18 what should be avoided. You say don't smoke there. We say 19 avoid prolonged or repeated contact with the skin and none 20 of these dire things you're talking about would have ever 21 happened. 22 Q (By Mr. McCrea) Does this label give you the 23 early warning signs of systemic poisoning? 24 A No, it does not. 25 Q Does this label tell you the route of entry of	Page 39 1 product? 2 A When to stop using it? 3 Q Right. 4 A No, it doesn't tell you when to stop using it. 5 It tells you how to use it safely. 6 Q You knew if there was irritation of the eyes 7 and throat, 55 was a sign of overexposure? 8 A We tell them to avoid breathing of the vapors 9 and if you avoid breathing the vapors, you'll avoid 10 irritation of the eyes and throat. 11 Q Do you tell them that if you experience 12 irritation of the eyes and throat, you must stop using this 13 product because that is a sign of overexposure? 14 A No. You tell them to avoid breathing it so 15 you don't even get irritation of the eyes. 16 Q Does this tell a person it's a systemic 17 poison? 18 A No, sir, it doesn't because it is not a 19 systemic poison. It is a -- You have no effects if you 20 avoid breathing the vapors, if you avoid contact with the 21 skin. 22 Q Does this give the person the early warning 23 signs that he is being poisoned? 24 A First of all, I am not sure if what you are 25 talking about, early warning signs, is correct. Tell me
Page 38 1 the chemical into the body? 2 A Well, I think it does because it says avoid 3 prolonged breathing of vapor or fumes and avoid prolonged 4 or repeated contact with skin. Of course, it doesn't say 5 don't swallow it, but I think industrial workers are quite 6 intelligent enough to know that you don't go around 7 swallowing industrial chemicals. 8 Q Does this tell you that if you breathe it, it 9 can contaminate your body? 10 A This shows you how to avoid any contamination. 11 It doesn't tell you that if you breathe it. They say don't 12 breathe it. 13 Q Does this tell you that if you get it on your 14 skin it can go through the skin and poison your body? 15 A No, it tells you how to avoid it. 16 Q Will you turn to Exhibit K-11? 17 A Yes, sir. 18 Q Do you know what color the letters were on 19 this exhibit? 20 A No, sir. 21 Q Does this contain the word warning? 22 A No, sir, it contains caution. 23 Q Does this contain skull and crossbones? 24 A No, it does not. There's no need for it. 25 Q Does this tell you when to stop using the	Page 40 1 what you mean by early warning signs. 2 Q Well, blackheads as was discussed in the 3 report where the individual got blackheads which the author 4 acknowledged could not be detected by a family physician, 5 but were found by an industrial physician. That's what I 6 mean. 7 A The author -- First of all, you're misquoting 8 that. 9 Q Well -- 10 A The author did not say -- He said the worker 11 did not know it. He did not say that a family physician 12 had examined the man and had ignored it or had misdiagnosed 13 him. 14 Q Correct. He did not say that a family 15 physician had examined him. 16 A That's correct. 17 Q But he did state that this is a symptom that 18 would probably be missed by a family physician. 19 A I don't think he said that. 20 Q All right. We'll check the record. 21 A Well, let's do it now. 22 Q We'll check it later. Does this state that 23 the routes of entry of the chemical into the body? 24 A It states it by saying obviously if you avoid 25 breathing of the vapors, that means to a worker that if

Page 41 1 you're breathing something, that's a route of entry and if 2 it's on the skin, that's a route of entry. 3 Q Where does it say that if it gets on the skin 4 it can get in your body? 5 A It doesn't say that, but I'm sure that a 6 worker is intelligent enough to look at this and say avoid 7 prolonged contact with the skin. Why are you putting that 8 on there? You're putting it on there to tell them the 9 material can be harmful if allowed to remain on the skin. 10 Q To the inside of your body? 11 A Well – 12 MR. CARNEY: I'm going to object. I object to 13 the form. You're asking him to speculate on what an 14 unnamed worker might or might not think when reading this. 15 Q (By Mr. McCrea) You may answer. To the 16 inside of your body? 17 A Well, I think if the worker sees a statement 18 saying avoid prolonged contact with the skin, he will 19 figure out that if I do have prolonged contact with the 20 skin, something bad is liable to happen to me. 21 Q To his body? 22 A Well, to him anyway. 23 Q To the inside of his body? 24 A Well, he may think that and he may not. 25 Q Does this explain that death can result?	Page 43 1 one. 2 (Thereupon, a short recess was taken. The reporter 3 marked Plaintiff's Deposition Exhibit Seven, for 4 identification.) 5 Q (By Mr. McCrea) Dr. Kelly, during the break 6 did you have a discussion with your attorneys about your 7 testimony? 8 A No, sir, just about the exhibit. 9 Q All right. What did your attorneys say to you 10 and what did you say to them? 11 A I said I have quite a few faults to find with 12 this particular exhibit. 13 Q All right, sir. What faults do you find? 14 A First of all, it is not statistically 15 significant. The size, if you notice that she – Well, 16 first of all, I might say this is by Zack and Musch and I 17 mean, I guess it should be as adapted by McCrea because 18 this really isn't her table. 19 MR. CARNEY: I'm going to object just for the 20 record to using Exhibit Seven which has the caption that 21 it's by Zack and Musch and I believe has a different, an 22 additional column on it that wasn't a part of their exhibit 23 and also some additional information on the bottom half of 24 it that wasn't on the exhibit of Zack and Musch, so it's, I 25 would object to the use of it because of that.
Page 42 1 A No, sir, it does not. 2 MR. CARNEY: I'm going to object to that last 3 question, no evidence that death has ever resulted from PCB 4 intake, and the doctor has testified to that on several 5 occasions. 6 A Well, I've testified to that on the previous 7 label. 8 Q (By Mr. McCrea) Dr. Kelly, would you turn to 9 the Zack-Musch study? Do you have that, Counsel? 10 MS. RUTTER: Was it one of your exhibits? 11 MR. MCCREA: It was, I believe. I think it 12 was number two. 13 MS. RUTTER: Five. 14 Q (By Mr. McCrea) Number five. Dr. Kelly, will 15 you turn to table three of the study? 16 A Yes, sir. 17 Q What is dose response? 18 A Dose response is the effect or the result of 19 varying quantities of the material. In other words, if you 20 give twice as much of the product, you ought to have an 21 increase in the effect. 22 Q What if you are exposed twice as long? 23 A That's the same. If you were exposed and 24 under conditions where you would absorb it, yes. 25 MR. MCCREA: We ready for a break? Let's take	Page 44 1 Q (By Mr. McCrea) What other faults did you 2 find? 3 A Well, let me repeat. First, the numbers are 4 not significant because if you go through the body of a 5 report, she has only found one statistically significant 6 figure in the mortality studies. That was for 7 non-arteriosclerotic heart disease. 8 Number two, she has not, this particular table has 9 not made any mention of compounding factors, age of these, 10 different age groups is not in there. In other words, 11 people who worked there less than one year, one would 12 presume they are younger than people who worked there more 13 than five years and if you don't pay, take that into 14 account, that is a very large confounding factor, but the 15 main point is it is not statistically significant and 16 that's the fallacy in these small studies or picking one 17 table. 18 If I went to Parkview High School and had 100 19 teachers, I might very well come out with an expected death 20 of 25 as observed 37, but then if I went up to Lindbergh 21 High School, I could come out with the same figures 22 reversed. So you have to have a significantly, 23 statistically significant excess of whatever you're looking 24 for and that she has not said, but she's admitted that the 25 only figures that she has that are statistically

Page 45 1 significant in her entire paper is that due to 2 arteriosclerotic, non-arteriosclerotic heart disease. 3 Q Dr. Kelly, what numbers does it take from a 4 epidemiological point of view to establish an association 5 between chemicals and death on the basis of probability 6 more likely than not? 7 A It depends on the thing you're looking for. 8 If you had a hemangiosarcoma of the liver from vinyl 9 chloride, if you had three or four of those in 100 people 10 and it only occurs once in 2,000 someplace else, that might 11 very well be statistically significant, but if you're 12 talking about plain mortality, you need more than 89 13 because that's what Zack said. She said they were not 14 statistically significant. 15 Q Doctor, my question was unclear. 16 A Was what? 17 Q My question was unclear. Let me clarify it. 18 In doing on epidemiological survey, a study, what numbers 19 are required to prove it's statistically significant? What 20 numbers are required? Can you explain that to the jury? 21 A I just did. It depends on the rarity. 22 Q No, the actual numbers. 23 A No, I don't know how many. 24 Q What numbers are required from an 25 epidemiological point of view to prove not that it's	Page 47 1 A Yes, that's correct. 2 Q On a bell-shaped curve? 3 A Yes, sir. 4 Q Dr. Kelly, will you refer to Plaintiff's Exhibit 5 Seven? 6 A Yes, sir. 7 Q I have added two columns to the information on 8 table three. I have added ratio of living to dead, column 9 four, and percent deceased, column five? 10 A Yes, sir. 11 Q Do you agree that -- 12 MR. CARNEY: Let me object. You've added more 13 than that. 14 Q (By Mr. McCrea) Please, would you let me 15 finish my question? Would you agree that the column one is 16 exactly the same as table three, years of exposure to PCBs? 17 MR. CARNEY: I'm going to object to that. I'm 18 looking at the tables and, you know, it's not exactly the 19 same. 20 MR. McCREA: Well, what's different? 21 MR. CARNEY: Well, there's, it says less than, 22 the words less than appear. There's a -- rather than a 23 symbol. 24 MR. McCREA: Does the symbol in front -- 25 MR. CARNEY: That's several other changes, so
Page 46 1 statistically significant, but that it's more likely than 2 not, i.e., probable? Do you know? 3 A No, I don't, but that is not, probable it not 4 the term used by epidemiologists. 5 Q But probable is the term used in a courtroom. 6 MR. CARNEY: Well, I'm going to object to 7 that. 8 MR. McCREA: I'll withdraw the statement. 9 A Well, I also -- 10 MR. CARNEY: I think you're trying to tell the 11 jury what the law is and I think the judge is the person 12 who will tell the judge what the law is. 13 MR. McCREA: Stipulated, and I withdraw the 14 comment. 15 A And I also will say I have never seen the term 16 probable used in an epidemiological statement, study. 17 Q (By Mr. McCrea) All right. But there is a 18 difference between the standard to establish that something 19 is statistically significant. That's a very high standard, 20 is it not? 21 MR. CARNEY: Well, I'm going to object to 22 that, object to the form of the question. I don't know 23 what you mean by very high. 24 Q (By Mr. McCrea) It requires a 95 percent 25 confidence interval. Is that correct?	Page 48 1 I object. I think the documents speak for themselves, but 2 when you say exactly the same, there are three or four 3 differences in the column in Exhibit Seven and table three 4 when you're asking exactly. 5 Q (By Mr. McCrea) Dr. Kelly, will you look at 6 table three? 7 A Which one? 8 Q In the Zack-Musch draft study or final report. 9 It doesn't matter because they're both the same. 10 A Yes, sir. 11 Q Your attorney suggests that the first three 12 columns in Plaintiff's Exhibit Seven are different from the 13 first, from the first three columns in table three. Do you 14 see any differences? 15 MR. CARNEY: Well, let me -- First of all, I'm 16 going to object to asking this witness to compare these two 17 but, you know, the headings are different if you want to 18 read the headings. The words are different. I'm not 19 saying there's any material difference. I'll just saying 20 when you ask if it's the same thing, it's not the same, and 21 I think the documents will speak for themselves. 22 Q (By Mr. McCrea) Doctor, do you see any 23 differences in the first three columns of Plaintiff's 24 Exhibits Seven and the first three columns of table three? 25 A Yes, because in table three it says "Average

Page 49 1 Length of Exposure." You don't seem to have that on yours. 2 Q What was it referring to? 3 A It was referring to years of exposure. 4 Q To what? 5 A To polychlorinated byphenyl. 6 Q All right. So should we put on the first 7 column average years of exposure to PCBs or how would you 8 change that? 9 A Well, I didn't mean, what do you want to change? 10 What are you trying to prove with this? 11 Q Well, your attorney says that my chart and 12 table three aren't same. 13 A Well, they aren't. Here they are. You can 14 look at them. It says different. 15 Q What's different? 16 A This has average length of exposure for the 17 living people, 3.2 years; for the deceased, 3.7. That does 18 not seem to appear on yours. 19 Q Dr. Kelly, we're not talking about that. 20 We're talking about column one, two and three. 21 MR. CARNEY: Well, he's looking at column one. 22 I also notice that it's, the heading, the column one says 23 "Years of Exposure to PCBs" on yours and it says "Years of 24 Exposure" with an asterisk, so they're different words. I 25 mean, the columns, they're not the same. That's all.	Page 51 1 the same. Some of the numbers are the same, but some of 2 them, the captions are different and you have additional 3 columns. I don't see the 20 percent I don't see the 37.that 4 percent. I don't see the 40 percent. I don't see the 42.8 5 percent. 6 MR. McCREA: That's because it's not on it. 7 MR. CARNEY: I agree. They're not the same 8 documents and that's why I object to it. You're trying -- 9 you've got a caption here that this is a Zack and Musch 10 table, and I disagree with you. It isn't a table. I don't 11 see that table, Exhibit Seven, in the Zack and Musch 12 document, so I'm objecting to it. I think it's misleading. 13 Q (By Mr. McCrea) And we agree. Dr. Kelly, 14 would you turn to table three? 15 A Yes, sir. 16 Q Let me have the exhibit. We'll do this the 17 hard way. In table three of the Zack and Musch study, what 18 does column one indicate? 19 A Years of exposure. 20 Q To what? 21 A To PCBs. 22 MR. CARNEY: Which column? Are you asking him 23 to read the caption of table three? 24 A Table three. 25 MR. McCREA: Right.
Page 50 1 They're different words used. The second column, the 2 heading ask "Living Workers" on Exhibit Seven and it says 3 "Living (N equals 58)" on the top of the second column. Do 4 you agree that those deferences occur. 5 MR. McCREA: No, those are exactly the same. 6 Living workers on column two are the same as the living 7 workers in column two on my chart. Add these up. 20 and 8 20 is 40 and 6 is 46 and 12 is 58. 9 MR. CARNEY: I didn't say the numbers were 10 different. I said the caption of the column has different 11 words. You asked if the columns are the same, and again I 12 repeat, the documents speak for themselves, but they aren't 13 the same. 14 MR. McCREA: Is there any substantial 15 difference? 16 THE WITNESS: You asking me? 17 MR. McCREA: No. I'm asking your attorney if 18 he has any objection to my -- 19 MR. CARNEY: I do have an objection to it 20 because there are substantial differences in Exhibit Seven 21 and table three of the Zack and Musch. You've got extra 22 columns. You've got -- You've got four lines at the bottom 23 that are not at all contained, that I see, in table three. 24 There's additional information. There's changed 25 information. There are some -- There are things that are	Page 52 1 MR. CARNEY: In Zack and Musch? 2 MR. McCREA: Right. 3 A Yes. 4 MR. CARNEY: Okay. And you're asking him to 5 read the top? 6 MR. McCREA: Right. 7 MR. CARNEY: Okay. Read the top. 8 MR. McCREA: He just did. 9 A Duration of exposure to polychlorinated 10 byphenyl by vital status. 11 Q (By Mr. McCrea) Right. And then column one 12 is what? 13 A Years of exposure. 14 Q To what? 15 MR. CARNEY: Are you asking him to read it, or 16 are you asking -- 17 A Polychlorinated byphenyls. 18 Q (By Mr. McCrea) What does the first -- 19 MR. CARNEY: I object. Well, I'm going to 20 object. Again these documents speak for themselves. 21 They're -- you can -- I don't know why having this witness 22 read what's in these documents is germane. 23 MR. McCREA: Any more objections? 24 MR. CARNEY: No, not at the -- 25 Q (By Mr. McCrea) What does the sign in front

Page 53 1 of the one mean? 2 A Less than one. 3 Q And is that what is on Plaintiff's Exhibit 4 Seven? 5 A Yes, sir. 6 Q What does one to three mean below? 7 A One to three years of exposure. 8 Q Is that the same as Plaintiff's Exhibit seven? 9 A Yes. 10 Q What does three to five mean? 11 A Three to five years of exposure. 12 Q Is that the same as Plaintiff's Exhibit Seven? 13 A Yes, sir. 14 Q What does the indicator in front of five mean? 15 A It means greater than five years. 16 Q Would that be the same as more than five? 17 A Yes, sir. 18 Q And is that the same as Plaintiff's Exhibit 19 Seven? 20 A Yes, sir. 21 Q Column two? 22 A Well, just a moment before we run off column 23 one. You have neglected to say what the average length of 24 exposure is and that's pretty important because it's 3.2 25 years for the individuals who are living. You don't have	Page 55 1 MR. CARNEY: Well, let me, Dr. Kelly -- 2 MR. McCREA: I'd be happy to explain my 3 position. 4 MR. CARNEY: I don't -- This is a deposition 5 of Dr. Kelly and you can testify. If you want to go under 6 oath and be deposed, that's fine. 7 Q (By Mr. McCrea) Dr. Kelly -- 8 MR. CARNEY: But if you're not, I think you 9 ought to limit yourself to questions of Dr. Kelly. 10 Q (By Mr. McCrea) Dr. Kelly, the living workers 11 in column two on table three of Zack and Musch? 12 A Yes, sir. 13 Q Is there any difference between that column 14 and my column? Is there any difference? 15 A Above the line there isn't any. You have 16 omitted the 3.2 below the line. 17 Q That's true. I omitted that. I omitted that; 18 all right? 19 A Yes, sir. 20 Q I didn't think it meant anything. Does it 21 mean something? 22 A Yes, it means quite a bit to me. 23 Q What's it mean? 24 A It means that there is no significant 25 difference in the amount of exposure to the living and the
Page 54 1 that on your adaptation of the chart. 2 Q I'd be happy to include that. This study -- 3 A Fine. I think that's very important. 4 Q This study shows that the workers who were 5 living had 3.2 years of exposure, that the workers who were 6 dead had 3.7 years of exposure, that the workers who were 7 dead had 5/10 of a year more exposure than the living? 8 A That doesn't mean a thing, absolutely nothing. 9 It -- 10 Q I didn't say it did. 11 MR. CARNEY: Just a minute. Let him finish. 12 A You certainly are implying that it means 13 something. 14 Q (By Mr. McCrea) What? I didn't -- 15 A That's why you're bringing it up. 16 Q Did I include it on my chart? 17 A For the reason that it doesn't mean anything, 18 yes, you didn't want it on your chart, I believe. 19 Q I'd be happy to put it on the chart. You're 20 the one that said it doesn't mean anything. 21 A Why didn't you put it on before? It doesn't 22 mean anything in support of your position and your position 23 -- Let's hear what your position is first while you're 24 bringing this out. 25 Q My position is --	Page 56 1 dead people. 2 Q Overall? 3 A Yes, overall. 4 Q Right. Except that the deceased had another 5 half year of exposure? 6 A That still doesn't mean anything. 7 Q Okay. I agree with that. 8 A All right. Fine. Let's get on. 9 Q All right. Now, is there any difference in 10 column two between Zack and Musch's chart and my chart? 11 MR. CARNEY: Other than what he said already? 12 A We're on two? I thought we went over two. 13 Q (By Mr. McCrea) No, living workers. Is there 14 any difference there? 15 MR. CARNEY: Other than what he's already 16 covered or do you want him to repeat himself? 17 Q (By Mr. McCrea) No, no. And other than what 18 you've already covered which is that on my chart, I do not 19 inform this jury that these workers had 3.2 and 3.7 years 20 of exposure. 21 A Okay. Fine. 22 Q I'd be happy to put that on there if I thought 23 it meant anything. 24 A It's not my chart. 25 Q All right. Do you think I should put it on

Page 57 1 there? 2 A It's up to you. It's not -- 3 MR. CARNEY: Well, I don't know that it's a 4 matter of what -- 5 A I think so, yes, you should. 6 MR. CARNEY: All I'm saying is if you're 7 trying to replicate the Zack and Musch chart, my only point 8 is you should have put it there exactly. That's my only 9 point. You've put -- A lot of the numbers there are exact. 10 MR. McCREA: Thank you. 11 MR. CARNEY: But there are some changes in the 12 chart and that's my only quarrel is to give the wrong 13 impression that this is a Zack and Musch chart. 14 MR. McCREA: That's why we have redirect 15 examination, isn't it? 16 MR. CARNEY: But I have a right to object. 17 You're using an exhibit that I think is misleading. 18 Q (By Mr. McCrea) Okay. All right. Now, 19 Doctor, we're spending an awfully lot of time on this. 20 Doctor, in column two, are there any differences in the 21 figures other than I don't have (N = 58)? You don't see 22 that on my chart, do you? 23 A No, sir. 24 Q But my numbers are exactly the same? 25 A Yes, sir.	Page 59 1 that mean? That's the number of living and deceased? 2 A No. Look, it does not, but what I'm saying 3 it that this vital status means, refers to all three of 4 these groups, the living, the dead and the unknown. It 5 does not just refer to the dead people. Living people are 6 still a vital statistic. 7 Q Dr. Kelly, I stand corrected. You're exactly 8 right. 9 A Okay. All right. Good. Let's get on. 10 Q Okay. Under this column then, the only word 11 that specifically applies to that column is the word 12 deceased? 13 A That's correct. 14 Q All right, sir. And on my column, instead of 15 the word deceased, I put dead workers. Is that the same? 16 A Well, it refers to the people who are dead or 17 deceased, right. 18 Q And under that column we have the number five, 19 five dead workers who worked there less than a year? 20 A Yes, sir. 21 Q Correct? 12, 12 dead workers who worked there 22 one to three years? 23 A Yes, sir. 24 Q Four dead workers, three to five, and nine 25 dead workers, greater than five?
Page 58 1 Q And they don't have the word workers on 2 theirs, do they? 3 A No, sir. 4 Q And I added the word workers? 5 A Yes, sir. 6 Q Other than that, are the numbers exactly the 7 same? 8 A The numbers are the same. 9 Q Thank you. Now, on the next column it says 10 "Vital Status deceased." Is that correct? 11 A I think vital status refers to all the 12 columns. It doesn't refer just to the deceased. A person 13 living is a vital statistic. 14 Q Doesn't that mean the number of dead workers? 15 A It also means the number of living. The vital 16 status of these workers, 20 are living and five are dead. 17 Q And this column, "Vital Status deceased," 18 vital status deceased I say means dead workers. Is that 19 what it means? 20 A No, that isn't what it means.that -- The vital 21 status of this group is 89 shows 558 are living, 30 are 22 dead, one is unknown. The vital status refers both to 23 living, deceased and unknown. It does not just refer to 24 deceased. 25 Q Well, when the number five appears, what does	Page 60 1 A Yes, sir. 2 Q My numbers are the same as Zack and Musch? 3 A Yes, sir, with the exception of the 3.7 below 4 the line. 5 Q Stipulated. 6 A All right. Fine. 7 Q Now, they have a column "Unknown"; correct? 8 A Yes, sir. 9 Q And I did not include that on my chart, did I? 10 A No, sir. 11 Q All right, sir. Now, they have a total on the 12 right-hand side; correct? 13 A Yes, sir. 14 Q Ask I did not include that on my chart, did I? 15 A No, sir. 16 Q All right, sir. Now, on my chart I added two 17 columns which do not appear on the Zack-Musch chart, fair, 18 "Ratio Living to Dead"? 19 A I don't know what you mean by fair. It's on 20 here. I don't know if it's fair or not. 21 Q It doesn't appear on Zack and Musch? 22 A That's correct. 23 Q And I added a column, "Ratio Living to Dead." 24 That doesn't appear anywhere on Zack and Musch? 25 A No, sir.

Page 61 1 Q And under that for less than one year, I said 2 that the ratio of living to dead was four living to one 3 dead. That's the ratio. 4 A Yes, sir. 5 Q Is that accurate? 6 MR. CARNEY: Well -- 7 Q (By Mr. McCrea) Is 20 to five a ratio of four 8 to one? 9 MR. CARNEY: I don't know what you mean by 10 accurate you know. It's -- Four to one is the same as 20 11 to five, but again I think you've got a chart with columns 12 that Zack and Musch didn't have which you've agreed to now, 13 and I think the fact is I don't see anything about the age 14 of these people, for example, and That's just one thing to 15 -- I think if the people that worked less than one year 16 were 25 years older or 25 year younger, the percentages 17 would be different. So I don't see any relevance to your 18 ratios. They mean nothing without more information. They 19 mean absolutely nothing, so I object to even using them. 20 A Is there a question? I lost the question 21 someplace along the line. 22 Q (By Mr. McCrea) Doctor, is, in column four, 23 are those ratios correct? 24 A They're mathematically correct, yes, sir. 25 Q All right, sir. Then column five, "Percent	Page 63 1 A Well, it looks pretty close. I mean, you want 2 me to divide it? I'll take your word for it that this is 3 mathematically correct. 4 Q And if it shows up it's not mathematically 5 correct, That's easily determined; correct? 6 A Yes. 7 Q And "Observed Deaths," 33.7 percent? 8 A Yes, sir. 9 Q All right, sir. Now, I'd like to at this time 10 show this chart to the jury in the videotape which I 11 prepared which is marked as Plaintiff's Exhibit Seven and 12 I'll ask the, if that is, you can raise your hand when you 13 That's in focus. 14 MR. CARNEY: While we're focussing, I just want 15 to object again for the record. Now you're showing this 16 chart to the jury and I think again it's misleading to 17 characterize it as a Zack and Musch chart which is the way 18 you've labeled it, a "Monsanto PCBs Mortality Study of 19 Monsanto Workers by Zack and Musch" when, in fact, this is 20 a David McCrea chart where some of the information on Zack 21 and Musch chart is in there and most of the information is 22 additions that Mr. McCrea has put on it. I think if you 23 had labeled it the McCrea table, it would be more accurate. 24 Q (By Mr. McCrea) So stipulated. McCrea table. 25 Dr. Kelly, are these figures accurate?
Page 62 1 Deceased," is that an accurate percentage of the deceased 2 workers? If there were 25 total workers and you have five 3 that are deceased, is that the 20 percent? 4 A Yes, sir. 5 Q If there were 32 total workers and 12 are 6 deceased, is that 37.that percent? 7 A Yes, sir. 8 Q If there were ten total workers and four are 9 deseased, is that the 40 percent? 10 A Yes, sir. 11 Q If there were 21 total workers and nine are 12 deceased, is that 42.8 percent? 13 A Yes, sir. 14 Q Now, doctor, I make this statement on 15 Plaintiff's Exhibit Seven, "Percentage of deceased workers 16 compared to living workers increased with years of PCB 17 exposure (dose response)." Is that a fair statement based 18 on this chart? 19 A No, it isn't at all. 20 MR. CARNEY: Objection to form. 21 A It's absolutely ridiculous. 22 Q (By Mr. McCrea) All right. Below that we 23 have "Expected Deaths," 22.88 of 89 is 25.6 percent? 24 A Yes, sir. 25 Q Is that math correct?	Page 64 1 MR. CARNEY: I don't know what you mean by 2 accurate. 3 Q (By Mr. McCrea) Are these the same as Zack 4 and Musch is all I want? 5 A Yes. 6 Q "Living Workers," are those the same as Zack 7 and Musch? 8 A Yes, sir. 9 Q "Dead Workers"? 10 A Yes, sir. 11 Q Are those the same as Zack and Musch? 12 A Yes, sir. 13 Q "Ratio," are those mathematically correct? 14 A Yes, sir. 15 Q "Percent deceased," is that correct? 16 A Yes, sir. 17 Q "Expected Deaths," is that correct? 18 A Yes, sir. 19 Q "Observed Deaths," is that correct? 20 A Yes, sir, but -- Those are all correct, but 21 you have left out a very important set of figures, average 22 length of exposure, 3.2 years for living and 3.7 years for 23 the deceased. 24 Q All right, sir. 3.2 for the living and 3.7 25 for the deceased?

Page 65 1 A That's correct. 2 Q Now, would you explain that to the jury? 3 A Explain what? 4 Q 3.2 years and 3.7? 5 A Explain what, the figures? 6 Q What those mean? 7 A They represent that the individuals who were 8 living had worked three, on average of 3.2 years. Those 9 individuals who are deceased had worked an average of 3.7 10 years, but the figures themselves are meaningless because 11 it does not -- First of all, it is such a small difference 12 in such a small group that any epidemiologist would laugh 13 at it because it is not at all significantly, statistically 14 significant. 15 Q These numbers? 16 A That is correct. Number two, it does not 17 account at all for the age of the individual groups, and if 18 you don't account for the age of people, I don't see how 19 you can say, how you can even think of correlating a work 20 exposure when you don't know whether the people who worked 21 less in one year were different in age than the people who 22 worked over five years because advancing age is certainly a 23 very important thing in deaths. 24 MR. CARNEY: And I'll stipulate, Mr. McCrea, 25 that people that are in their 70s, you're going to have a	Page 67 1 Q No, Zack and Musch? 2 MR. CARNEY: Yeah. Well, you've asked him 3 this and I think we agreed this is the McCrea table. 4 MR. McCREA: Well, I'd be happy to make it 5 available to the workers through the United States 6 because I think they deserve to know it, but the fact of 7 the matter is the Zack-Musch study was never published. 8 A No, it was not. 9 MR. CARNEY: Objection. You've covered that 10 in length, Mr. McCrea. This is very repetitive. 11 Q (By Mr. McCrea) Do you know why it was not 12 published? 13 A No, sir, but it was certainly made available 14 to an awful lot of people because I've seen it referred to 15 in numerous articles. 16 Q Dr. Kelly, I'm going to hand you one more 17 exhibit that I've prepared. We'll this the McCrea 18 chart; all right? I didn't know I would receive so much 19 notoriety. 20 MR. CARNEY: Can I take a look at the McCrea 21 chart? Do you have an extra copy? This is Exhibit -- 22 (Thereupon, the reporter marked Plaintiff's Deposition 23 Exhibit Eight, for identification.) 24 Q (By Mr. McCrea) Dr. Kelly, I hand you what 25 the court reporter has marked Plaintiff's Exhibit Eight
Page 66 1 higher incidence of death in that group than people in 2 their 30s or 40s. Would you agree with that? 3 MR. McCREA: I would agree with that and I 4 would think it would also be likely that if a person was in 5 his 70s, he would be less likely, he would be more apt to 6 work fewer years than somebody in his 20s. Would you 7 stipulate to that? 8 MR. CARNEY: If somebody was in their 70s, 9 they would have worked? 10 MR. McCREA: They would be more likely to work 11 less years than somebody who was in their 20s. Would you 12 stipulate to that? 13 MR. CARNEY: No, I wouldn't because I'd say 14 the older person probably, if anything -- We don't know. 15 We're all guessing, and that's why this chart is 16 meaningless, but my opinion would be an older man or woman 17 would probably have worked more years because they're 18 older. That would be my guess, but again since we don't 19 know the ages of these people, showing them a chart and 20 having a difference of six deaths when you don't know what 21 the ages were of the people is irrelevant and misleading 22 and doesn't prove anything. 23 Q (By Mr. McCrea) Okay. Dr. Kelly, this 24 information was never published; correct? 25 A Yours?	Page 68 1 which we have indicated is the McCrea chart hopefully to 2 avoid a lot of objections. Now, what I did was go through 3 the Zack-Musch draft study which is part of the Plaintiff's 4 Exhibits, what number? 5 MS. RUTTER: five. 6 Q (By Mr. McCrea) Five, and I listed what I 7 call the sign, symptom or condition that they referenced in 8 the study which was reported in the literature. Then I 9 went through the final study and I added symptoms in the 10 final report which were not in the draft study. What I 11 would like for you to do very simply is look at the 12 Zack-Musch draft study and see if Zack and Musch reference 13 on page three, paragraph two, chloracne as having been 14 reported in studies to which they rely. If you would, sir, 15 go to the draft study. 16 A This is a draft study of a study that has 17 never been published. Is that what you're saying? 18 Q Correct. 19 A Oh. Now, you want me to look on page three? 20 Q Page three, paragraph two, and I want you to 21 see if on page three, paragraph two on the draft study Zack 22 and Musch reference chloracne as having been a reported 23 condition. 24 MR. CARNEY: Okay. 25 Q (By Mr. McCrea) As a result of exposure to

Page 69 1 PCB. 2 MR. CARNEY: Let me object here. You've got 3 now a three page questionnaire with three main columns and 4 I would say we're talking about somewhere in the order of 5 50 to 60 questions, and as I see it, what you're asking him 6 to do on each of these 50 or 60 questions is to identify 7 whether something is referenced in an article. 8 Now, we have the article. It's Exhibit Five -- or the 9 report. It's in evidence, and if it says, if it has the 10 word chloracne on page three, paragraph two, it has it. If 11 it doesn't have it, it doesn't have it. I don't know that 12 we'd want to waste the jury's time going through and asking 13 Dr. Kelly to confirm that a certain word appears at a 14 certain page in a multipage report. I don't think that 15 helps the jury at all. 16 MR. McCREA: Well, I think it helps. 17 MR. CARNEY: The document we have and we can, 18 if you want to ask a quiz -- Are you giving a quiz to the 19 doctor as to whether he can find the word and how long it 20 takes him? You know, the word is either in there or it 21 isn't in there, and so I object to going through and 22 wasting more time in having this Dr. decide whether a 23 word appears in the page, in the paragraph that you say or 24 not. 25 MR. McCREA: Will you sit down with me, Mr.	Page 71 1 like lesions aren't in the article at page three, paragraph 2 three, then we'll correct it. 3 MR. CARNEY: And you know, this is the first 4 time -- Just two minutes ago when you just handed this to 5 me is the first time I've seen it, but I think to save the 6 time of the jury, we can handle something like this and I 7 will agree that if chloracne appears on page three, 8 paragraph two, I will agree to it. In fact, we have the 9 article. We can show the jury the article if necessary, 10 but I think the taking the time to do this now would, I see 11 no purpose in it other than to spend a lot of time. 12 MR. McCREA: I will stipulate to that, and at 13 some future date you and I can sit down and compare this 14 chart to the article. Dr. Kelly, it won't be necessary to 15 address those questions. Could we locate Plaintiff's 16 Exhibit Two which was a one page article, I believe? No, 17 that's not it. It was -- Correct. Could you hand that to 18 Dr. Kelly? 19 MR. CARNEY: Sorry. What exhibit now? 20 MR. McCREA: Plaintiff's Exhibit Two. 21 MS. RUTTER: One. 22 MR. McCREA: That's number one? 23 MS. RUTTER: Yes. 24 Q (By Mr. McCrea) All right. What's the caption 25 on that at the top for identification purposes, Dr.
Page 70 1 Carney, and confirm if these what I call signs, symptoms 2 or conditions are referenced by Judith Zack and David 3 Musch in the draft study, and if so, will you agree to that 4 so that I can present this chart to the jury at trial? 5 MR. CARNEY: I will agree to respond to the 6 fact that you've asked interrogatories in request for 7 admissions. I've answered on, or not -- I haven't answered 8 it, but my client, Monsanto, has answered extensive 9 questions. If you want to ask this particular question, 10 we'll respond to it so that we can save the time. That way 11 we can get it down and we won't take up the jury's time in 12 going through this because this is something that's either 13 there or it isn't. 14 MR. McCREA: This simplifies matters for the 15 jury because this places in front of them all the signs, 16 symptoms or conditions referenced in 1979 by Judith Zack 17 and David Musch which said signs, symptoms or conditions 18 were reported in the literature which they reviewed. It's 19 a simplification for the jury. 20 MR. CARNEY: Well, I'd be glad -- 21 MR. McCREA: I simply want Dr. Kelly -- It's 22 not a quiz of Dr. Kelly. 23 THE WITNESS: You talking to me now? 24 MR. McCREA: Yeah, I'm talking to you. I 25 just simply want him to confirm the accuracy, and if acne	Page 72 1 Kelly? 2 A "Section IV, Health Effects of PCBs and PCDF 3 Mixtures." Where'd it come from? 4 Q It came from -- I've been through that and I 5 will try and track that down and if and when, Dr. Kelly, I 6 do, I will send you the entire article. 7 A Fine. 8 Q But I think it's indicated it's an EPA 9 publication? 10 A I don't see any indication right here that it 11 is. 12 Q Well, I don't, either; all right? So I 13 honestly don't know. 14 A Okay. 15 Q All right, sir? 16 MR. CARNEY: Why don't we just call it a one 17 page document because I'm not sure it's an article. 18 MR. McCREA: I'm not either. 19 A Well, it's section four out of something. I 20 don't know what section three or what the rest, how many 21 other pages are there, but go ahead. 22 Q (By Mr. McCrea) Yes, and -- All right. 23 Dr. Kelly, at the bottom of that -- 24 MR. CARNEY: Before you ask the questions, I 25 don't want to have to interrupt. I think I had an

Page 73 1 objection to the use of this document because we don't have 2 the pages before it or after it or know what it is or the 3 date, and if I could have that as a standing objection on 4 this document. 5 MR. McCREA: I will stipulate all objections 6 which were made earlier carry over to any questions asked 7 at this point in time. 8 MR. CARNEY: Okay. 9 Q (By Mr. McCrea) All right, sir. Dr. Kelly, 10 down at the bottom of the page there is a footnote 11 reference, and would you read that footnote reference? 12 A "A recent analysis of Yusho patient data put 13 this figure" -- let's see what the figure is -- "at .6 14 milligrams (26 p. 291)." 15 Q All right, sir. 16 A I don't exactly know what that means. 17 Q And nor do I. Dr. Kelly, .6 milligrams, would 18 you multiply that number by 10,000 tell me what that 19 equals? 20 MR. CARNEY: Let me object while the math is 21 being done. We've got a .6 milligrams number out of a 22 document that we haven't, we don't know where it came from 23 or what it is and we do have, though, we've had introduced 24 in evidence and the doctor's discussed the article about 25 Yusho which I think would be, since they've been	Page 75 1 Q Does the camera have that? Thank you. Dr. 2 Kelly, are you familiar with a book called "Harrison's 3 Principles of Internal Medicine". 4 A Yes. I mean, familiar -- You mean I can quote 5 things out of it? 6 Q No, no. 7 A I know the book certainly. 8 Q Is it reputable? 9 A Yes. 10 Q Authoritative? 11 A Yes. 12 Q Did you use it when you were in the practice 13 of medicine? 14 A Yes. 15 (Thereupon, the reporter marked Plaintiffs 16 Deposition Exhibit Nine, for identification.) 17 Q (By Mr. McCrea) Dr. Kelly, I do not have the 18 book with me, but I've an excerpt from the book which I 19 will represent to you is accurate and it can be cross 20 checked to the book itself. I would like to hand you 21 Plaintiff's Exhibit -- What number is that? 22 MR. CARNEY: Nine. 23 Q (By Mr. McCrea) Nine which I represent to you 24 is a verbatim quotation from "Harrison's Principles on 25 Internal Medicine," 1980 edition, and then I would like to
Page 74 1 authenticated as published articles, would be more 2 authoritative to get the one number that you put up there. 3 A By the way -- 4 MR. CARNEY: So I object to the building on a 5 number that we haven't been able to authenticate. 6 Q (By Mr. McCrea) Dr. Kelly, what does that 7 equal? 8 A 6,000 milligrams. 9 Q And how much of an ounce is 6,000 milligrams? 10 A Fifth of an ounce. 11 Q O-u-n-c-e? 12 A Or O-z if you want it. 13 Q O-u-n-c-e is correct? 14 A Yes. 15 Q O-u-n-c-e? 16 A That's correct. 17 Q That is document what, one? 18 A Yes, which I don't know the date. I don't 19 know where it came from. I don't know anything about it, 20 but I'm just attesting to the mathematics. 21 Q All right. It's understood. Dr. Kelly, are 22 those mathematics correct? .6 milligrams multiplied by 23 10,000 equals 6,000 milligrams and that's the same as one 24 fifth of an ounce? 25 A That's right.	Page 76 1 ask you to read that and if you agree with the statement. 2 MR. CARNEY: Let me object here before we hand 3 the document to the doctor. Exhibit Nine is two sentences 4 purportedly out of a medical book. I assume it's a two 5 inch or a one inch or maybe a three or four inch book. 6 THE WITNESS: At least three inches. 7 MR. CARNEY: A three inch book. We've got two 8 sentences here on a page, and number one, we have no way of 9 verifying that these sentences appear in there, but I'm not 10 saying they don't. I would assume -- 11 MR. McCREA: That's stipulated. 12 MR. CARNEY: -- if you say they do, they do, 13 but what we do know is we don't know what comes after it or 14 before it and we've seen -- We're pulling out a sentence in 15 a long 15 page document. Sometimes the sentence after it 16 changes the sentence. 17 An example I give, he talked about tumors of the 18 liver. He doesn't say whether it was in humans, rats, 19 rabbits or what, but it's possible, and again I don't know, 20 that the that next sentence would say that there have been 21 no tumors found in humans, but in female rats there have 22 been, and that would be just an example of what might be in 23 there. So I would object to using it and asking the doctor 24 questions about it because of that. 25 Q (By Mr. McCrea) I agree with all of your

Page 77 1 statement. Dr. Kelly, I'll just, I'll hand you that 2 exhibit and ask you if you would read it, and I guess my 3 first questions to you is: Have you read that before this 4 date? 5 A I may have. 6 Q Dr. Kelly, is that information that you as a 7 doctor in internal medicine would rely upon? 8 A Not necessarily at all because, first of all, 9 he is talking about several instances of benign or 10 malignant primary tumors of the liver have been associated 11 with PCT. Now, that's not PCB. That's not even a 12 chemical. 13 Q That's porphyria cutanea tarda, isn't it? 14 A That's right, completely different. 15 Q All right. 16 A So right off the bat I don't know why, how I 17 would connect that with any industrial exposures to PCB. 18 Then he says "Toxic acquired PCT has occurred in 19 the individuals accidentally exposed to hexachlorobenzene, 20 polychlorinated biphenyls, tetrachlorodibenzodioxin and 21 other polychlorinated hydrocarbons." I would like very 22 much to see his data on that because he might just at well 23 be repeating the errors that often creep into medicine. 24 So I consider "Harrison" an excellent text book of 25 internal medicine. I think his knowledge on toxicology --	Page 79 1 A Yes, I see it. 2 Q All right, sir. 3 A Yes, sir. 4 Q And there is the word toxicity at the bottom 5 of the page 2018. Is that correct? 6 A Yes, sir. 7 Q Then will you turn to page 2019, and there's a 8 chart there? 9 A Wait. Let's not go so fast. 10 Q All right. 11 A First of all, what is that first letter, pore 12 acne, or on the bottom of number one? 13 Q It says, it says -- It looks to me like it 14 says p-o-r-e. Is that the way you read that? 15 A That's the way I read it. 16 Q Brake, a-c-n-e? 17 A Uh-huh. 18 Q (Chlor, C-h-l-o-r - acne)? 19 A This shows whoever wrote this had no medical 20 background at all. I don't think anybody ever used the 21 term pore, p-o-r-e, acne, but go ahead. On page 19 now? 22 Q Yes, sir. On page 2019 it has a number of the 23 chemicals listed? 24 A Yes, sir. 25 Q And are PCBs included in that list?
Page 78 1 Harrison isn't doing it any more, I don't think. I mean, 2 Isselbacher, Adams, Braunwald, etc. are the authors of 3 "Harrison's". I don't think Harrison is alive, but I'd 4 have to see their references before I accept this as 5 gospel. 6 Q All right. Fair enough. 7 A Okay. 8 Q Dr. Kelly, will your attorneys please provide 9 you with Exhibit K-19? 10 A Yes, sir. 11 Q Will you turn -- What's the title of that 12 document? 13 A Well, first of all, this is a title, a copy of 14 some paper written by some salesman. It's not an official 15 Monsanto Chemical Company document. It has never seen the 16 light of day, as far as I'm concerned, in any publication 17 I've ever seen at Monsanto. I myself have never saw this. 18 This was written by some salesman sitting at his desk 19 during World War II, and it is not an official Monsanto 20 publication at all. 21 Q All right. Do you know the salesman who wrote 22 it? 23 A No, I don't. 24 Q Will you turn to page 2018? Do you see what I 25 guess is a Bates number?	Page 80 1 A Yes, but he's absolutely wrong. 2 Q I appreciate your thoughts on this document, 3 but are PCBs listed in that list? 4 A Yes, they are listed by this unknown salesman. 5 Q All right, sir. Then at the bottom there's 6 reference to summary of gross feeding experiments. Is that 7 correct? 8 A Yes, sir. 9 Q Turn to the next page. Do you know see at 10 two-thirds of the way down on the page of 2020, it says, 11 "The following hygienic measures may be considered good 12 practice where these compounds are handled." Do you see 13 that, sir? 14 A Yes, sir. 15 Q "A, two lockers for each workers exposed to 16 chlorinated waxes, one for working and one for street 17 clothes." Do you see that? 18 A Yes, sir. 19 Q Do you believe that would, that is a good 20 practice when working with PCBs? 21 A We're talk now about chlorinated waxes. 22 Q Yes. Do you believe that is a good practice 23 for PCBs? 24 A No. 25 MR. CARNEY: You're not asking about

Page 81 1 chlorinated waxes? 2 Q (By Mr. McCrea) I'm asking him is there any 3 -- Do you believe 55 would be a good practice when working 4 with PCBs? 5 A No, sir, you don't need to do that. 6 Q "B, all work clothes above the underwear should 7 be provided and laundered at least twice a week by 8 management." Do you agree 55 would be a good practice for 9 workers exposed to PCBs? 10 MR. CARNEY: Let me object. I'm not sure. If 11 I could look over your shoulder a minute, we're talking 12 about various compounds here. We're just not talking about 13 PCBs. This unknown salesman who, or whoever wrote this 14 document, that isn't a document that Monsanto ever 15 published. 16 MR. McCREA: Stipulated. Well, I'm not 17 stipulating you didn't publish it. I'm stipulating -- 18 A Monsanto didn't publish it. 19 Q (By Mr. McCrea) What? 20 A It was never published. 21 Q Or you didn't write it? I presume it was 22 written -- 23 A I was in the service in 1944. 24 Q What? 25 A If I had seen this, I'd have thrown it in the	Page 83 1 publications. It was never in any files that I ever had 2 when I came back from the service. 3 Q All right. 4 A I never saw it until it was dredged up in one 5 of these depositions. 6 Q All right. Now, what -- With that 7 understanding; all right, sir? 8 A Well, there's a little bit more understanding. 9 Q All right. 10 A Because this man has gone back to the Halowax 11 studies where he's talking about chlorinated naphthalenes. 12 He has gone back to the cable pullers where they were 13 getting the waxes all over their clothes, all over their 14 hands, all over their underwear, and these hygienic things 15 were certainly important for those people at that kind of 16 exposure to those solid Halowaxes. 17 Q All right, sir. I don't dispute that. 18 A All right. Fine. Well, I mean, the inference 19 I'm getting is that you are tying in the industrial use of 20 PCBs with the Halowax problems of chlorinated naphthalene, 21 and that is not correct. 22 Q All right, sir. Now, with all that said, what 23 I would like to ask you is if the hygienic measures listed, 24 A, B, C, D, E and F on pages 2020 and 2021 should be 25 instituted for workers exposed to PCB in industrial
Page 82 1 wastebasket. 2 Q Okay. Do you agree with the hygienic measure 3 that workers working with PCB, that workers working with 4 PCBs, the practice should be instituted that all work 5 clothes above the underwear should be provided and 6 laundered at least twice a week by the management? 7 MR. CARNEY: Just so -- The jury might get the 8 impression you're reading from the document that all 9 workers who work with PCBs. This refers to these 10 compounds. There are a number of different compounds, not 11 -- It doesn't say PCBs. It says "These compounds." 12 MR. McCREA: Stipulated. 13 MR. CARNEY: Okay. Well, I think the way you 14 read it, it might appear to the jury that you're reading it 15 that this is what PCB workers are supposed to do as opposed 16 to any other type of worker. 17 MR. McCREA: No, that's not correct. 18 MR. CARNEY: Okay. Just so we clarify it, 19 that's all. 20 Q (By Mr. McCrea) Dr. Kelly, the unknown 21 salesman who wrote this for Monsanto Chemical Company -- 22 A He did not write it for Monsanto Chemical. He 23 wrote it for himself. 24 Q How do you know that? 25 A Because it was never in any Monsanto	Page 84 1 setting? 2 A No, sir, it should not. 3 Q All right, sir. And that is true for A? 4 A Yes. 5 Q That is true for B? 6 A It depends on the contamination. 7 Q That is true for C? 8 A And again it depends on the amount of spills 9 they have, whether they are -- If it's an organization 10 that's not following the recommended procedures, yes, they 11 should, but if they followed the cautions and the safe 12 handling procedures put out by Monsanto, they do not need 13 to change to clean underwear every day. 14 Q Are you stating that D does not apply? 15 A Well, certainly it doesn't apply. You don't 16 have to have a worker scrub his hands and face under 17 supervision. 18 Q Are you stating that E does not apply? 19 MR. CARNEY: Objection to the form. 20 A Yes, I do not believe in skin creams, 21 protective clothing, and it isn't -- I think clothing 22 should be used that can be changed if it's contaminated. 23 Q (By Mr. McCrea) Are you stating that F does not 24 apply? 25 A Yes, that's correct. The directions he is

Page 85 1 talking about, chlorinated synthetic waxes, does not apply 2 to PCBs. First of all, they should be not slopped around 3 obviously, but these, these recommendations which were, 4 which this man has ascribed to the Halowax situation do not 5 need to be applied to PCBs, certainly do not need to be 6 applied when the people follow the safe handling 7 procedures. 8 Q Do you agree -- 9 A Listed on our PCB literature. 10 Q All right. So you're saying that F doesn't 11 apply? 12 A That's correct. 13 Q The paragraph following F, does that apply to 14 PCBs, to establish -- 15 A Yes. 16 Q All right. That does apply? 17 A Yes, sir. 18 Q The next paragraph, does that apply to PCBs? 19 A I think it depends on the exposure. If 20 there's no exposure or no particular exposure, you don't 21 need to. 22 Q Do you agree that a history of liver disease, 23 jaundice or antisyphilitic treatment should automatically 24 exclude a worker from jobs involving a possible PCB 25 exposure?	Page 87 1 A I don't think that would exclude him. 2 Q Antisyphilitic treatment, if he gave you a 3 history of three years of antisyphilitic treatment with 4 penicillin, would you exclude him? 5 A Well, first of all, I don't know of anybody 6 that only gets three years of penicillin treatment. It's a 7 matter of weeks. 8 Q All right. What if he gave a history of 9 antisyphilitic treatments with penicillin on four occasions 10 within the last five years? 11 A They may exclude him on other grounds. 12 Q Well, Doctor, we don't need to be -- 13 A Well, no, but I mean, you were giving me these 14 fanciful conjectures. If a man's got that much trouble, 15 he's probably got, he may not, should not be in an 16 industrial setting at all. 17 Q Doctor, on a -- So you would not employ 18 somebody who had had gonorrhea or syphilis? 19 A We're not talking about gonorrhea. We're 20 talking about syphilis. Certainly I have hired lots of 21 people with gonorrhea. I've hired lots of people who have 22 been treated for syphilis. 23 Q And put them in positions where they're 24 exposed to PCBs? 25 A I can't answer that, whether they've gone
Page 86 1 A That depends on the exposure and that depends 2 on the state of the liver disease. Antisyphilitic 3 treatment, certainly if a man had the course of two weeks 4 of penicillin ten years before, it doesn't make any 5 difference. They can go to work there. 6 Q What if it was one week before? 7 A I still think he could. This man is talking 8 about syphilis in the 1900s. 9 Q So it is your position that a history of liver 10 disease wouldn't exclude a worker? 11 A Automatically it said. I think it has to be 12 evaluated on the man -- He says automatically. I believe 13 that you've got to decide when the extent of the liver 14 disease was, was the recovery was. 15 Q And then you would make a decision as to 16 whether or not to employ him? 17 A That's correct. 18 Q What about jaundice, if he gave you a history 19 of jaundice? 20 A Well, That's also liver disease, but if he 21 gave jaundice when he was ten years old and you were 22 examining a 25 year old worker, I don't think that would 23 automatically exclude him. 24 Q What if he gave you a history of jaundice five 25 years earlier?	Page 88 1 there, but I've examined them and put them in the chemical 2 operation where if they rotated in the PCB department, it 3 would be all right. 4 Q Would you hire an individual who had been 5 treated for antisyphilitic conditions to work in PCBs? 6 A Ever? 7 Q Yes. 8 A Yes, I would. 9 Q All right. "Pregnant woman should not be 10 employed where there's a possible exposure to PCB." Do you 11 agree with that? 12 MR. CARNEY: I think we're out of tape. 13 Q (By Mr. McCrea) Are we out of tape? Do you 14 agree with that, Doctor? 15 A Well, that's a hard questions to -- 16 MR. CARNEY: Why don't we pick it up. I don't 17 want to get in the middle of an answer. 18 MR. McCREA: Break. 19 (Thereupon, a short recess was taken.) 20 Q (By Mr. McCrea) Dr. Kelly, we're back on the 21 record. 22 A Yes, sir. 23 Q Do you recall where you were in the last 24 answer before the break? 25 A Yes. You had asked me about would I employ

Page 89 1 pregnant woman. 2 Q Yes, sir? 3 A And I said that was a tough questions because 4 it would depend on the state of her health, the state of 5 her exposure, if I could be assured that she would be under 6 the maximum allowable concentration. I would not hesitate 7 to be hesitant to employ her if she was exposed to repeated 8 or continuous skin contact. That is a very hard decision 9 to make about hiring pregnant women in any industry where 10 there's any exposure. 11 Q Dr. Kelly, during the break I asked you if you 12 would diagram for the jury a PCB, a polychlorinated 13 dibenzofuran and a polychlorinated dibenzo -- 14 A Dioxin. 15 Q Dioxin. 16 A Yes, sir. 17 Q And you have drawn those for us? 18 A I'm not so proud of my drawing, but that's -- 19 Q All right, sir. Now, could I address a couple 20 of questions to the chart? 21 A Yes, yes. 22 Q On your drawing at the top you have PCB? 23 A That's right. 24 Q Ask this is a PCB? 25 A That's correct, with four chlorine atoms.	Page 91 1 manufacture of a PCB, and we discussed in this earlier, you 2 start with benzene? 3 A Yes, sir. 4 Q Is that correct? 5 A Correct. 6 Q And benzene is simply one, is half of that 7 PCB? 8 A That's correct. 9 Q Which contains hydrogen and carbon? 10 A That's correct, no chlorines at all. 11 Q And in the process of chlorinating the 12 benzene, these rings fit together and the chlorine replaces 13 what, the -- 14 A No, you skipped a -- 15 Q All right. 16 A First you have to hook up two benzene rings 17 to get diphenyl which is an entirely different thing. 18 Q All right, sir. 19 A You get two benzene rings. Benzene is a 20 liquid. Diphenyl is a solid. 21 Q All right, sir. And the diphenyl would look 22 exactly like the PCB without the chlorine. 23 A That is correct. 24 Q What does the chlorine replace? Does it 25 replace --
Page 90 1 Q All right. Then next on your chart is a PCDF, 2 polychlorinated dibenzofuran. 3 A That's correct. 4 Q And here is the PCDF showing -- 5 A One oxygen between the two benzene rings. 6 Q All right, sir. And then you have CL here 7 and CL here just to show -- 8 A Well, they could be anyplace, yes. 9 Q All right. Then at the bottom you have a 10 dioxin which would be PCDD? 11 A That's correct. 12 Q Poly means more than one? 13 A Chlorinated. 14 Q Chlorinated speaks for itself. Dibenzo refers 15 to the oxygen? 16 A No, that's the benzene ring. 17 Q All right. 18 A And dioxin is the two oxygens. In other 19 words, we have two benzene rings. Up at PCBs they're 20 connected together. There's no oxygen. PCDF, there's one 21 oxygen connected on two benzene rings. The dioxin, there's 22 two oxygens connected? 23 Q All right sir. 24 A I didn't put the chlorines down there. 25 Q All right, sir. Now, when you start in the	Page 92 1 A Hydrogen. 2 Q It replaces hydrogen? 3 A That's correct. 4 Q So in this molecule you have three chemical 5 elements, hydrogen, carbon and chlorine? 6 A Correct. 7 Q In this molecule you have those three same 8 elements plus oxygen? 9 A Yes, sir. 10 Q And these molecules no longer touch? 11 A They're adjoined by oxygen in one place, yes. 12 Q All right, sir. And dioxin is exactly the 13 same as a furan except that in between these two rings -- 14 A Benzene rings you have -- 15 Q You have two oxygen atoms? 16 A That's correct. 17 Q All right, sir. And these as a family can be 18 called chlorinated hydrocarbons? 19 A Yes, but you, the usual chlorinated 20 hydrocarbon like carbon tetrachloride or trichlorbenzene is 21 not quite as complicated as these molecules. 22 Q All right. So -- 23 A Technically you could call it a chlorinated 24 hydrocarbon, but with the oxygen in there, I don't know if 25 a chemist would call it that.

Page 93 1 Q All right, sir. PCBs were known to exist in 2 what year? 3 A Oh, they're probably known to exist as a 4 laboratory curiosity back in the 1900s or something. I'm 5 not sure, but industrially I think it was around 19, late 6 '20s or '30s. 7 Q 1900 known, give or take? 8 A Give or take, yes, I think so. 9 Q When were furans first known? 10 A I don't know that. 11 Q When were they first known by you? 12 A Oh, sometime in the '70s, I believe. Kelly 13 didn't know about PCBs -- I mean, the first I ever heard of 14 PCBs was in 1936, if you want, if you're writing down 15 Kelly. 16 Q All right. And when did you first know about 17 dioxin? 18 A That's hard to say. '50s, '60s. I'm not 19 sure. Put a question mark there. 20 Q All right, sir. Dr. Kelly, you mentioned that 21 you had never talked or visited workers at the Westinghouse 22 plant during the time you were with Monsanto. Is that 23 correct? 24 A Yes, before or since. I never have, period. 25 MR. McCREA: I would like it extend a sincere	Page 95 1 years at Monsanto, were any of those reports regarding 2 capacitor or transformer workers? 3 A No, sir, not that I can recall. 4 Q Are there any reports in the published medical 5 literature of deaths or series long-term health effects 6 due to industrial exposure of PCBs? 7 A No, sir. 8 Q What about Yusho? 9 A That's not industrial workers. Yusho is 10 entirely different. This is an ingestion taken by mouth of 11 the Japanese PCB contaminated with dibenzofurans. 12 Q Do the Monsanto PCBs contain large quantities 13 of furans? 14 A I mean, they're parts per million. I mean, I 15 don't know what you mean by large. Ten parts per million? 16 Q How do they compare with the Japanese, the 17 amounts in the Japanese PCBs? 18 A Well, it was less than the Japanese Kanechlor 19 and much, much less than the dibenzofurans in the rice oil 20 after the material had been heat and the heat as a heat 21 transfer medium and then cooked in a Japanese skillet or 22 Japanese wok or wherever they cook it in. 23 Q Do PCBs contain dioxin? 24 A No, sir, they do not. 25 Q Mr. McCrea showed you a diagram or actually
Page 94 1 invitation to you to come and talk to workers at the 2 Bloomington Westinghouse plant and the Muncie plant without 3 any attorneys present, if you would like to do that, 4 arrangements could be made. Dr. Kelly, I wish you good 5 health. Thank you. 6 THE WITNESS: Thank you very much for your 7 invitation which I'll take under advisement, and I hope you 8 have a pleasant trip back to Bloomington. 9 MR. McCREA: Thank you, sir. 10 REDIRECT EXAMINATION 11 QUESTIONS BY MR. CARNEY: 12 Q Dr. Kelly, I just have a few questions that 13 I'd like to ask. You've heard that before, I'm sure. So, 14 but I don't think they're more than about ten questions. 15 During the 38 years that you worked at Monsanto, did you 16 ever receive any reports or complaints of PCB related 17 health problems in any Monsanto PCB worker? 18 A No, sir. I did not. 19 Q During the 38 years at Monsanto, did you ever 20 receive any customer reports or complaints of deaths or 21 serious long-term injuries due to PCBs? 22 A No, sir. 23 Q The handful of complaints or less than five 24 complaints or reports that you did receive regarding 25 short-term problems with PCBs during your 30 years, 38	Page 96 1 you prepared a little diagram of a molecule, of PCB and a 2 dioxin and a furan. Does the fact that they have some 3 similarities mean that they're similar in their toxic 4 effects? 5 A Oh, no. I mean, I could, if you want me to 6 draw some more, if you have, if you take bichloride of 7 mercury, that is a very serious poison. It's a kidney 8 poison. If you swallow it, your kidneys shut down, period. 9 It's calls corrosive sublimate. It's a very serious 10 poison. It's got one molecule of mercury, two molecules of 11 chlorine. 12 If you take coumarin which has been used as a folk 13 medicine in the south for years and years, it's the same 14 compound with one less chlorine, and so just the addition 15 of this one atom of chlorine. 16 If you take alpha-phenethylamine which is, that's a 17 thing, I can draw a couple of benzene rings with an amine 18 group, an NH group on one position. If you move it over 19 another position it's a bladder carcinogen. If it's the 20 alpha position it's not. Move it down one on this ring, 21 it's a bladder carcinogen. So structure is an extremely 22 frail reed to base any toxicological conclusion on. 23 Q You said that the PCBs do not contain dioxin. 24 Can the combustion or burning of PCBs produce dioxin as a 25 by-product?

Page 97 1 A Not PCB by itself. 2 Q Does the government agree with you? 3 A Oh, yes, the EPA has written that. 4 Q Is there any evidence in the literature of 5 people getting sick like in Japan in the Yusho incident 6 from Monsanto PCB? 7 A Not that I've ever seen. 8 Q Any evidence that Monsanto PCBs cause immune 9 deficiency and which, by that I mean make a person more 10 susceptible to colds or other illnesses? 11 A Well, it certainly was not in our workers and 12 I haven't seen any report of it in the United States 13 literature. 14 Q Mr. McCrea showed you some labels or asked you 15 about why certain information wasn't on the labels, and he 16 mentioned things like does the label contain the fact that 17 it would cause death or lots of other details. Can you 18 tell me why you didn't include all the information that Mr. 19 McCrea mentioned in your labels? 20 A Well, certainly. I think it, it's certainly 21 been my experience and experience of people in the label 22 business that what you need to put on a label is what you 23 have to do to protect the worker. If you have a label 24 that's three pages in extent, the average person won't read 25 it. I'm sorry to say they just -- I don't believe I would,	Page 99 1 were knowledgeable about PCBs? 2 A When I came to work for Monsanto, the first 3 medical department or industrial medical meeting I went to, 4 one of the pillars of industrial medicine was a Dr. T. 5 Lyle, L-y-l-e, Haslett, H-a-s-l-e-t-t, who was, as I say, 6 one of the pioneers of industrial medicine, and their 7 medical department continued all through the years. 8 I know they had an active industrial hygiene 9 department. Dr. Spiker -- whether it's Dr. or Mr. Spiker 10 -- wrote to us, wrote to Wheeler quite frequently. They 11 had a very active medical department, a very active 12 industrial hygiene department, and as I said also, they had 13 contracted out work for PCB with Vinotigan, a consultant 14 who was in those early days probably the rating 15 toxicologist in the country. 16 Q And did you believe when you were employed by 17 Monsanto that Westinghouse was a responsible company? 18 A Oh, no question about it. 19 MR. CARNEY: I have no further questions. 20 MR. McCREA: I have no additional questions 21 and would ask that the deposition be signed by Dr. Kelly. 22 MR. CARNEY: I would agree to that. 23 THE WITNESS: After reading it. 24 MR. CARNEY: I hate to make you read it again, 25 but we would, I think, both appreciate that.
Page 98 1 either, if I saw a cautionary statement that was half a 2 dozen paragraphs long on a label. I wouldn't. You just 3 get to where you just don't pay any attention to it. So we 4 have our labels short, concise, filled with the information 5 that's needed, how to protect yourself against any ill 6 effect, whether that ill effect was fire, explosion or 7 danger to your health. 8 Q Doctor, you mentioned in your cross 9 examination testimony when Mr. McCrea was asking you 10 questions that you walked away from, that Monsanto walked 11 away from a product, a profitable product. Did Monsanto 12 walk away from the environmental problem? 13 A No, I didn't say I walked away. That was Ed 14 Bock, the president. What he meant, they were talking 15 about the sales and they were talking about the profit and 16 he said, "I don't care about the sales or the profit. If 17 we can't contain this from the environment, we're going to 18 walk away from it," and that didn't mean he was going to 19 sweep the problem under the rug. He meant we're going to 20 walk away from manufacturing and selling the product. 21 Q Did Monsanto sweep the environmental problem 22 under the rug? 23 A They certainly did not. 24 Q When -- To your knowledge, did Westinghouse 25 have a medical director and an industrial hygienist who	Page 100 1 STATE OF MISSOURI) 2) 3 COUNTY OF JEFFERSON) 4 I, Sheila C. Irvin, a Notary Public within and for 5 the State of Missouri, do certify that pursuant to agree- 6 ment there came before me at the offices of Communitronics 7 Corporation, 1907 South Kingshighway, in the City of St. 8 Louis, State of Missouri, DR. R. EMMET KELLY, a witness of 9 lawful age, who was by me first duly sworn to testify the 10 whole truth of his knowledge touching the matters in 11 controversy herein; that thereafter, the witness was 12 examined and said examination was reduced to shorthand by 13 me on the day, between the hours, at the place and in that 14 behalf first aforesaid, and later transcribed into 15 typewriting, and was subscribed to by the witness this 16 _____ day of _____, A.D., 1990; and said 17 deposition is now herewith returned to and filed in this 18 Court. 19 IN WITNESS WHEREOF, I have hereunto set my hand and 20 Seal this 24th day of July, A.D., 1990. 21 MY COMMISSION EXPIRES SEPTEMBER 26, 1992. 22 23 _____ 24 Tax of \$1,798.70 to: SHEILA C. IRVIN, 25 Husch, Eppenger, et al. Notary Public, within and 26 100 North Broadway for the State of Missouri 27 St. Louis, MO. 63102 28

1 COURT MEMO
 2 IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS
 3 STATE OF MISSOURI
 4
 5 Glenn Brown, et al. vs. Monsanto Company
 6 862-00694
 7
 8 CERTIFICATE OF OFFICER AND
 9 STATEMENT OF DEPOSITION CHARGES
 10
 11 DEPOSITION OF DR. R. EMMET KELLY
 12 TAKEN ON BEHALF OF THE DEFENDANT
 13 6/16/1990
 14 Name and address of person or firm having custody of
 15 the original transcript:
 16 Amanda Russo
 17 Husch & Eppenberger
 18 190 Carondelet Plaza, Suite 600
 19 St. Louis, MO 63105
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1 ORIGINAL TRANSCRIPT TAXED IN FAVOR OF:
 2 Amanda Russo
 3 Husch & Eppenberger
 4 190 Carondelet Plaza, Suite 600
 5 St. Louis, MO 63105
 6 Total:
 7
 8 Upon delivery of transcripts, the above
 9 charges had not been paid. It is anticipated
 10 that all charges will be paid in the normal course
 11 of business.
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 14 St. Louis, Missouri 63101
 15 IN WITNESS WHEREOF, I have hereunto set
 16 my hand and seal on this _____ day of _____
 17 Commission expires
 18 _____
 19 Notary Public
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 24
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