

In The Matter Of:

*WALTER OWENS, et al. v.
MONSANTO COMPANY*

*WILLIAM B. PAPAGEORGE, P.E.
March 13, 2001*

*BROWN REPORTING, INC.
ATLANTA, AUGUSTA, ROME & SAVANNAH
1740 PEACHTREE STREET, N.W.
ATLANTA, GA USA 30309
(404) 876-8979 or (800) 637-0293*

*Original File 0313PAPA.ASC, 176 Pages
Min-U-Script® File ID: 3735898460*

Word Index included with this Min-U-Script®

Page 1

[1] IN THE UNITED STATES DISTRICT COURT
[2] FOR THE NORTHERN DISTRICT OF ALABAMA
[3] EASTERN DIVISION
[4] WALTER OWENS, et al.,)
[5] Plaintiffs,)
[6] vs.) CIVIL ACTION FILE
[7] MONSANTO COMPANY,) NO. CV-96-J 0440-E
[8] Defendant,)
[9]
[10]
[11] DEPOSITION OF
[12] WILLIAM B. PAPAGEORGE, P.E.
[13]
[14] March 13, 2001
[15] 10:00 a.m.
[16]
[17] 1355 The Peachtree Building
[18] 7th Floor
[19] Atlanta, Georgia
[20]
[21]
[22] Marcia W. Welch, CCR-A-172
[23]
[24] BROWN REPORTING, INC.
[25] 1740 PEACHTREE STREET
ATLANTA, GEORGIA 30309
(404) 876-8979

Page 2

[1] APPEARANCES OF COUNSEL
[2]
[3] On behalf of the Plaintiffs:
[4] LARRY WRIGHT, Esq.
[5] Mitchoff & Jacks, L. L. P.
[6] 111 Congress Avenue
[7] Suite 1010
[8] Austin, Texas 78701
[9]
[10] On behalf of the Defendant:
[11] JERE F. WHITE, JR., Esq.
[12] Lightfoot, Franklin, White, L.L.C.
[13] The Clark Building
[14] 400 29th Street North
[15] Birmingham, Alabama 35203-3200
[16] and
[17] DAVID M. MOORE, II, Esq.
[18] Smith, Helms, Mullis & Moore, L.L.P.
[19] 300 North Greene Street
[20] Suite 1400
[21] Greensboro, North Carolina 27401
[22]
[23]
[24]
[25]

Page 3

[1] WILLIAM B. PAPAGEORGE, P.E.,
[2] having been first duly sworn, was examined and
[3] testified as follows:
[4] CROSS-EXAMINATION
[5] BY MR. WRIGHT:
[6] Q: Mr. Papageorge —
[7] MR. WHITE: Before I forget it, let me
[8] say this. Number one, we would like to
[9] reserve the right to read and sign, and,
[10] number two, Larry, as we mentioned before the
[11] deposition started, Mr. Papageorge is here in
[12] response to two of the topics of your
[13] 30(b)5 — I think it's 30(b)(6), excuse me,
[14] Deposition Notice of February 19th.
[15] The two topics are, the first one,
[16] Mr. Papageorge did participate in the reasons
[17] for the cessation of the production of PCBs
[18] at the Anniston plant, and then the second
[19] topic is that — that he is here to address
[20] is he is familiar with the undertaking of
[21] providing warnings to customers and the
[22] indemnification issue.
[23] MR. WRIGHT: Thank you.
[24] Q: (By Mr. Wright) All right.
[25] Mr. Papageorge, I'm just going to jump right in.

Page 4

Page 6

[1] not going to talk to you about depositions
[2] because you've been deposed enough. Let's take that
[3] first subject on the 30(b)(6) Notice, the shutting
[4] down of the Anniston PCB facilities. Why was it
[5] done?

[6] A: I can think of two reasons at the
[7] moment. One is that, by that time, Monsanto had
[8] stopped selling PCBs for half of its business, which
[9] left the amount — or the need for PCBs equal to the
[10] production capabilities of either plant, the one in
[11] Sautet, S-a-u-g-e-t, and the unit at Anniston,
[12] Alabama. The question then was do we want to
[13] produce PCBs at two localities, and it's controlled
[14] quite a bit by economics. Do you want two labor
[15] groups producing the same products?
[16] And the decision was based primarily on
[17] which of the two facilities could be shut down as
[18] far as PCB production was concerned and still
[19] produce the quality and type of PCBs required by the
[20] remaining customers.

[21] The decision was then made to concentrate
[22] it at the Krummrich plant, which was the bigger
[23] plant and had a lot more capabilities in terms of
[24] maintenance force, management group, and all the
[25] units that go to making a plant, as compared

Page 5

[1] to Anniston, which was a smaller plant and could not
[2] provide the support that an operating unit might
[3] require.

[4] Q: Is that the end of your answer?

[5] A: I believe so, yes.

[6] Q: Okay. Is it your testimony that the
[7] threat of the Justice Department to file suit
[8] against Monsanto for pollution downstream from the
[9] Anniston plant in 1971 had no effect on the decision
[10] to stop producing PCBs in Anniston?

[11] A: Definitely.

[12] Q: How do you know that, sir?

[13] A: Well, I was actively participating in all
[14] matters relating to PCBs and Monsanto and its
[15] customers. At no time was that issue you just
[16] described perceived as being important to base a
[17] judgment on. It just didn't support anything that
[18] we knew about PCBs, and it would have been really
[19] perceived by many as irresponsible activity when it
[20] comes to an important group of products.

[21] Q: It would be irresponsible to base at
[22] least part of your decision on the fact that the
[23] Federal Government is getting ready to sue you over
[24] pollution?

[25] MR. WHITE: Object to form.

[1] MR. WRIGHT: You can answer write.

[2] MR. WHITE: It mischaracterizes his
[3] testimony. He can answer.

[4] Q: (By Mr. Wright) You can answer.

[5] A: The definition of irresponsible is
[6] subjective and depends on the perception of the
[7] listener. There was nothing that my contacts with
[8] government representatives indicated that they would
[9] pursue that route.

[10] Q: Have you not seen the memos that say that
[11] Mr. White of the EPA here in Atlanta told the
[12] Monsanto plant representatives that he was going to
[13] recommend a Justice Department suit against
[14] Monsanto?

[15] MR. WHITE: Object to the form.

[16] THE WITNESS: I have seen that and I
[17] recall it, but —

[18] Q: (By Mr. Wright) You were not present at
[19] the meeting, correct, sir?

[20] A: I'm sorry?

[21] Q: You were not present at that meeting?

[22] A: That's correct.

[23] Q: Well —

[24] MR. WHITE: I don't think he finished
[25] his answer. Were you going to say something

Page 7

[1] else, Mr. Papageorge?

[2] Q: (By Mr. Wright) You said you recalled
[3] it. I was just wondering —

[4] A: I recall the memorandum and the reference
[5] to that statement.

[6] Q: Okay.

[7] A: But I also was very aware that the
[8] individual who made that remark did not have the
[9] influence within the government structure to have
[10] his opinion followed and the lawsuit filed.

[11] Q: In other words, Monsanto had more
[12] influence with the government than Mr. White from
[13] the EPA had?

[14] MR. WHITE: Object to the form. That's
[15] not what he said.

[16] THE WITNESS: I would not define it
[17] that way, sir. I would suggest that the
[18] information available to Monsanto and to the
[19] government and to the universities did not
[20] support that action.

[21] Q: (By Mr. Wright) Let's go back to your
[22] personal knowledge. When were you first made aware
[23] of the government's, through Mr. White's indication,
[24] that a lawsuit would be filed against Monsanto
[25] Anniston as a result of pollution from the Monsanto

Page 8

[1] Anniston facility?
[2] MR. WHITE: Object to form.
[3] Q: (By Mr. Wright) You can answer.
[4] A: When you say "when," I just don't
[5] remember any specific dates.
[6] Q: Then, I assume it's possible that you
[7] didn't have notice of that until long after it had
[8] occurred?
[9] MR. WHITE: I object, Larry. He has
[10] told you he is familiar. You're
[11] mischaracterizing his testimony.
[12] MR. WRIGHT: I would respectfully
[13] request that you not coach this eminently
[14] unneeding of coaching witness.
[15] MR. WHITE: I respectfully request you
[16] not mischaracterize his testimony.
[17] MR. WRIGHT: I will do the best I can
[18] within the constraints of the
[19] cross-examination.
[20] Q: (By Mr. Wright) Sir, you can answer the
[21] question. Is it possible you didn't hear about that
[22] until long after the memo had been issued?
[23] MR. WHITE: What do you mean by "long
[24] after," Larry?
[5] Q: (By Mr. Wright) You can answer,

Page 9

[1] Mr. Papageorge.
[2] A: I have difficulty with the use of the
[3] word "long," because —
[4] Q: Months?
[5] A: — time was flying at that point —
[6] Q: Let's assume —
[7] A: — in this program.
[8] Q: Let's define it as months.
[9] A: As months?
[10] Q: Yes.
[11] A: It could have been months, sir, but I
[12] just don't recall how many.
[13] Q: Could it have been years?
[14] A: At most, two years.
[15] Q: All right.
[16] A: At most.
[17] Q: Now, with regard to the decision to shut
[18] down the Anniston facility, who was that decision
[19] made by?
[20] A: I was not present in the office of the
[21] person making the decision, but a decision of that
[22] type, and I can mention to you normally within
[23] Monsanto, was made by the general manager of the
[24] unit within Monsanto that is assigned the
[25] responsibility of plants.

Page 10

[1] Q: Who would that have been in 1971?
[2] A: Howard Minkler.
[3] Q: Is Mr. Minkler still alive?
[4] A: No.
[5] Q: Would he have made the decision by
[6] himself?
[7] A: Well, he, of course, uses his staff, and
[8] he listens to their advice; and his staff, at that
[9] time, advised him to — advised him of the need for
[10] shutting down one of the units and suggested that
[11] the Anniston plant be the one to shut down.
[12] Q: Okay. Let me ask you this: Were you a
[13] part of his staff during that period of time?
[14] A: Not of Mr. Minkler's staff.
[15] Q: Were you present at any meetings where
[16] his staff advised him that one of the plants needed
[17] to be shut down?
[18] A: No.
[19] Q: Were there any written documents
[20] evaluating the options of either, A, shutting down a
[21] plant at all, or, B, deciding which plant to shut
[22] down? Were there any writings?
[23] A: I recall what I'm going to call minutes
[24] of the meeting held by various members of
[25] Mr. Minkler's team, of which I was a member.

Page 11

[1] Q: All right. When was that meeting that
[2] those minutes applied to held?
[3] A: 1971.
[4] Q: And where was the meeting held?
[5] A: In St. Louis.
[6] Q: When was the last time you saw those
[7] minutes?
[8] A: This morning.
[9] Q: Okay.
[10] MR. WRIGHT: I don't think I have seen
[11] those, Jere. I may have.
[12] MR. WHITE: Yeah, you have. It's in
[13] all the material that has been produced.
[14] MR. WRIGHT: You going to get that?
[15] MR. MOORE: Yes.
[16] MR. WHITE: If you can get a clean
[17] copy.
[18] MR. MOORE: I don't know that I can get
[19] a clean copy, but I can identify it.
[20] Q: (By Mr. Wright) Any other writings that
[21] you're aware of that relate to either the decision
[22] to shut down one of the Anniston plants, or the
[23] decision regarding which Anniston plant to shut
[24] down?
[25] A: I don't recall any.

Page 12

[1] Q: Okay. So this one document is all of the
[2] documents that you've seen, I assume?

[3] A: Yes.

[4] Q: Was that the usual course of business for
[5] Monsanto when making a decision of that magnitude,
[6] to not have any written documents relating to
[7] investigations of options, recommendations, or any
[8] other written documents?

[9] A: When you talk about written documents,
[10] you mean one that refers to — like the one we
[11] talked about earlier?

[12] Q: Well, what you have told me is that you
[13] recall there being one document related to this
[14] decision of whether to shut down a plant and which
[15] plant to shut down, and that's the minutes of this
[16] meeting that we've talked about?

[17] A: Correct.

[18] Q: Okay. And what I'm asking you now is was
[19] it the normal course of Monsanto's business, in
[20] 1971, to not put anything else in writing about that
[21] magnitude of a decision?

[22] MR. WHITE: I'm not trying to
[23] interfere. He just says he recalls one. He
[24] didn't say that is the only one, Larry.

[25] Q: (By Mr. Wright) You can answer, sir.

Page 13

[1] A: Well, the decision, like the shutting-
[2] down of one of the two PCB units, is a rare type of
[3] decision, and in my personal experience, I haven't
[4] seen any decision of that magnitude being made and
[5] put in writing. It just didn't occur.

[6] Q: Okay.

[7] A: Now, the opposite decision, let's install
[8] a unit to make chemical "X" in which the request is
[9] included we need so many dollars to do this, they go
[10] out almost — well, once a month. There are many of
[11] those.

[12] Q: Okay.

[13] A: So the communications do take place when
[14] you add, but when you delete a production unit, that
[15] doesn't happen often enough to create a library of
[16] documents.

[17] Q: Well, when we talk about the magnitude of
[18] the decision, I think you'll agree that shutting
[19] down this multimillion dollar production facility
[20] was a large decision in 1971?

[21] A: That's difficult to describe because the
[22] decision to stop selling was really the large
[23] decision, and you're now left with empty tanks. The
[24] question is, which of the empty tanks are you going
[25] to get rid of. It's almost a balancing act. It's

Page 14

[1] not any larger at one plant than it was at the
[2] other.

[3] Q: But it's a balancing act that you would
[4] expect to be documented by memoranda at least
[5] evaluating the options, correct? In other words,
[6] you talked about, for example, that you don't want
[7] to have two labor groups.

[8] Which labor group do you want to keep?
[9] Do you want to keep the union labor group in
[10] Illinois or do you want to keep the nonunionized
[11] labor group in Alabama?

[12] That would be something that people would
[13] want to evaluate, and I would have expected there to
[14] be written memoranda discussing those considerations
[15] and other considerations regarding this major
[16] decision.

[17] MR. WHITE: Object to the form.

[18] Q: (By Mr. Wright) Is that not correct?

[19] A: That's not necessarily typical. All of
[20] this could have taken place in Mr. Minkler's
[21] office. That's it.

[22] MR. WRIGHT: Can I mark this?

[23] MR. WHITE: Sure.

[24] MR. WRIGHT: I'm going to mark as
[25] Exhibit Number 1, the memo — or the notes, I

Page 15

[1] guess, that you were describing a moment ago.

[2] (Plaintiffs' Exhibit 1 was marked for
[3] identification.)

[4] MR. WHITE: I think they're minutes.

[5] MR. WRIGHT: If I could just have a
[6] second to look at it.

[7] (Discussion ensued off the record.)

[8] Q: (By Mr. Wright) Let's go on the record.

[9] All right. Mr. Papageorge, now that
[10] we've got these memos or these minutes, does it
[11] refresh your recollection that, in fact, pollution
[12] concerns at Anniston were a factor in the decision

[13] to shut down the Anniston production facility?

[14] MR. WHITE: Object to the form. Is
[15] there a particular part that you're referring
[16] to, Larry, just for the sake of time.

[17] MR. WRIGHT: It's actually throughout
[18] the memo.

[19] Q: (By Mr. Wright) Paragraph 2 discusses
[20] whether or not it might justify spending PCB
[21] pollution control capital at Anniston as a
[22] consideration. Item 4 is entitled Can We Get —
[23] there is a delta, and I believe that stands for
[24] pollution — well, Can We Get Capital for Anniston
[25] Pollution, and then it gives estimates of capital

Page 16

[1] necessary for Anniston pollution control. It talks
[2] about a ten ppb target at Snow Creek, and talks
[3] about minimizing chlorinated terphenyl losses to
[4] postpone pressure on the use of 5432 in Pydrauls.
[5] This is perhaps easier than for PCBs.
[6] Then Howard Bergen opined that if we do
[7] our homework well in the other decision areas, we
[8] can get the capital needed to support the decision
[9] and JRS — who is JRS?
[10] A: He is the author of this document.
[11] Q: Mr. Savage?
[12] A: James Savage.
[13] Q: The capital differences is \$200 million
[14] more at Anniston. And then in Paragraph 7, which is
[15] entitled Do Legal/PR, which I assume means public
[16] relations?
[17] A: Yes.
[18] Q: Do legal and public relations
[19] considerations dictate, and the answer seems to be
[20] not quite. While recent Illinois regulatory
[21] activity indicates some threat that PCB control at
[22] WGK could become politically hot, Bill Papageorge -
[23] that's you - stated that the Law and Medical
[24] Departments and others would welcome a decision to
[25] shut down Anniston liquid Aroclor since the legal

Page 17

[1] threats are more imminent and the problems more
[2] visible.
[3] Now, isn't one of the legal threats that
[4] was more imminent the threat by the Justice
[5] Department to sue Monsanto over pollution at the
[6] Anniston facility?
[7] A: I believe you're referring to a case that
[8] was filed, and, as I recall, it was named after a
[9] fish, B-a-s-s; and covered industry in Alabama not
[10] specific to PCBs; and as far as the Anniston plant
[11] was concerned, as best I can recall, the Anniston
[12] plant was dropped from that legal activity.
[13] Q: Hadn't that been done before this memo
[14] was ever conceived, sir?
[15] A: Well, yes, but the thought was still in
[16] the Legal Department's mind.
[17] Q: Okay. So your testimony is that the
[18] Legal and Medical Departments at Monsanto were more
[19] afraid of a defunct Bass lawsuit than they were of
[20] an imminent Justice Department Federal Government
[21] lawsuit?
[22] MR. WHITE: Well, now, defunct legal
[23] lawsuit, that's incorrect.
[24] Q: (By Mr. Wright) You can answer, sir.
[25] MR. WHITE: Also argumentative.

Page 18

[1] Q: (By Mr. Wright) You can answer.
[2] A: I personally did not perceive the Bass
[3] lawsuit as the lawsuit of concern. It was only an
[4] example of the kind of thing that could happen out
[5] of the clear blue, and the Legal Department just
[6] didn't want to face that for any reason.
[7] Q: So you maintain your position that
[8] Monsanto didn't care a bit about Mr. White's threat
[9] to have the Justice Department sue Monsanto as a
[10] result of pollution downstream from the Anniston
[11] facility?
[12] MR. WHITE: He didn't say — now, come
[13] on, Larry. I'm not —
[14] MR. WRIGHT: Let him testify.
[15] MR. WHITE: I'm not going to let you
[16] take his prior testimony and intentionally
[17] misstate it.
[18] MR. WRIGHT: Let him testify, Jere.
[19] MR. WHITE: Hold on here. I can state
[20] my position.
[21] MR. WRIGHT: No, you can't. You can
[22] say I object to the form of the question.
[23] MR. WHITE: Don't answer the question
[24] because of the form.
[25] MR. WRIGHT: I don't think you can say

Page 19

[1] that.
[2] MR. WRIGHT: I just did. You're
[3] intentionally misstating his testimony.
[4] Q: (By Mr. Wright) Do you refuse to answer
[5] the question I posed to you, sir?
[6] A: Yes, sir.
[7] Q: Did you understand the question I posed
[8] to you?
[9] A: I think I did.
[10] Q: All right.
[11] MR. WRIGHT: Let's put a mark by this
[12] so we can discuss it with the Judge later.
[13] Q: (By Mr. Wright) Item Number 3, PCB
[14] Pollution — by the way, this statement about the
[15] Law and Medical Departments, that was your
[16] statement, correct? That was your part of the
[17] presentation, correct?
[18] A: I am quoted as such.
[19] Q: All right. Do you have any reason to
[20] believe that they quoted you improperly?
[21] A: Only that I do not personally involve
[22] myself as a spokesman for other professional
[23] departments. So that doesn't fit in with my
[24] behavior and recollection.
[25] Q: Well, do you have a specific recollection

Page 20

Page 22

[1] everything you stated at this meeting?
[2] A: No. I didn't keep notes, no.
[3] Q: And Mr. Savage did keep notes, correct,
[4] apparently?
[5] A: I have to assume that. I don't know
[6] that.
[7] Q: Was Mr. Savage an incompetent
[8] note-keeper?
[9] A: Oh, I — sir, I'm not qualified to judge
[10] note-keeping.
[11] Q: All right. Was he ever censured or
[12] disciplined for incompetent note-keeping, to your
[13] recollection?
[14] A: Not to my knowledge.
[15] Q: All right. In the conclusions, one of
[16] the conclusions is that "PCB pollution capital at
[17] Anniston should be held to a minimum, consistent
[18] with the timing of the phaseout and reasonable
[19] control of chlorinated terphenyl."
[20] Do you recall anything else about that
[21] discussion other than what's written here?
[22] MR. WHITE: About the particular
[23] discussion on that subject?
[24] MR. WRIGHT: Yes.
[25] MR. WHITE: Okay.

Page 21

Page 23

[1] THE WITNESS: I don't recall any
[2] specifics, other than they were obviously
[3] referring to a different chemical, the
[4] chlorinated terphenyl, and I don't know the
[5] connection between PC — I don't recall the
[6] connection between PCB pollution and
[7] chlorinated terphenyl.
[8] Q: (By Mr. Wright) Okay. And can you think
[9] of any connection between PCB pollution and
[10] chlorinated polyphenols?
[11] MR. WHITE: In connection in that
[12] decision or that discussion? Or in general?
[13] MR. WRIGHT: In general.
[14] THE WITNESS: In general? No, I don't
[15] recall.
[16] Q: (By Mr. Wright) All right. Now, on this
[17] last page, which is 150414, there is a flow chart,
[18] correct?
[19] A: Yes, I see that.
[20] Q: And again, Paragraph 7 is listed there,
[21] and it says, "Do legal/public relations
[22] considerations dictate," and if you say yes, it
[23] ins mothball Anniston, and if you say no, it means
[24] keep Anniston manned, correct? Is that the way the
[25] flow chart works?

[1] A: Yes.
[2] Q: Now, do you have any other recollection
[3] about the decision to shut down Anniston other than
[4] what we've discussed already this morning?
[5] A: Well, sir, I find that difficult to
[6] answer. There is so many things that could be
[7] thought of.
[8] Q: Well, can you think of any of them?
[9] A: Where does a fence go up and where does a
[10] road run and what do you do with the tanks.
[11] Q: Well, do you remember any of that?
[12] A: Not specifically, but in general, when
[13] you dismantle an operating unit, you end up with a
[14] different appearance and a different approach.
[15] Q: Okay. Well, what's your general
[16] recollections about this issue? What I'm trying to
[17] do is get closure on this issue, and so, you know,
[18] I'm — I need — you're the man that Monsanto
[19] designates as the man with the most knowledge on
[20] this subject, and I need to know what the knowledge
[21] is?
[22] MR. WHITE: Well, a man who
[23] participated in that decision.
[24] Q: (By Mr. Wright) Well, is there anybody
[25] with more knowledge than you on this issue?

[1] A: Of course, the people that were
[2] physically present at the plant when this
[3] dismantling occurred.
[4] Q: Well, they would be more knowledgeable
[5] about the dismantling?
[6] A: Yes.
[7] Q: But what I'm talking about right now is
[8] the decision to shut down Anniston. Is there
[9] anybody else who has more knowledge of that area
[10] than you do and, if so, who is it so that I can go
[11] talk to them?
[12] A: I don't know of anybody that is — was
[13] closer to this subject than I was, sir.
[14] Q: Is Mr. Savage still alive?
[15] A: The last I heard, yes.
[16] Q: In the St. Louis area?
[17] A: To the best of my knowledge.
[18] Q: Okay. Is Howard Bergen still alive?
[19] A: No.
[20] Q: Is Mr. Richards still alive?
[21] A: No.
[22] Q: Okay. Let me go back to my original
[23] question.
[24] Is there anything else about the decision
[25] to shut down one of the plants or specifically shut

Page 24

[1] down Anniston, is there anything else about that
[2] decision that you know, other than what we have
[3] already talked about?
[4] A: Oh, that's such a broad question. I
[5] don't know what to — how to respond to that.
[6] Q: Well —
[7] A: When you say is there anything else I
[8] know about the shutdown?
[9] Q: Yes, sir. Is there anything else you
[10] know about that decision other than what we have
[11] already talked about and what is set forth on this
[12] Exhibit Number 1?
[13] A: Nothing comes to mind, no.
[14] Q: All right. Thank you, sir.
[15] Now, with regard to the indemnity issue,
[16] I'm not going to ask you very many questions because
[17] you've been asked about that extensively in other
[18] depositions.
[19] I assume you stand by all your other
[20] prior deposition testimony on that subject?
[21] A: If I recall them correctly.
[22] Q: Okay. Let's talk about the other
[23] depositions that you have given regarding PCBs. Do
[24] you remember the first deposition that you gave in a
[25] case in which human health effects were alleged?

Page 25

[1] MR. WHITE: Involving PCB?
[2] MR. WRIGHT: Yes, sir.
[3] THE WITNESS: Human health effects?
[4] MR. WHITE: In which it was alleged.
[5] THE WITNESS: I'm sorry?
[6] MR. WHITE: In which it was alleged.
[7] THE WITNESS: I understand. I just
[8] don't remember PCBs and human health.
[9] Q: (By Mr. Wright) Okay.
[10] A: Only in informal and open kinds of
[11] discussions with the FDA and so on.
[12] Q: No, no, I'm talking about lawsuits, now?
[13] A: Yeah, that's what I meant.
[14] MR. WHITE: Like this lawsuit.
[15] THE WITNESS: I just don't remember any
[16] lawsuits that addressed the human health
[17] effect.
[18] Q: (By Mr. Wright) Okay. You don't
[19] remember any other lawsuits in which people have
[20] claimed that they have been injured or they may be
[21] injured in the future by PCBs before this one?
[22] A: I'm having a hard time remembering a case
[23] that involved a church near the plant, Anniston
[24] plant.
[25] Q: Yeah. There was the Mars Hill case?

Page 26

[1] A: Mars Hill. I think they touched on human
[2] health effects there.
[3] Q: Other than the Mars Hill case, you can't
[4] think of any other case?
[5] A: I just can't think of any.
[6] Q: Have there been any?
[7] A: I believe that human health effects would
[8] have been so important, you know, that I would never
[9] forget it. I just don't remember.
[10] Q: All right. Are you as sure about that as
[11] you are about your recollections about the closing
[12] of the plant or other items?
[13] A: Yes.
[14] Q: Okay. Let's move on, then.
[15] A: Sure.
[16] Q: You started to tell us about a lawsuit
[17] that Bass filed against Monsanto and others. Do you
[18] remember when that lawsuit was filed?
[19] A: Late Sixties or early Seventies. Late
[20] Sixties is as close as I can come.
[21] Q: Now, you were the plant manager at
[22] Anniston in — from 1965 to 19 — to the end of '69,
[23] as I recall; is that correct?
[24] A: That is correct.
[25] Q: So the Bass lawsuit was filed during your

Page 27

[1] tenure there at the plant?
[2] A: If my memory serves me correct, I recall
[3] hearing about it then, but that's as far as it
[4] went. There was nothing specific about what — for
[5] what I was responsible for producing at the plant
[6] and the Bass lawsuit.
[7] Q: Who was Mr. Fuhrmeister?
[8] A: He was the superintendent reporting to me
[9] in charge of the — what we call the Technical
[10] Services Department, the laboratory, the engineers
[11] and the technical people.
[12] Q: All right. And Mr. Fuhrmeister — well,
[13] let me just ask you. Was there ever a concern at
[14] the Anniston plant about mercury releases into the
[15] waterways downstream from the Anniston plant?
[16] A: I don't personally recall any reference
[17] to a mercury release, although the potential for it
[18] occurring was there because it was used in one of
[19] the processes.
[20] Q: You don't think any mercury was ever
[21] released from the Monsanto Anniston plant while you
[22] were there?
[23] A: I don't recall getting any reports of
[24] that type.
[25] Q: Do you recall there being any concern at

Page 28

[1] "I about mercury having been released or being
[2] eased from the plant?
[3] A: No, I don't.
[4] Q: Now, you know and I assume you knew back
[5] then that mercury is a toxic material?
[6] A: Yes.
[7] Q: And the hazards of mercury poisoning
[8] are — and mercury accumulation in fish and other
[9] animals is fairly well documented, has been for a
[10] long time?
[11] A: Well, there are reports that document it,
[12] and, like everything else, it depends on the amount
[13] and the time of exposure and the creature exposed.
[14] Q: Is mercury more toxic than PCBs?
[15] A: I'm not a health authority. I don't
[16] know.
[17] Q: Okay.
[18] (Plaintiffs' Exhibit 2 was marked for
[19] identification.)
[20] MR. WHITE: What is that, Larry?
[21] MR. WRIGHT: It's a letter to
[22] Fuhrmeister.
[23] MR. WHITE: What's the date on it?
[24] MR. WRIGHT: January 5th, '67.
[25] Q: (By Mr. Wright) Who was Gene Coley?

Page 29

[1] A: I'm sorry? Gene Coley?
[2] Q: Yes.
[3] A: Gene Coley —
[4] Q: This is from your Anniston days.
[5] A: God, I'm trying to place the name.
[6] Q: Let me hand this to you and maybe this
[7] will stimulate the recollection. Why don't you take
[8] a minute to look at that document. That's, again, a
[9] document dated January 5th, 1967, DSW 107013.
[10] (A recess was taken).
[11] Q: (By Mr. Wright) Let's go back on the
[12] record. Have you had chance to look at Document
[13] Number 2?
[14] A: I have.
[15] Q: All right. First question, I guess, does
[16] that bring back any recollections about who Gene
[17] Coley was?
[18] A: Only that he was involved with the unit
[19] at the Anniston plant that produced chlorine and
[20] caustic soda.
[21] Q: Okay. And this memo to Mr. Fuhrmeister
[22] documents a meeting held on January 5th, 1967, on
[23] methods of reducing the mercury content in the
[24] streams leaving the plant. It talks
[25] about, "Objectives being set, and work has begun

Page 30

[1] immediately to put into effect a plan to investigate
[2] mercury concentrations in Snow Creek at its
[3] confluence with Choccolocco Creek. A long-range
[4] method for reducing the mercury methods and an
[5] immediate means of reducing mercury levels."
[6] Then you were copied on this memo,
[7] correct?
[8] A: Yes.
[9] Q: All right. Does that refresh your
[10] recollection that there was a concern, at least in
[11] January of 1967, about mercury leaving the plant and
[12] polluting the streams below the plant?
[13] MR. WHITE: Object to the form.
[14] THE WITNESS: I honestly don't remember
[15] that.
[16] Q: (By Mr. Wright) All right. About this
[17] same time, or I guess — yeah, about this same time,
[18] Monsanto had hired a man from the University of
[19] Mississippi to investigate the waterways downstream
[20] from the Anniston plant, correct?
[21] A: Yes.
[22] Q: That's a Mr. Denzel Ferguson?
[23] A: Yes.
[24] Q: Mississippi State University, I'm sorry.
[25] And he —

Page 31

[1] (Discussion ensued off the record.)
[2] Q: (By Mr. Wright) What we are going to
[3] mark as Exhibit 3 is one of his reports. This one,
[4] in particular, is dated February the 8th of 1967 and
[5] you're the lead copy on this document, report,
[6] correct?
[7] A: Yes.
[8] (Plaintiffs' Exhibit 3 was marked for
[9] identification.)
[10] Q: (By Mr. Wright) I'm not going to take
[11] the time to go through the entire report. I'm going
[12] to look back here, however, in his conclusions. At
[13] the bottom of the first paragraph of his conclusion
[14] paragraph on the last page of his report, it says —
[15] well, earlier, it talks about "Snow Creek is the
[16] only environment unfit for aquatic life." Then he
[17] says: "Several materials in Snow Creek appear to
[18] accumulate in fishes caged downstream, but the
[19] biological properties of these compounds are
[20] unknown."
[21] Do you see that in this document?
[22] A: Well —
[23] Q: The last sentence in the first paragraph
[24] of his conclusions?
[25] MR. WHITE: Why don't you read the

Page 32

[1] whole conclusion here just to put it in
[2] context.
[3] THE WITNESS: I have read the
[4] conclusions.
[5] Q: (By Mr. Wright) Okay. The question is
[6] focused on the last paragraph — I'm sorry, the last
[7] sentence in the first paragraph where it
[8] says: "Several materials in Snow Creek appear to
[9] accumulate in fishes caged downstream, but the
[10] biological properties of these compounds are
[11] unknown."
[12] Do you see that?
[13] A: I see that.
[14] Q: My question to you is, sir, did you see
[15] that back in '67 when you got this report?
[16] A: Yes.
[17] Q: Okay. Did you consider investigating to
[18] determine what the materials in Snow Creek that are
[19] accumulating in fishes were?
[20] A: We continued our program with the
[21] Professor and he was to pursue the next step.
[22] Q: All right.
[23] A: Now that we found them, what do they do.
[24] Q: All right. Were you concerned to find
[25] out that materials were accumulating in fishes?

Page 33

[1] A: I was concerned with the possible
[2] biological effects. Presence alone does not mean
[3] problems.
[4] Q: Well, in fact, it wasn't too long after
[5] this that presence of PCBs accumulating in fish and
[6] other organisms was perceived to be a significant
[7] environmental problem?
[8] MR. WHITE: Object to the form.
[9] THE WITNESS: I don't know what you
[10] mean by "significant environmental problem."
[11] Again, presence was the theme, the important
[12] observation.
[13] Q: (By Mr. Wright) For PCBs accumulating in
[14] animals and other fish?
[15] A: Yeah, we're talking PCBs presence in many
[16] samples.
[17] Q: Yes. You're unwilling to acknowledge
[18] that the presence of PCBs accumulating in fish and
[19] other animals and even in humans, eventually, was a
[20] significant problem?
[21] MR. WHITE: Talking about back at that
[22] time?
[23] MR. WRIGHT: No. I'm saying
[24] eventually. The original question that I got
[25] an argument on, and I'm trying to clear it

Page 34

[1] up, is whether or not the accumulation of
[2] PCBs eventually became a significant problem
[3] in these United States.
[4] MR. WHITE: You can answer that.
[5] THE WITNESS: I do not personally have
[6] any information that ties the accumulation of
[7] PCBs in these samples to biological effects
[8] or health effects.
[9] Q: (By Mr. Wright) Well, I thought one of
[10] the first effects that was noted from an
[11] accumulation was the death of shrimp in
[12] Escambia Bay, correct?
[13] A: What is correct is the — the death of
[14] shrimp? I'm not aware of the death of shrimp other
[15] than juvenile shrimp in the laboratory at the — I
[16] forget the laboratory, the Federal — Commercial
[17] Fisheries Laboratory. They found that baby shrimp
[18] are affected by PCBs.
[19] The Escambia Bay situation, there was
[20] presence of PCBs in the water creatures, but there
[21] was no mention made of deaths.
[22] Q: Well, I guess that — there was a concern
[23] that PCBs were killing shrimp in Escambia Bay and
[24] whether or not anybody ever found the dead baby
[25] shrimp to do an autopsy on them, I don't know that,

Page 35

[1] but there was a concern about PCBs killing shrimp in
[2] Escambia Bay or in other waterways?
[3] MR. WHITE: Object to the form,
[4] argumentative.
[5] Q: (By Mr. Wright) You can answer.
[6] A: I just don't remember that conclusion.
[7] Q: Well, not the conclusion, but do you
[8] remember the concern?
[9] MR. WHITE: Could you give him a hint
[10] as to the concern?
[11] MR. WRIGHT: I have given the best hint
[12] I can give, which is a concern about killing
[13] shrimp in Escambia Bay or any other waterway
[14] in and around the United States of America.
[15] MR. WHITE: Okay.
[16] Q: (By Mr. Wright) Do you recall there ever
[17] being such a concern?
[18] A: The only concern that I am aware of is
[19] the concern of this laboratory as it related to baby
[20] shrimp and not the adult shrimp.
[21] (Plaintiffs' Exhibit 4 was marked for
[22] identification.)
[23] Q: (By Mr. Wright) Now, here is another
[24] report from Mr. Ferguson. This is Number 4. He
[25] talked about Gene Coley dying, I guess, suddenly?

Page 36 [1] : Oh, now I remember. [2] Q: Do you remember? [3] A: Automobile accident, yeah, okay. [4] Q: And he talks about — well, I will turn [5] this around. I can read upside down maybe better [6] than you can. It talks about how — on this cover [7] page, he talks about how the fish downstream were [8] dead and the fish upstream were alive. [9] Do you see that? [10] A: Let me read it. [11] Q: I'm not going to ask you about everything [12] that's in there just for the sake of time. [13] A: I have scanned the report. [14] Q: All right. What I was going to ask you [15] about is on this first page and, again, this is [16] copied to you, correct? [17] A: Yes. [18] Q: On this first page, in the second [19] paragraph, the last sentence, he says: [20] "On Saturday," talking about his student, "he found [21] that all caged fish below Anniston were dead. Those [22] upstream were alive." [23] Do you see that? [24] A: I do. [25] : All right. And in the last sentence of Page 37 [1] the next paragraph, he says: "We hope to collect [2] some dead fish for mercury analyses at the same [3] time." [4] Do you see that? [5] A: I do. [6] Q: Does that stimulate any recollection of a [7] mercury concern for pollution below Anniston? [8] A: No more than all the other chemicals [9] listed in that report. [10] Q: Well, I don't see any other chemicals [11] listed in the report, except for parathion. Is that [12] what you're talking about? [13] A: Parathion and then they have several [14] others on the following page. [15] Q: Well, why don't you see if you can find [16] any others besides parathion? [17] A: I have found, on looks like Page 3, a [18] reference to DDE, DDT, and DDD, which Monsanto did [19] not manufacture, and lindane, which Monsanto did not [20] manufacture. There is a reference to malathion [21] which is sort of a cousin to parathion. [22] Q: Okay. [23] There is further reference to a different [24] species, a different sample, DDE, DDT, and lindane, [25] and the DDT, DDE are also referred to on Page — I	Page 38 [1] think it's Page 4. It's not clear. [2] Q: Go ahead. [3] A: DDT, DDE, heptachlorepoide, and down [4] below, again, there is methyl parathion, malathion, [5] parathion, heptachlorepoide, DDE, DDD, DDT. [6] Q: With all due respect, Mr. Papageorge, the [7] only chemical that is mentioned in the letter dated [8] 2nd, March, 1967, is mercury. [9] MR. WHITE: Excluding the attachments? [10] MR. WRIGHT: The rest of it is a report [11] and it talks about a lot of other things that [12] you just mentioned; but in the cover letter [13] where it says: "We hope to collect some dead [14] fish for mercury analysis at the same [15] time," that's the only chemical mentioned [16] on that page, which is the cover letter, and [17] the one that's signed by Denzel Ferguson, [18] correct? [19] MR. WHITE: In all fairness, Larry, for [20] purposes of everybody, the letter also says [21] "I'm enclosing a summary of recent [22] findings," so I think the attachment is part [23] of the letter. [24] MR. WRIGHT: All right. [25] MR. WHITE: But it is what it is. Page 39 [1] MR. WRIGHT: I will swear you next [2] year. [3] MR. WHITE: All right, good. [4] Q: (By Mr. Wright) Am I correct that the [5] only chemical mentioned in his cover letter, where [6] he specifically says, we hope to collect some dead [7] fish to do an analysis, is mercury? [8] A: Specifically, he mentions mercury [9] analyses, but his last sentence: "I'm enclosing a [10] summary of some recent findings," which includes [11] everything he has tested for to date. [12] Q: That's right. [13] A: And mercury remains — remains to be [14] looked after. [15] Q: That's right. [16] The next report is dated the 10th of [17] March of '67. Again, you're a — you are copied on [18] the document, and — [19] MR. WHITE: That is 5? [20] MR. WRIGHT: Yes. [21] (Plaintiffs' Exhibit 5 was marked for [22] identification.) [23] Q: (By Mr. Wright) I guess it's the third [24] paragraph, Dr. Ferguson — or Mr. Ferguson, whatever [25] he is, reports a meeting with someone who talks
---	---

Page 40

[1] about cattle dying after drinking from Dry Creek.
[2] Do you see that?
[3] MR. WHITE: Take your time to read it.
[4] Do you need some more time, Mr. Papageorge?
[5] THE WITNESS: I'm sorry. I'm reading
[6] the last sentence here.
[7] MR. WRIGHT: Please continue, then.
[8] THE WITNESS: Okay. Do you have a
[9] question, sir?
[10] Q: (By Mr. Wright) Again, I didn't intend
[11] to spend a lot of time on the document, but in the
[12] third paragraph, this man from Mississippi State
[13] talks about an interview that he apparently had with
[14] a man at a gas station that told him about fish
[15] kills at the Highway 202 bridge, and that several
[16] cattle died as a result of drinking from Dry Creek,
[17] and that on Friday afternoons, the creek is a real
[18] mess, but Mr. Ferguson said, since he saw live
[19] mosquito fish, he doesn't think the creek is as bad
[20] as the man says it is.
[21] Did you see that?
[22] A: I see that.
[23] Q: Did you see that back in 1967?
[24] A: Yes.
[25] Q: Okay. Did that make you want to look

Page 41

[1] further into what this man had been talking about?
[2] A: No, because I felt that Mr. Fuhrmeister
[3] and Dr. Ferguson were both capable of addressing
[4] this situation, and would eventually come up with
[5] suggestions, understandings, impressions that they
[6] got from their studies.
[7] Q: Okay. Then in the next paragraph, and I
[8] will just go ahead and read it: "I gave the
[9] Mississippi State Chemical Lab two bluegills and a
[10] carp for mercury analysis. They seemed to doubt
[11] that they could do a quantitative analysis but
[12] promised to do their best. If you people have
[13] competent chemists who could do mercury analyses on
[14] some of the dead fish from downstream, I suggest
[15] that you get them busy, especially in view of the
[16] cholinesterase data below."
[17] Did you see that?
[18] A: Yes.
[19] Q: What did you do in response to his
[20] request?
[21] A: Mr. Ferguson — I'm sorry,
[22] Mr. Fuhrmeister arranged for the Monsanto Laboratory
[23] to look at those samples for mercury.
[24] Q: Do you know what they showed, because
[25] with all due respect, I don't believe I have seen

Page 42

[1] those results?
[2] A: Of course, I don't remember the numbers,
[3] but the levels were so low and it was up to
[4] Dr. Ferguson to evaluate them in terms of —
[5] Q: Let me ask you, do you remember the
[6] levels being low or are you assuming the levels were
[7] low?
[8] A: No. I remember they were low, but I
[9] don't remember the specific numbers.
[10] Q: What does "low" mean to you for mercury?
[11] A: Well, I have forgotten what guidelines I
[12] was given by the knowledgeable people in terms of if
[13] the level is of this magnitude, and your samples
[14] show another magnitude, it's either lower or
[15] higher. I don't remember the specifics.
[16] MR. WHITE: Let's take a couple of
[17] minutes' break.
[18] (A recess was taken.)
[19] MR. WHITE: Let's put this on the
[20] record. This is something that you have and
[21] I'm just trying to head off something that
[22] will save you and me both some time.
[23] When you were asking Mr. Papageorge
[24] about legal actions and threats and you were
[25] alluding to the Justice Department's

Page 43

[1] involvement, this is the only thing I'm aware
[2] of. It's a November 11th, 1971, memo that
[3] references that meeting which was about a
[4] year later than that earlier memo.
[5] I'm not trying to do your job. Like I
[6] say, I'm trying to save both of us time. I
[7] think that's what you were thinking about
[8] when you were asking the questions, but
[9] that's for your use and consideration.
[10] MR. WRIGHT: Okay. Thank you.
[11] Q: (By Mr. Wright) Let's get rolling.
[12] (Plaintiffs' Exhibit 6 was marked for
[13] identification.)
[14] Q: (By Mr. Wright) Exhibit 6 is a Technical
[15] Services Department Monthly Report for January of
[16] '69. One quick question I have about these
[17] Technical Services Department Reports —
[18] MR. WHITE: I'm sorry, what is the
[19] date?
[20] MR. WRIGHT: January '69, Technical
[21] Services Department Monthly Report.
[22] Q: (By Mr. Wright) Was this the very first
[23] monthly report or was this in existence when you got
[24] to the plant?
[25] A: Oh, it's — it was in existence for many

Page 44

Page 46

[1] rrs prior to that.
[2] MR. WRIGHT: Okay. This is the very
[3] first one that I think we've got, and, Jere,
[4] let me just ask you and — I don't know better
[5] how to do it than just to ask you if you can
[6] get Mike or, David, maybe you can go back to
[7] your fancy archive and find us the other
[8] monthly reports prior to January of '69.
[9] MR. WHITE: Here's what I want you to
[10] do for me. My memory is not good. Could you
[11] write me a letter?
[12] MR. WRIGHT: Let me write it right
[13] now. My memory is, I'm afraid, probably
[14] worse than yours.
[15] MR. WHITE: Okay. And, yeah, if there
[16] are other ones, we will take a look at it.
[17] MR. MOORE: Put the caption for that
[18] report on there so it will help us identify
[19] them.
[20] MR. WRIGHT: Okay. I guess we don't
[21] need to go too far back, but let's go back to
[22] the beginning of your tenure, so let's say
[23] '65.
[24] THE WITNESS: I have no way of
[25] knowing. This probably goes back decades

[1] reduce it?
[2] A: No, I don't.
[3] Q: All right. And then it talks about
[4] "mercury-acid wash tank now in operation." What
[5] did the mercury-acid wash tank do?
[6] A: Mercury is used in the production —
[7] Q: Of chlorine?
[8] A: — of chlorine given off and lye or
[9] caustic soda remaining behind. That caustic soda
[10] creates a slurry or a sludge. The way to clean that
[11] out is to expose this sludge-mercury bottom layer to
[12] some acid to sort of wash it off.
[13] Q: What are you washing off? Are you
[14] washing off the mercury or the caustic or what?
[15] A: It's primarily a caustic with whatever
[16] mercury is picked up in this washing process.
[17] Q: All right. Is that what creates the
[18] mercury butter?
[19] A: Yes.
[20] Q: All right. So the mercury butter is a
[21] waste product, essentially?
[22] A: Yes.
[23] Q: And it says it's being accumulated in the
[24] wash tank. "To date no butter has been
[25] acid-washed." Do you know what that means?

Page 45

Page 47

[1] (indicating).
[2] MR. WRIGHT: We don't need to go back
[3] decades.
[4] MR. MOORE: We don't know how many we
[5] have got or what period of time.
[6] MR. WRIGHT: When did you get to the
[7] plant, do you think?
[8] THE WITNESS: '65.
[9] MR. WRIGHT: Do you remember when in
[10] '65?
[11] THE WITNESS: Oh, let me think. About
[12] June.
[13] MR. WRIGHT: Let's go from June of '65
[14] to January of '69.
[15] Q: (By Mr. Wright) Now, on this one, the
[16] only thing I want to ask you about is, over here, it
[17] has different sections for different categories of
[18] the plant, and I'm not going to ask you about all of
[19] them. I am going to ask you, on the chlorine plant,
[20] there is an item that says, "reduce mercury usage
[21] to .75 pounds of mercury per ton of chlorine."
[22] Do you see that?
[23] I do.
[24] Do you remember what the amount of
[25] mercury per ton of chlorine was before you tried to

[1] A: Well, it indicates that they had not been
[2] using this acid, I talked about —
[3] Q: All right.
[4] A: — to clean off that mercury and get the
[5] soda ash or caustic soda off of it.
[6] Q: What happened to the mercury butter waste
[7] before the acid wash process in '69?
[8] A: As best I remember, it was being
[9] landfilled in steel drums.
[10] Q: And the landfill, I assume, would be the
[11] south landfill up the mountain there?
[12] A: I never referred to it as the south, but
[13] it's up the mountain. I do remember that.
[14] Q: All right. Back in those days, you
[15] called it the dump?
[16] A: I never used the word dump. It's
[17] landfill.
[18] Q: Okay. Did the other people at Anniston
[19] call it the dump?
[20] A: I — not in front of me.
[21] Q: Okay. Would you be surprised to see
[22] memos and other publications referring to it as the
[23] dump back in those days?
[24] MR. WHITE: I object to whether he
[25] would be surprised.

Page 48

[1] Q: (By Mr. Wright) You can answer. As the
[2] plant manager for five years, would you be surprised
[3] to see it referred to as the dump?

[4] A: Well, I would hesitate jumping to the
[5] conclusions about the use of the word dump because
[6] there were other spots in the plant that served as
[7] places where waste was deposited and they were
[8] called dumps. Eventually, that material that was
[9] deposited was sent back to the original process to
[10] be recovered, so everything didn't go up the hill.

[11] Q: All right. I'm going to move on, you'll
[12] be delighted to know.

[13] (Plaintiffs' Exhibit 7 was marked for
[14] identification.)

[15] Q: (By Mr. Wright) Now, let's look at
[16] Exhibit 7. This is a Progress Report from the
[17] Technical Services Department dated February 24th of
[18] '69, and you're up there at the top of the Anniston
[19] receipt list, and this is from E. G. Wright and then
[20] W. F. Taffee is in parenthesis. Do you see that?

[21] A: I do.

[22] Q: And the title of the document is Anniston
[23] Plant Departmental Waste Audits, and the purpose is
[24] to "identify the major waste components from all the
[25] operating departments and to provide reliable flow

Page 49

[1] data so that waste losses can accurately — can be
[2] accurately calculated," correct?

[3] A: I see that.

[4] Q: That's the purpose of this document?

[5] A: Yes.

[6] Q: All right. In the Departmental Audits
[7] section, the Chlorine Department, they say they're
[8] not going to audit the Chlorine Department because
[9] that's going to be shut down. "However, samples
[10] from the east limestone pit will be analyzed for
[11] mercury because of the toxicity of this material."

[12] Do you see that?

[13] A: I do.

[14] Q: Did you agree with that plan of action?

[15] A: Yes.

[16] Q: Why — now, you were involved, I assume,
[17] in the decision to shut down the mercury — I'm
[18] sorry, to shut down the chlorine plant which used
[19] the mercury, correct?

[20] A: Yes.

[21] Q: Okay. Why did you decide to shut down
[22] the chlorine plant that used the mercury in 1969?

[23] MR. WHITE: If you need to refer to
[24] this document.

[25] MR. WRIGHT: I don't think you're going

Page 50

[1] to get any help from that. I wish you did
[2] because then I wouldn't have to ask the
[3] question.

[4] MR. WHITE: Feel free to look at it.

[5] It might help.

[6] THE WITNESS: As I remember, at this
[7] point in time, we could buy chlorine in tank
[8] cars and didn't have to generate our own at
[9] the plant, and this avoided what to do with
[10] the caustic soda and all these other problems
[11] associated with the manufacturing process.

[12] Q: (By Mr. Wright) Including the release of
[13] mercury into the environment downstream from the
[14] Anniston plant?

[15] MR. WHITE: Object to the form.

[16] THE WITNESS: That was not a factor.

[17] Q: (By Mr. Wright) Okay. And, again, your
[18] testimony, based upon only your recollection, I
[19] assume, is that the environmental considerations
[20] from the release of mercury that were being studied
[21] by Mr. Ferguson and Mr. — reported to Fuhrmeister,
[22] but reported by Ferguson and later on Sutkass &
[23] Gunning, that a concern about mercury had no impact
[24] on the decision to shut down the chlorine plant in
[25] '69?

Page 51

[1] A: Well, those are two separate questions to
[2] be answered.

[3] One is, is the mercury present in
[4] quantities and places where it could cause
[5] unacceptable damage as compared to the purchase of
[6] chlorine based on an economic decision. You buy
[7] this pure material in tank car lots and it's
[8] competitive market, it flows into the plant, you
[9] hook them up and use it, so there is two types of
[10] decisions that were involved.

[11] One was not related to the other at all.

[12] Q: Okay. That's my question. We've spent a
[13] good part of this morning going over documents that
[14] indicate that, at about this same time, your
[15] consultants were concerned about finding mercury in
[16] fish downstream from the plant or documenting the
[17] amount of mercury in fish downstream from the
[18] plant.

[19] We have seen documents that indicate that
[20] you folks at the plant were concerned about
[21] minimizing mercury losses from the plant, and your
[22] testimony is that those factors, i.e., any
[23] environmental considerations, had nothing to do with
[24] the decision to shut down the chlorine —

[25] MR. WHITE: Object to the form.

Page 52

[1] Q: (By Mr. Wright) — plant?
[2] A: Very true in that when you say the
[3] personnel at the plant were concerned about losses
[4] of mercury, this reflects the fact that when you
[5] shut down a unit, you're going to create losses that
[6] were not noticed when you're operating a unit as it
[7] should be, carefully, under control, and at a
[8] uniform rate and all the other considerations that
[9] take place.
[10] Q: Well —
[11] A: So —
[12] MR. WHITE: Let him finish.
[13] MR. WRIGHT: I'm sorry. Were you
[14] through?
[15] THE WITNESS: I lost my line of
[16] thought, but it had to do with — and then
[17] Dr. Ferguson, he always — well, he reported
[18] the presence, but if you will recall in one
[19] of those exhibits, at least I think I read in
[20] here, is that he did not associate any
[21] biological effects on the amount of mercury
[22] present.
[23] Q: (By Mr. Wright) With all due respect,
[24] Mr. Papageorge, I don't think that's in any of those
[25] documents that we've gone through this morning.

Page 53

[1] However, I think what you might be referring to is
[2] where he said — and I don't know what it is is
[3] accumulating in the fish, and I don't know what the
[4] biological effects of that are. I did not mean to
[5] imply that that's mercury. Frankly, I think that's
[6] the PCBs he was finding.
[7] A: When you say I, you were quoting —
[8] Q: I'm quoting myself.
[9] A: Oh, yes.
[10] Q: Because I think you were assuming that I
[11] was referring to that unknown material as mercury,
[12] because that's how you answered the question just
[13] now.
[14] MR. WHITE: Is that a question or
[15] what?
[16] MR. WRIGHT: We're trying to get things
[17] straight.
[18] MR. WHITE: Oh, okay. It was a he
[19] thought, I thought.
[20] MR. WRIGHT: That's exactly right. He
[21] thought something, I think, which was
[22] incorrect and I may have led him to that
[23] incorrect assumption based on my questions.
[24] MR. WHITE: That's fine.
[25] THE WITNESS: I included mercury with

Page 54

[1] all these other chemicals that Dr. Ferguson
[2] had found, the DDT, DDE. You remember that
[3] long list, lindane and on and on, and
[4] although he doesn't specifically say
[5] biological effects due to mercury were not
[6] noticed, he just said no biological effects
[7] were noticed. In my thinking, that includes
[8] all chemicals they identified.
[9] Q: (By Mr. Wright) Well, with all due
[10] respect, Mr. Papageorge, the chemicals that you
[11] talked about were in the report. In the letter in
[12] which he's requesting information, he's asking to
[13] have the amount of mercury in the fish quantified,
[14] and he doesn't have that quantified yet, apparently,
[15] and I have not ever seen the documents where that
[16] was quantified?
[17] A: You're right. In the fish?
[18] Q: In the fish?
[19] A: Not in the environment that the fish are
[20] swimming in?
[21] Q: Right. I haven't seen that quantified,
[22] either, but right now we're talking about fish.
[23] A: Okay.
[24] Q: Do you remember any documents that were
[25] given to you where it said, we don't have anything

Page 55

[1] to worry about with regard to mercury? Mercury is
[2] not a problem in Anniston? Do you remember any
[3] documents like that from the '65 to '69 timeframe?
[4] A: Documents, no, but the thought prevailed
[5] throughout the plant.
[6] Q: This is just some recollection that you
[7] have from back in those days?
[8] A: I just don't recall.
[9] Q: Okay. The document that we do have,
[10] however, which is one — one of which is Exhibit
[11] Number 6, talks about an effort to reduce mercury
[12] usage by putting in some new technology, correct?
[13] This is in January of '69.
[14] A: That's during the shutdown?
[15] Q: It's before the shutdown?
[16] A: Well, preparing for it, okay.
[17] Q: Now, what — well, were there any
[18] documents, and I'm going to ask you a similar
[19] question to what I asked you first thing this
[20] morning, were there any documents that documented
[21] the decision process for shutting down the mercury
[22] using caustic chlorine operation?
[23] A: I don't recall any.
[24] Q: Was that a decision that you made?
[25] A: No.

Page 56

[1] Q: Who made that decision?
[2] A: Well, there's several people that come to
[3] mind. They were part of the division's
[4] manufacturing team, people like Homer Carter, Paul
[5] Hodges. I forget all their names, that were in
[6] place at that time, and they reported to
[7] Mr. Minkler.
[8] Q: So there were people in St. Louis that
[9] would have had to have been involved in the decision
[10] to shut down the caustic chlorine operation?
[11] A: Yes.
[12] Q: Were there any memos that went back and
[13] forth from Anniston to St. Louis about the decision
[14] to shut down the caustic chlorine operation?
[15] A: Not that I'm aware of.
[16] Q: In the normal course of Monsanto's
[17] business, would you expect there to be memos going
[18] from Anniston to St. Louis or from St. Louis to
[19] Anniston regarding the decision to shut down the
[20] caustic chlorine operation?
[21] A: No memos. Maybe a telephone call.
[22] Q: Would there have been calculations to
[23] determine whether it would, in fact, save money to
[24] shut down the caustic chlorine plant and start
[25] buying chlorine by railcar lots?

Page 57

[1] A: I never saw any.
[2] Q: In fact, do you have firsthand knowledge
[3] that any such calculation was ever made?
[4] A: No, I don't.
[5] Q: In fact, sir, you do not have any
[6] firsthand knowledge about why the decision was made
[7] to shut down the caustic chlorine plant in 1969?
[8] MR. WHITE: Object to the form. He has
[9] already testified to that.
[10] Q: (By Mr. Wright) You can answer, sir.
[11] A: Would you define "firsthand knowledge"
[12] for me?
[13] Q: Involvement in the decision?
[14] A: In other words, was I in the room when
[15] this was discussed, that kind of thing?
[16] Q: Yes.
[17] A: No.
[18] Q: Okay. Now, the other thing I wanted to
[19] talk about with regard to Exhibit Number 7 is in the
[20] HCL Department, and HCL is hydrochloric acid,
[21] correct?
[22] A: Correct.
[23] Q: That was a by-product of the Aroclor
[24] manufacturing process, correct?
[25] A: Correct.

Page 58

[1] Q: In the HCL Department, it says: "The
[2] primary waste products from this department are
[3] hydrochloric acid and organic (Aroclor) material."
[4] Did I read that correctly?
[5] A: Yes.
[6] Q: The next sentence says: "Presently, the
[7] HCL Department is sewerage approximately one-third
[8] of the production or three" — is that 30,000 pounds
[9] per day, an M with a line over the top of it?
[10] A: That is thirty — I think it's — has to
[11] be 30,000.
[12] Q: Either it's 30,000 or 30 million and
[13] 30 million would be a bit much?
[14] MR. WHITE: Would be a little high.
[15] Q: (By Mr. Wright) Yeah. So, "a third of
[16] the production or 30,000 pounds per day (based on
[17] theory). This causes problems with the operation of
[18] the east limestone pit."
[19] That's the one that the Aroclor wastes
[20] flowed into as well, correct?
[21] A: Yes.
[22] Q: "These losses are intentional because the
[23] operation is trying to purge organic material," and
[24] Aroclors are organic material, correct —
[25] A: Yes.

Page 59

[1] Q: — "from the HCL system in an attempt to
[2] produce Staley Grade (organic-free) hydrochloric
[3] acid." So at least as of the time of this memo,
[4] Monsanto was intentionally sewerage material that it
[5] knew contained Aroclors?
[6] MR. WHITE: Object to the form. The
[7] document speaks for itself.
[8] Q: (By Mr. Wright) Correct? Do you recall
[9] that?
[10] A: Well, your use of the word "sewerage" —
[11] Q: That's in the document. That's not my
[12] word. It's the word that's in the document.
[13] A: Well, okay. In this instance, this
[14] sewerage means it was directed to this pit which was
[15] lined with crushed rock, in which the hydrochloric
[16] acid would be neutralized, and any other materials
[17] associated with it would settle to the bottom, and
[18] every so often, that pit would be cleaned up.
[19] Q: Well, Mr. Papageorge, aren't you aware
[20] from other documents and, frankly, from your
[21] experience there at the plant, that all of the
[22] organic material, i.e., Aroclors did not settle to
[23] the bottom but, in fact, some of it escaped from
[24] that pit into the drainage ditch and eventually into
[25] Snow Creek?

Page 60

[1] : Well, I'm aware of this drainage ditch
[2] and the use of the expression Snow Creek is —
[3] we have to be careful how we use that, because the
[4] plant used that expression to describe any facility
[5] that allowed water to drain from the area.
[6] Now, Snow Creek was not named for that
[7] one segment, didn't carry the name, but the plant
[8] personnel, when talking to each other, they would
[9] use the expression Snow Creek. That was quite
[10] common.
[11] Q: Right.
[12] A: And developed years ago.
[13] Q: The drainage ditch eventually flowed into
[14] or joined, let's say, Snow Creek?
[15] A: Yes.
[16] Q: Downstream from the plant?
[17] A: Yes.
[18] Q: And what you're saying is that sometimes
[19] the plant personnel would refer to the drainage
[20] ditch as Snow Creek?
[21] A: Correct.
[22] Q: Okay. Even though it was really a
[23] tributary to Snow Creek?
[24] A: All right, a tributary is a good word,
[25]

Page 61

[1] Q: Okay. But, in any event, the question
[2] was, in fact, all of the organic material, i.e.,
[3] Aroclors, did not stay lodged in the limestone pit
[4] but, in fact, some of that material escaped from the
[5] pit and into the drainage ditch and wherever the
[6] drainage ditch went, correct?
[7] MR. WHITE: Is that a question?
[8] MR. WRIGHT: Yes.
[9] THE WITNESS: Well, my hesitation is
[10] due to the fact where we started talking
[11] about the HCL Department and the sewerage —
[12] Q: (By Mr. Wright) Right. We talked about
[13] the material leaving the HCL Department,
[14] 30,000 pounds a day?
[15] A: Right.
[16] Q: And the intentional sewerage of that
[17] material, trying to purge the organic material,
[18] i.e., Aroclors?
[19] A: Right.
[20] Q: And that that ended up going to the
[21] limestone pit?
[22] A: Correct.
[23] : And my question to you is, is it not true
[24] that some of the organic material that ended up in
[25] the limestone pit eventually left the limestone pit

Page 62

[1] in the effluent and went into the drainage ditch
[2] downstream from the plant?
[3] A: Some did, but not necessarily with this
[4] HCL transfer.
[5] Q: Well, the HCL transfer took it into the
[6] limestone pit?
[7] A: Yes.
[8] Q: And then that joined all the other
[9] Aroclor wastes that ended up in the pit, correct?
[10] A: Yeah, yeah.
[11] Q: And some of that ended up leaving the pit
[12] and going into the drainage ditch?
[13] A: Some did.
[14] Q: Okay. Now, the other division that's
[15] discussed here, the other department allotted, is
[16] the Aroclor Department, and it talks about the
[17] primary wastes from the Aroclor Department are
[18] organic material and hydrochloric acid, again,
[19] "These wastes originate from spills, pump leaks, or
[20] when the department is being cleaned up. Due to the
[21] recent concern over chlorinated biphenyl (Aroclor)
[22] compounds being found in the" — I can't read that.
[23] Can you read it?
[24] MR. WHITE: Tissues.
[25] Q: (By Mr. Wright) — "...tissues of some

Page 63

[1] animals and the effects of these compounds on the
[2] palatability of fishes, it is necessary that the
[3] quantities of this material being lost is
[4] determined."
[5] Did I read that correctly?
[6] A: You did.
[7] Q: Did you agree with that notion at the
[8] time you got this memo?
[9] A: Certainly. This is part of our overall
[10] study.
[11] Q: All right. I want to talk for just a
[12] second in general about your time at the Anniston
[13] plant?
[14] A: Okay.
[15] Q: Monsanto had instructions to its workers
[16] about safety, correct, there at the Anniston plant?
[17] A: Yes.
[18] Q: And, specifically, the instructions to
[19] the Aroclor workers were to try not to breathe
[20] Aroclor vapors, to try not to get Aroclor on your
[21] skin, and to try not to get any Aroclor in your
[22] mouth, correct?
[23] A: Correct.
[24] Q: And Monsanto had precautions or
[25] instructions that were intended as precautions to

Page 64

[1] the workers. For example, Monsanto issued the
[2] workers impermeable gloves to use when handling
[3] Aroclors, correct?
[4] A: Correct.
[5] Q: Monsanto issued Aroclor workers clothes
[6] to wear that Monsanto would then launder for them to
[7] minimize their exposure to Aroclors?
[8] A: Correct.
[9] Q: Monsanto issued covers for shoes of an
[10] impermeable material to minimize workers' feet
[11] contact with Aroclors, correct?
[12] A: Correct.
[13] Q: In some instances, Monsanto issued what
[14] I'm going to call rubber suits to protect workers
[15] from Aroclor contact?
[16] MR. WHITE: Rubber suits?
[17] MR. WRIGHT: I'm going to call them
[18] rubber suits. They were an impermeable
[19] material. I don't know whether it was rubber
[20] or plastic or what.
[21] THE WITNESS: I don't recall any
[22] instance that required that degree of
[23] protection.
[24] Q: (By Mr. Wright) You don't remember them
[25] having those suits available to them if they chose

Page 65

[1] to wear them?
[2] A: Those suits were available to all
[3] employees at the plant, including me, and we never
[4] had a situation that resulted in a shower of PCBs
[5] requiring wearing such protection.
[6] Q: I can't find my reference in one of your
[7] previous depositions.
[8] MR. WHITE: Your rubber suit
[9] reference?
[10] MR. WRIGHT: Right.
[11] Q: (By Mr. Wright) In any event, there were
[12] rubber suits available, but you don't remember
[13] whether they were worn in the Aroclor area during
[14] your time?
[15] A: I don't recall any incident requiring
[16] such protection.
[17] Q: All right. Did Monsanto have a lotion
[18] that employees could rub on their skin to prevent
[19] Aroclors from being absorbed through the skin?
[20] A: We had some of that, yes.
[21] MR. WHITE: What type of lotion was
[22] it?
[23] THE WITNESS: I don't know how to
[24] describe it. The idea was to provide a coat
[25] that nothing could penetrate. It wasn't

Page 66

[1] specific to PCBs. It helped a little bit.
[2] Q: (By Mr. Wright) Now, Monsanto also
[3] recommended that its employees take a shower at the
[4] end of its — Aroclor employees take a shower at the
[5] end of their shift?
[6] A: Well, that was one of the
[7] recommendations, yes.
[8] Q: Monsanto also recommended that if an
[9] employee got Aroclor on his skin, he would
[10] immediately, if his job allowed it, wash it off?
[11] A: Correct.
[12] Q: Monsanto advised its employees that they
[13] should not ingest PCBs?
[14] A: That is correct.
[15] Q: I'm going to get you on the rubber suit
[16] deal. I'm still looking for that. Maybe I'm not.
[17] Well, I guess I'm not, because I think your answer
[18] was the same.
[19] The question in the Scott deposition
[20] was: "Did you have available in the PCB Department
[21] materials that employees could put on the portions
[22] of their skin that they could not cover with some
[23] type of rubberized — that they could not cover with
[24] some type of rubberized material" — actually,
[25] that's the wrong question. Let's hold that

Page 67

[1] thought. Let me ask you this question differently.
[2] In addition to those other materials that
[3] we talked about, there was a rubber-coated skull cap
[4] that the employees could use to keep PCBs off of
[5] their head?
[6] A: Yes.
[7] Q: Okay. And with regard to the clothing
[8] that was issued, was it also true that if they were
[9] doing a job where PCBs might come in contact with
[10] their clothing, that is when they would then wear
[11] the rubber-coated clothing that would keep the PCBs
[12] from coming into contact with their regular
[13] clothing?
[14] MR. WHITE: Are you asking him if he
[15] said that?
[16] Q: (By Mr. Wright) I'm asking you if that's
[17] true. I will just — so that there is no secrets
[18] and I'm not sneaking up on you, that's from
[19] Page 20 —
[20] A: The previous answer I gave was for a
[21] complete outfit.
[22] Q: Okay.
[23] A: The general practice was to put on long
[24] leggings with suspenders to cover the lower parts of
[25] their bodies, depending on the type of job that they

Page 68

[1] e involved in.
[2] A: Like rubberized overalls kind of?
[3] A: Yes, that's a good way to describe it.
[4] MR. WHITE: Or waders.
[5] Q: (By Mr. Wright) And so that was done in
[6] the Aroclor Department from time to time?
[7] A: On occasion, but not too often.
[8] Q: Okay. The bottom line on all of this, is
[9] that Monsanto took whatever measures were necessary
[10] to prevent its workers from coming in contact with
[11] Aroclors?
[12] MR. WHITE: Object to the form.
[13] Q: (By Mr. Wright) To the best of
[14] Monsanto's ability?
[15] A: I know, but I hesitate because the steps
[16] taken to protect the worker was not unique to PCBs.
[17] It applied to many other chemicals produced at the
[18] plant.
[19] Q: Okay. Nevertheless, Monsanto took all
[20] these precautions and gave the workers all these
[21] instructions in an effort to prevent the workers
[22] from coming into contact, their bodies, from coming
[23] into contact with PCBs?
[24] A: Right.
[25] Q: Now, I want to ask you another question

Page 69

[1] about your time there at the Anniston plant. During
[2] your time at the Anniston plant, did you ever warn
[3] the neighbors of the Anniston plant about the
[4] presence of PCBs in the environment outside of the
[5] Anniston plant?
[6] MR. WHITE: Object to the form. What
[7] do you mean in "the environment"?
[8] Q: (By Mr. Wright) By "environment," I mean
[9] air, water, dirt, fish, hogs, anything. Did you
[10] ever warn the neighbors of Monsanto's Anniston plant
[11] about the presence of PCBs in the environment around
[12] the plant, and if so, I would like to know when and
[13] where and who it was and who was present, so forth?
[14] A: Warning the neighbors of the plant would
[15] require good medical and technical information.
[16] That continues to be lacking even to this day.
[17] There is no medical information to share with the
[18] neighbors, and sharing with the neighbors the
[19] analytical methodology and so on serves no purpose.
[20] You had mentioned about the hogs. Yeah,
[21] the neighbors knew about that one. In fact, that's
[22] how we heard about it. These hogs were running
[23] around and we rounded them up and disposed of them,
[24] the so-called owners, they were tuned in, very
[25] much so.

Page 70

[1] Q: Well, they were tuned into the idea that
[2] Monsanto wanted to buy their hogs?
[3] A: Yes, but it also told them that there is
[4] something wrong with those chemicals, and that's why
[5] the hogs were being purchased, and let's avoid this
[6] happening again.
[7] Q: What told them that?
[8] A: When the Monsanto representatives
[9] approached them and said, We want to buy up your
[10] hogs --
[11] Q: Who was that, first of all? Who was the
[12] Monsanto representative?
[13] A: I think Gene Coley.
[14] Q: Were you one of them?
[15] A: No.
[16] Q: In fact, Gene Coley was dead at that
[17] time, sir, wasn't he?
[18] A: Was he? That's why I used the word I
[19] think. That was one of his assignments. Now, it
[20] could have been Bunky Wright who followed him, but
[21] I -- no, Bunky came much later than that. It was
[22] Monsanto individuals speaking for the plant, let me
[23] say that. It wasn't me personally, no.
[24] Q: All right. So you weren't involved in
[25] any discussions with any neighbors of the plant

Page 71

[1] about any kind of pollution outside of Monsanto's
[2] plant?
[3] A: That is true. That's why I had 150
[4] people egging me on.
[5] Q: Okay. Did you assign anyone to advise
[6] the neighbors of Monsanto's Anniston plant about PCB
[7] pollution outside of the plant?
[8] A: No such person was appointed because we
[9] didn't have any good information. We were still
[10] generating information.
[11] Q: Okay. Are you aware that -- well, let me
[12] just ask. After you left Anniston, did you ever
[13] instruct anyone to give any warnings to Monsanto's
[14] neighbors in Anniston, Alabama?
[15] A: There was no reason to give anybody such
[16] warning.
[17] Q: All right. Now, Monsanto, in fact, did
[18] give warnings to its customers in 1971, correct?
[19] A: '71?
[20] Q: Maybe 1970. I might be off a year.
[21] A: '70.
[22] Q: All right. As soon as you got to your
[23] new job, one of the first things that happened was
[24] that Monsanto gave warnings to its customers about
[25] the environmental risks and problems associated with

Page 72

[1] PCBs?

[2] A: Presence was the only thing we had that
[3] was generated and provable. Effects were not
[4] determined as of yet of any kind. And to this day,
[5] they are not determined.

[6] Q: Well, in all fairness, Mr. Papageorge,
[7] you have not kept up with the medical or scientific
[8] literature regarding PCBs's effects on humans or
[9] other animals, have you, sir? Because if you have,
[10] I will argue with you all day about the various
[11] studies and so forth; but I don't think, based upon
[12] other testimony that I've seen, I don't think I need
[13] to do that.

[14] A: Well, I have not kept up-to-date on the
[15] developments that occurred after about 1979 or '80.

[16] Q: All right. Just out of curiosity, have
[17] you seen the most recent ATSDR toxicological profile
[18] for PCBs in which it delineates most, if not all, of
[19] the current knowledge on that subject?

[20] A: I am not even familiar with the acronym
[21] you used.

[22] Q: ATSDR?

[23] A: No.

[24] Q: Well, then, I can move on.

[25] My original question, sir, I think has

Page 73

[1] been answered. My followup question is, based upon
[2] something that you said, were you aware, when you
[3] were the plant manager, that there were hogs being
[4] kept by local residents that were around the
[5] Anniston plant or the landfill?

[6] A: Well, I was informed of that after I left
[7] the plant.

[8] Q: All right. You didn't — you don't
[9] recall seeing them when you were there?

[10] A: I just don't remember them.

[11] Q: Do you remember anything about that
[12] neighborhood when you were there?

[13] MR. WHITE: You mean like where it was,
[14] what it looked like?

[15] MR. WRIGHT: Anything about it, just
[16] anything.

[17] Q: (By Mr. Wright) Tell me where it was,
[18] what it looked like?

[19] A: Nothing stands out, no, sir.

[20] MR. WHITE: Larry, talking about hogs
[21] has made me hungry. Are we at a good
[22] stopping point?

[23] MR. WRIGHT: Why don't you give me ten
[24] more minutes.

[25] MR. WHITE: That's fine.

Page 74

[1] MR. WRIGHT: That will give me a little
[2] bit of closure on this.

[3] What I'm trying to do is wrap up —

[4] MR. WHITE: Wrap up his tenure.

[5] MR. WRIGHT: — wrap up his tenure at
[6] the Monsanto plant and move on to your next
[7] job. Although I do have to step outside of
[8] that a minute to follow up on what you just
[9] said.

[10] Q: (By Mr. Wright) You heard about the hogs
[11] there in Anniston after you moved to St. Louis?

[12] A: As best I can recall, yes.

[13] Q: Do you remember that that was stimulated
[14] by the finding of a dead hog on the landfill?

[15] A: I don't remember that at all.

[16] Q: Okay. How did you hear about the hog
[17] situation in Anniston?

[18] A: I just don't know the — it was a
[19] telephone call, is all I remember.

[20] Q: Do you remember who the call was from?

[21] A: No, I don't.

[22] Q: Do you remember anything about the
[23] telephone call?

[24] A: Not really. It's just that I became
[25] aware of it and that's it.

Page 75

[1] Q: All right. What is the next thing you
[2] heard about the hogs in Anniston after you got this
[3] first telephone call?

[4] A: Well, I don't know whether to include
[5] that with the original understanding, but as part of
[6] that program, it was to —

[7] Q: I'm sorry, what was the original
[8] understanding that you are talking about? I thought
[9] the original understanding was when you got the
[10] telephone call?

[11] A: The telephone call told me several
[12] things. One is we found these hogs roaming on
[13] Monsanto property. They were analyzed and PCBs were
[14] found in their tissues. We arranged to buy up all
[15] these hogs and dispose of them. We also arranged
[16] with the neighbors to keep them off of that Monsanto
[17] property. Those are the points that were covered.

[18] Q: All right. Just out of curiosity, how
[19] were the hogs going to be kept off the property
[20] other than by being bought up? I mean, what is
[21] going to keep new hogs from going on the property?

[22] A: I was left with the impression that a
[23] fence was put up.

[24] Q: I think this may help you a little bit,
[25] sir. We will mark this as Exhibit 8.

Page 76

[1] Plaintiffs' Exhibit 8 was marked for

[2] identification.)

[3] Q: (By Mr. Wright) This is a memo dated

[4] December the 12th — well, December 21st, 1970, from

[5] Scott Tucker to you?

[6] A: Yes.

[7] Q: At the General Offices. This is after

[8] you have already taken your new job?

[9] A: Right.

[10] Q: It sets out the findings of the hog

[11] analysis. And then it says: "E. G. Wright should

[12] be contacted for details regarding the source of

[13] these samples, et cetera"?

[14] A: Right.

[15] Q: Does that help any recollection on that

[16] issue?

[17] A: Yeah. Mr. Wright took over from

[18] Mr. Coley.

[19] Q: Okay.

[20] A: Okay.

[21] Q: So does that — well, do you think it

[22] might have been Mr. Wright that called you on the

[23] phone? Does that help you any? You may not have

[24] any recollection. I'm just wondering if that

[25] ulates —

Page 77

[1] A: He's the most likely person.

[2] Q: Okay. After this phone call that we've

[3] talked about, what is the next thing that you

[4] remember hearing about the hog situation?

[5] A: That's it. I didn't hear anymore.

[6] Q: That was the first and last relating to

[7] that situation?

[8] A: Oh, the subject would come up, but no new

[9] information.

[10] Q: All right.

[11] MR. WRIGHT: Now we can take a break.

[12] (A recess was taken.)

[13] Q: (By Mr. Wright) Let's go back. I want

[14] to turn briefly back to your days as Anniston plant

[15] manager.

[16] Did you ever go up to the landfill there

[17] on the mountain?

[18] A: Yes.

[19] Q: What caused you to go up there?

[20] A: Well, it was part of my attempt to be in

[21] touch with the plant, and every day, I would make at

[22] least one trip — and by "day," I'm talking a

[23] our period, and the landfill would be one of the

[24] areas I would walk around on and look things over,

[25] and I wouldn't cover that every day.

Page 78

[1] I might miss several days, go to other

[2] places in the plant; but to summarize, it was part

[3] of my — of what I feel was my responsibility.

[4] Q: Do you think you were up there on a

[5] weekly basis, on average?

[6] A: That's a good estimate, yeah, a week to

[7] ten days.

[8] Q: So every week or every two weeks,

[9] somewhere along in there, you would go up to "the

[10] dump" — or to the landfill?

[11] A: Yes.

[12] Q: Did you ever see the drums lying on the

[13] side of the bank of the pit?

[14] A: At what point in time?

[15] Q: At any point in time?

[16] A: On one of my early trips, there were some

[17] drums lying on the side.

[18] Q: All right. Is it your testimony that you

[19] corrected that and, from that point on, those drums

[20] were no longer lying on the banks of the pit?

[21] A: Well, I would suggest that the more

[22] appropriate word might be changed that. I don't

[23] know if it was any better or any worse.

[24] Q: How did you change it?

[25] A: I suggested that the drums be placed on

Page 79

[1] wooden pallets and delivered to the site on forklift

[2] trucks and placed shoulder to shoulder, so to speak,

[3] and once they got a line across, to cover it with

[4] the proper depth of soil.

[5] Q: Would that have been in your first year

[6] there at the plant, say?

[7] A: Yeah, within the — yeah, within the

[8] first year.

[9] Q: So by '66, that was the procedure that

[10] was supposed to be taking place up there?

[11] A: Correct.

[12] Q: And I assume that if hadn't been going on

[13] on your regular trips up there, you would have seen

[14] it and corrected it at that time?

[15] A: Certainly, yes.

[16] Q: Okay. What about drainage off of that

[17] landfill, was there any effort to restrict drainage

[18] off of the landfill, and by "drainage," I'm talking

[19] about storm water when it would rain and water would

[20] wash over the area?

[21] A: Well, when you say in an effort to

[22] restrict, I felt personally that this covering with

[23] a mound of dirt over each row of drums would serve

[24] the purpose of directing that water flow over the

[25] chemicals and on down.

Page 80

[1] Q: Is it your testimony that none of those
[2] drums ever leaked, none of them ever got holes shot
[3] in them?

[4] A: I never saw a drum leaking up there.

[5] Q: Okay. So if what you said to be done was
[6] being done, there would have been no PCBs leaking
[7] from that landfill?

[8] A: That's true.

[9] Q: Now, I know you're aware of this, but let
[10] me show it to you anyway. I will mark this as the
[11] next exhibit.

[12] (Plaintiffs' Exhibit Number 9 was marked
[13] for identification.)

[14] Q: (By Mr. Wright) This is Exhibit
[15] Number 9, and it's a document dated March 31st,
[16] 1970, to J. L. Corder. It's from M. B. Mullally,
[17] who was the task force chairman, and the task force
[18] was the task force on the plant dump, and the
[19] document is entitled Recommendations On — let's
[20] see, Recommendations Of Task Force On Plant Dump.

[21] Why don't you take a moment to look at
[22] that?

[23] A: (Witness complies with request of
[24] counsel.)

[25] Q: Let me ask you one question before you

Page 81

[1] finish that. Did you set up the task force on the
[2] plant dump? The reason I ask that, this report is
[3] in March of 1970, and you would have just left the
[4] plant a couple of months before that, so I was just
[5] wondering if maybe you set up the task force on the
[6] plant dump?

[7] A: I recall setting up a group to study the
[8] landfill. I don't know that I personally set up the
[9] task force. I would suggest that Mike Mullally, the
[10] chairman — well, there was, of course, somebody at
[11] the plant who had to set it up, and I would — the
[12] best I can come up with, it had to be the individual
[13] who replaced Mr. Fuhrmeister as the technical
[14] services superintendent, who is — well, the name
[15] escapes me at the moment.

[16] Now, some of these people on this task
[17] force are members of Manufacturing and Technical
[18] Services and Environment, so it's a mixed group.

[19] Q: All of these were your subordinates when
[20] you were the plant manager?

[21] A: Yes, sir.

[22] MR. WHITE: He just wants you to take a
[23] minute to read this document.

[24] THE WITNESS: Okay.

[25] Q: (By Mr. Wright) To be honest, I'm not

Page 82

[1] going to ask you about the entire document. I'm

[2] going to ask you about parts of it.

[3] If you feel like you need to read the

[4] whole thing, I want you to do that; but if you don't

[5] need to read the whole thing, don't think I'm asking

[6] you to read the whole thing.

[7] A: I appreciate that, but sometimes one

[8] paragraph leads to the next and helps my

[9] understanding and recollection. Okay.

[10] Q: Okay?

[11] A: I have scanned the document.

[12] Q: All right. Let me ask you a few specific

[13] questions about it. The first sentence of the

[14] section entitled Problem states: "A serious problem

[15] exists at the present time with the Monsanto dump.

[16] The two main areas of concern are: (1), water

[17] leakage from the PCB dump and, (2), lack of security

[18] throughout the dump area. These two areas create

[19] hazards in the areas of water pollution and in

[20] liability problems."

[21] First of all, did I read that correctly,

[22] first paragraph?

[23] A: Yes.

[24] Q: Were you aware of that when you left the

[25] plant three months earlier?

Page 83

[1] A: Yes.

[2] Q: Okay. Now, the immediate actions that

[3] this dump task force committee recommended was Item

[4] Number 1, to eliminate — it says PCP, but that may

[5] be a problem with the copy. I assume it means PCB

[6] drainage from present dump site. "To accomplish

[7] this, it is recommended that extensive changes be

[8] made to the present dump area. The old drums lying

[9] on the banks of the dump should be moved to the

[10] bottom of the hole."

[11] Now, do you remember seeing the old drums

[12] lying on the bank when you left there in December, a

[13] few months before this memo?

[14] A: No. I saw those dumps, at least they are

[15] described here earlier — remember I described

[16] earlier what I saw.

[17] Q: In '65?

[18] A: And what I requested be done.

[19] Q: Right, and this task force, the dump task

[20] force committee, is saying that that same problem

[21] exists in March of 1970. Is that correct, first of

[22] all?

[23] A: The same type of problem.

[24] Q: The same type of problem?

[25] A: But I don't know if it's the same drums

Page 84

[1] I saw or another row of drums in a different
[2] location.
[3] Q: Okay. And then it recommends dirt being
[4] placed over the top of the drums in the bottom of
[5] the hole and compacted, correct?
[6] A: I don't see the word "compacted."
[7] Q: It's on the next page, but —
[8] A: Oh, all right. It does say that.
[9] Q: All right?
[10] A: Yes.
[11] Q: And that's the same thing you told them
[12] to do back in '65, according to your earlier
[13] testimony, correct?
[14] A: Partially. I did not specify the two
[15] feet.
[16] Q: All right.
[17] A: I wanted a deeper cover.
[18] Q: You wanted more than two feet?
[19] A: Yes.
[20] Q: Do you know why they weren't even putting
[21] any dirt over them, not to mention two feet or more
[22] than two feet, in March of — I mean, in 1970?
[23] A: No, I don't.
[24] Q: All right. Now, there is also a mention
[25] repairing the incinerator. Do you remember the

Page 85

[1] incinerator out there, the teepee incinerator out
[2] there at the dump?
[3] A: Yes, I do.
[4] Q: And do you remember when it last worked?
[5] A: I do not.
[6] Q: Did it work at all during your years
[7] there at Anniston?
[8] A: Yes.
[9] Q: So, it was working — well, was it
[10] working when you got there?
[11] A: Yes.
[12] Q: And it worked for some period after you
[13] got there?
[14] A: Yes.
[15] Q: And then, presumably, it quit working at
[16] some time or do you ever remember it stopping
[17] working?
[18] A: I don't remember the termination of its
[19] operation, but this was used to burn office paper,
[20] wood from pallets, anything that was of that nature,
[21] wood, paper, boxes.
[22] Q: Rags?
[23] A: Rags, yes.
[24] Q: Sawdust?
[25] A: Sawdust, if appropriate, yes.

Page 86

[1] Q: Okay. And the specific answer to my
[2] question is you don't remember it stopping working
[3] before you left there in December of '69?
[4] A: No. It was still in operation when I
[5] left.
[6] Q: All right. Who was responsible for
[7] operating that thing?
[8] A: It's the individual that — it was the
[9] individual who supervised the warehousing operation,
[10] which included trash pickup and movement of raw
[11] materials.
[12] Q: How often would they burn in the teepee
[13] incinerator?
[14] A: I don't remember.
[15] Q: Was it — do you have a recollection of
[16] whether it was daily or weekly or biweekly?
[17] A: That varied depending on the
[18] accumulation.
[19] Q: Would the average have been closer to
[20] daily or closer to weekly or closer to biweekly?
[21] MR. WHITE: If you know, tell him, but
[22] don't guess.
[23] THE WITNESS: I don't know. I can't
[24] measure it.
[25] Q: (By Mr. Wright) All right. It also

Page 87

[1] talks about long-range goals include covering the
[2] material on a regular basis to a minimum of
[3] 18 inches, and digging a trench along the contour of
[4] the mountain of sufficient size to handle the
[5] plant's solid waste for a period of one year
[6] minimum — actually, that's not what I wanted to ask
[7] you about.
[8] Item Number E, if you would look at
[9] that, "Runoff water from the trenches should be
[10] sampled a minimum of once per week (more often in
[11] rainy weather), to make certain that no material is
[12] being lost from the fill."
[13] Do you recall that being a good idea?
[14] A: Yes. That was part of our continuing
[15] program of monitoring, checking, learning about not
[16] only PCBs, but all the chemicals out there.
[17] Q: All right. And I don't have the
[18] document, but I can refer to it. It was actually
[19] Exhibit Number 16 in your Mars Hill deposition.
[20] It was a memo that discussed several
[21] samples being collected from the ditch upstream from
[22] the sump, and the results being 64,800 parts per
[23] billion of 1242 on October 15th, 1970, 35,000 parts
[24] per billion of 1242 on October 21st, and 2800 parts
[25] per billion of 1242 on October 22nd.

Page 88

[1] Do you recall being advised about that
[2] kind of loss from the landfill area?
[3] A: I'm confused about the use of the word
[4] sump.
[5] Q: All right. Were you aware there was a
[6] sump placed at the landfill sometime after this memo
[7] was created in — sometime in 1970?
[8] A: I just don't remember in specifics. I
[9] just can't picture it.
[10] Q: Okay. Let me ask you this: Would a sump
[11] have been a good idea to catch PCBs being washed off
[12] of the landfill?
[13] A: Well, it would certainly catch any waters
[14] coming down, but it's only effective if those waters
[15] are treated properly once you capture them; and I
[16] don't see any evidence that the proper techniques
[17] were recommended to take this water and do something
[18] to try to change it, if it needed a change.
[19] Q: Okay. One evidence of whether it needed
[20] a change would be taking samples of it and trying to
[21] determine whether there is thousands of parts per
[22] million of PCBs in it?
[23] MR. WHITE: You mean billions? That's
[24] what that —
[25] Q: (By Mr. Wright) Yeah, thousands of parts

Page 89

[1] per billion?
[2] A: Oh, I don't know that the — well, it
[3] would have to be a concentration that was known to
[4] cause problems. A thousand parts per billion, I
[5] have nothing that tells me that could be a problem.
[6] Q: So, Monsanto, in 1970, didn't care about
[7] the 35,000 parts per billion of PCBs washing off of
[8] its landfill?
[9] MR. WHITE: I object. That's not what he
[10] said.
[11] Q: (By Mr. Wright) I'm just asking you. Is
[12] that your testimony?
[13] A: Well, we do care in that it's — it
[14] caused some more studies in terms of what does this
[15] tell us, what harm does it do, where is it going,
[16] what creatures are exposed, and how long is it going
[17] to be there, and what does that do, so there is a
[18] lot — there are many questions to be answered once
[19] you get a number like that.
[20] Q: All right. Let's talk about that. At
[21] this same time period, you were trying to get the
[22] effluent from the plant, and that's the effluent
[23] coming out of that limestone pit down there by
[24] Clydesdale or Highway 202 as it was known at that
[25] time, down to ten parts per billion, correct?

Page 90

[1] A: Correct.
[2] Q: That was the target level that Monsanto
[3] had decided was appropriate for the effluent from
[4] its plant processes, correct?
[5] A: Correct.
[6] Q: Would not a similar concern have been in
[7] place for the effluent from the landfill?
[8] A: The ten parts per billion were suggested
[9] by Monsanto to the governmental authorities based on
[10] Monsanto's experience with analytical methodology
[11] and the ability to reproduce the data and feel
[12] comfortable with a number, and Monsanto felt that
[13] although no effects were noted yet at ten parts per
[14] billion, since we can reach it, let's do so.
[15] Now, this other number in the thousands
[16] of parts per billion in the sump —
[17] Q: Well, it's actually in the ditch upstream
[18] from the sump?
[19] A: Well, it's still not the kind of stream
[20] that's out in the public waters.
[21] Q: Well, you understood, didn't you, sir,
[22] that that mountain where the landfill or dump,
[23] whatever you want to call it, was, was upstream from
[24] the public waters and the only thing between it and
[25] the public waters was a residential neighborhood?

Page 91

[1] MR. WHITE: Object to the form.
[2] Q: (By Mr. Wright) Did you understand that
[3] at that time?
[4] A: Yeah, but what data do we have that the
[5] residential neighborhood was experiencing that
[6] level?
[7] Q: Well, one way to find data would be to
[8] have tested downhill from the dump in the
[9] residential area to find out if Monsanto's PCBs had
[10] gone that far, correct? That would have been one
[11] way to find out?
[12] A: Yes. But that still doesn't tell you
[13] what effects to expect.
[14] Q: Okay. In order to determine what effects
[15] to expect, you have to look at scientific literature
[16] that was being developed by others, correct?
[17] A: That's one source, yes.
[18] Q: Okay. And in 1970, the scientific
[19] literature was not as developed as it would get
[20] later on, correct?
[21] A: That is normal, yes.
[22] Q: And in 1970, there were a lot of
[23] unanswered questions about health effects of PCBs?
[24] A: That is correct.
[25] Q: And nobody, not Monsanto, not the

Page 92

[1] Government, not scientific researchers, nobody knew,
[2] at that time, what all the health effects of PCBs
[3] were?
[4] A: Just as today, they don't know, yes, you
[5] are correct.
[6] Q: And there were allegations of health
[7] effects or potential health effects from PCBs in
[8] 1970?
[9] MR. WHITE: Health effects in humans?
[10] MR. WRIGHT: In humans or animals.
[11] Q: (By Mr. Wright) There were
[12] allegations —
[13] A: Yeah, you are correct in using the word
[14] allegations, yes.
[15] Q: Yes. And some of them were made by
[16] scientists around the world, correct?
[17] A: Well, the only allegations I remember is,
[18] again, presence, not visual harmful effects.
[19] Q: Well, you don't remember Dr. Riceboro out
[20] in California —
[21] A: Yes, I met with Dr. Riceboro and we
[22] discussed this in-depth.
[23] Q: And —
[24] A: And he withdrew his original comments.
[25] Q: Okay. But before you talked to him and

Page 93

[1] he withdrew his comments, he made allegations of
[2] health effects in animals and potential health
[3] effects in humans as a result of PCB accumulation,
[4] correct?
[5] MR. WHITE: Are you sure you're not
[6] misquoting or attributing — did Riceboro do
[7] anything on humans or was it animals?
[8] Q: (By Mr. Wright) Well, let me ask the
[9] witness.
[10] Dr. Riceboro found PCBs in animals,
[11] correct? That was his seminal work?
[12] A: I understood he found it in pelicans.
[13] Q: You think that's the only animal he ever
[14] found PCBs in?
[15] A: That's the only one he and I ever talked
[16] about in his office.
[17] Q: All right. Setting aside what you talked
[18] about, is it your testimony that you think
[19] Dr. Riceboro only found PCBs in pelicans and not in
[20] other kinds of animal life?
[21] A: That is correct.
[22] Q: Okay. Did Dr. Riceboro ever, either
[23] before you talked to him or after you talked to him,
[24] ever express concern that PCBs might be
[25] harmful to either animal or human life?

Page 94

[1] A: Never, not to me.
[2] Q: Okay. You don't remember the
[3] San Francisco Chronicle article that Monsanto was so
[4] concerned about?
[5] MR. WHITE: Object to form. Go ahead.
[6] THE WITNESS: Yes, I do.
[7] Q: (By Mr. Wright) Yes?
[8] A: Yes, I do.
[9] Q: Your testimony is you don't think there
[10] is anywhere in that article where there is any
[11] allegation of health effects to animals or human
[12] beings?
[13] A: Yes. I remember they were quoting
[14] Dr. Riceboro, and Dr. Riceboro later retracted all
[15] that and said it was DDT that was causing the
[16] HL thinning.
[17] Q: My question to you, very simply —
[18] MR. WRIGHT: And I'm going to object to
[19] that answer as nonresponsive.
[20] Q: (By Mr. Wright) My question to you, very
[21] simply, is in the San Francisco Chronicle article,
[22] were there allegations that PCBs were harmful to
[23] either humans or animals?
[24] MR. WHITE: Don't guess as to what
[25] might be in the article; but if you remember,

Page 95

[1] answer his question.
[2] THE WITNESS: I remember a reference in
[3] the San Francisco Chronicle about effects on
[4] living species; and at this point in time, I
[5] don't know specifically whether humans were
[6] mentioned or mammals or birds.
[7] Q: (By Mr. Wright) All right. Do you ever
[8] remember PCBs being referred to as poisons in the
[9] popular press?
[10] A: No, I don't.
[11] Q: Do you ever remember — and maybe you
[12] don't remember this, but do you ever remember any
[13] allegations by Dr. Riceboro or Dr. Jensen or
[14] anybody — well, let's limit it to any scientist,
[15] and by any scientist ever, that PCBs were
[16] potentially harmful to either human or animal
[17] health?
[18] MR. WHITE: At any time?
[19] MR. WRIGHT: At any time.
[20] MR. WHITE: Any scientist?
[21] MR. WRIGHT: That's right.
[22] Q: (By Mr. Wright) Do you ever remember any
[23] scientist ever making those allegations?
[24] A: I never have.
[25] Q: All right. And you're as sure about that

Page 96

[1] as you are about any of the testimony you have given
[2] today?

[3] MR. WHITE: Well, I object.

[4] MR. WRIGHT: You can answer.

[5] MR. WHITE: Comparing testimony is
[6] improper.

[7] Q: (By Mr. Wright) You can answer. Are you
[8] as sure about that statement as you are about any
[9] other testimony?

[10] A: To the best of my memory, that is as
[11] truthful as I can make it.

[12] Q: All right. Now, going back to my
[13] original question, if you were still the plant
[14] manager, would you have been concerned at all about
[15] 35,000 parts per billion being found in the runoff
[16] from the landfill?

[17] A: When you say still, you mean today?

[18] Q: No, no. I mean in 1970?

[19] A: At that time?

[20] Q: Yes, in March of 1970, would you have
[21] been concerned one little bit with 35,000 parts per
[22] billion PCBs in the runoff from the landfill?

[23] A: I would have to have more information
[24] than that.

[25] Q: Would you have been concerned enough to

Page 97

[1] try to figure out where the PCBs were going after
[2] they came off of the landfill?

[3] A: As best I can remember, I had a good idea
[4] where they might be going.

[5] Q: Where did you think they were going?

[6] A: Right on the Monsanto property.

[7] Q: Do you think they came off of Monsanto's
[8] landfill or dump, and were washed where?

[9] A: On the property. It had nowhere to go.

[10] Q: Well, it could have continued going
[11] downhill, couldn't it?

[12] A: Well, the soil is a good entrapper of
[13] that material and, with the heavy PCBs, they're not
[14] going to travel very far —

[15] Q: Okay.

[16] A: — in the soil.

[17] Q: Well, what about when they dry out and
[18] the wind blows them? Is that not possible?

[19] A: Oh, highly improbable.

[20] Q: What about when it rains really, really
[21] hard and a lot of water comes down, does it not
[22] continue to wash them downhill?

[23] A: I have no hard data to tell me how much
[24] of that soil — how much of the top surface of that
[25] soil will move along with PCBs on it to the point

Page 98

[1] where it gets out there off the property.

[2] Q: Okay. Now, one thing you did know, as of
[3] 1970, is that Monsanto PCBs that washed out
[4] presumably from the plant effluent ended up many
[5] miles downstream from Monsanto's plant in
[6] Choccolocco Creek and Snow Creek?

[7] A: I don't have good information that leads
[8] me to conclude that.

[9] Q: Let me make sure I understand what you're
[10] saying. Do you not remember PCBs being found at
[11] high levels downstream from the Monsanto plant?

[12] MR. WHITE: What do you mean by "high
[13] levels"?

[14] MR. WRIGHT: Hundreds of parts per
[15] million?

[16] THE WITNESS: I remember the fact that
[17] PCBs were in these dry trenches or ditches
[18] leaving the plant, yes. I do remember that,
[19] but I personally cannot tie that in to
[20] surface water runoff leading into that
[21] specific ditch. There just isn't enough
[22] information, really, sir. It's one big guess.

[23] Q: (By Mr. Wright) Well, the only way to
[24] gather the information is to take samples and
[25] analyze them; is that fair?

Page 99

[1] A: Not quite. It depends on when you take
[2] them and how much you take, and when I say "when,"
[3] I'm only talking — I'm talking also about the
[4] frequency. Is it right after a storm? Is it after
[5] a dry spell? Did you take it every half hour, every
[6] 24 hours? It's not simple, sir.

[7] Q: So you would have to have a well-designed
[8] testing and sampling program in order to effectively
[9] determine where the PCBs were going?

[10] A: Yeah, that's one piece of information
[11] that you'll get, yes.

[12] Q: Okay. Now, did Monsanto ever institute
[13] an effective testing and sampling program to
[14] determine the full extent of where its PCBs went
[15] after they left Monsanto's landfill?

[16] MR. WHITE: Object to form.

[17] Q: (By Mr. Wright) To the best of your
[18] knowledge?

[19] A: Well, in my opinion, the program
[20] instituted was an effective one. What we don't want
[21] to confuse it with is how much time it took. You
[22] can't do it overnight.

[23] It just took a lot of time to get the
[24] laboratory set up, to get the people trained, to get
[25] the proper way of sampling, to run the samples

Page 100

1) through the machinery and to interpret the results
2) then go on and get another set of samples to
3) confirm the first set; and it just took more time
4) than anyone would have expected.
5) Q: Should it have taken 25 years to
6) determine whether Monsanto's PCBs coming off its
7) landfill were ending up in a residential
8) neighborhood?
9) MR. WHITE: Object to form.
10) Q: (By Mr. Wright) You can answer.
11) A: What 25 years' period are you talking
12) about?
13) Q: 1970 to 1995.
14) A: Oh, I can't evaluate that because I don't
15) know what happened after 197-whatever.
16) Q: Okay. Let me ask you this: During your
17) years at Monsanto, did you ever instruct anyone to
18) test for where the PCBs that came off of the
19) landfill were going after they left the landfill or
20) had gone for past PCBs coming off of the landfill,
21) where they had gone after they had come off the
22) landfill?
23) A: I recall having discussions with the
24) individual who was then head of the Technical
25) Services Department.

Page 101

1) Q: Who was that, sir?
2) A: Landwehr, L-a-n-d-w-e-h-r.
3) Q: When were those discussions?
4) A: I'm sorry?
5) Q: Before you left as plant manager or after
6) you left as plant manager?
7) A: Just before I left.
8) Q: And what were the discussions that
9) related to the subject I just asked you about?
10) A: To set up a program working with the
11) environmental team, which included Mr. Wright, to
12) become more knowledgeable about PCBs in the plant
13) and where they were ending up and what kind they
14) were, and where they were coming from, first of all,
15) what kind of PCBs and where are they going. All of
16) that.
17) Q: I have seen the document I think you're
18) referring to that documents that. That was the
19) audit in the, I guess, '68-69 timeframe?
20) A: That was the beginning.
21) Q: Right.
22) A: We were taking our first steps, if you
23) learning how to go through all this.
24) Right. Correct me if I'm wrong, but that
25) audit or those documents do not reference testing to

Page 102

1) see where the PCBs went after they left Monsanto's
2) landfill?
3) MR. WHITE: Object to the form.
4) Q: (By Mr. Wright) Am I right or wrong
5) about that?
6) MR. WHITE: Isn't the best way is to
7) look at the document that y'all are both
8) thinking about to see if it's the same one?
9) MR. WRIGHT: I don't have it in front
10) of me.
11) MR. WHITE: If you can remember, Bill,
12) without looking at the document, tell him,
13) but if you don't —
14) THE WITNESS: I don't know what it is I
15) should be remembering.
16) Q: (By Mr. Wright) We're not talking about
17) the plant or the effluent from the plant. We are
18) talking about the landfill and the PCBs washing off
19) of the landfill.
20) What I'm asking you specifically is was
21) any effort made during your tenure as plant manager
22) to determine where the PCBs that had washed off the
23) landfill in the past went, or where the PCBs that
24) were washing off of the landfill in the present were
25) going?

Page 103

1) A: During my tenure, we were still in the
2) learning phases, so the activity really was limited
3) to what was in the plant proper, the production
4) unit, the drumming stations, the tank car loading,
5) right within the fence, so to speak; and the intent
6) was always one of the more information you get, the
7) more capable you are of extending the study to find
8) out where it starts and where it ends, and so while
9) I was at the plant, we had enriched the extremes.
10) Q: All right.
11) A: We were still learning.
12) Q: So the answer to my specific question
13) would be no, while you were at the plant, there was
14) no effort to determine where the PCBs that had come
15) off the landfill went prior to that time, or where
16) they were going at that time?
17) A: Well, when you say no effort, talking
18) about physically taking a sample?
19) Q: Yes, yes.
20) A: Because to me, learning how to run that
21) analyzer and studying what is in the plant is part
22) of an effort.
23) Q: All right.
24) A: It's really a never-ending effort.
25) Q: It should be a never-ending effort,

Page 104

[1] correct? Correct?

[2] A: Well, until you get an answer that's
[3] useful and you can take action.

[4] Q: That's right. And what you have
[5] testified is that you started the process before you
[6] left the plant, correct?

[7] A: Yes, yes.

[8] Q: But that by the time you left the plant,
[9] that process had not extended to the landfill, and
[10] the waste that had washed off of the landfill in the
[11] past?

[12] A: Not yet.

[13] Q: All right. You expected, I assume, that
[14] somebody who followed you would continue the effort
[15] and would determine where that waste that washed off
[16] of the landfill went?

[17] A: Well, I assumed that would happen.

[18] Q: Okay. Did you ever follow up, during
[19] your years as PCB coordinator or whatever it was
[20] your title was, and we will get to that in a minute,
[21] but during the later years, did you ever follow up
[22] to determine whether or not anyone had made an
[23] organized study of where the waste that had come off
[24] of that landfill in the past went?

[25] A: I think I did follow up, but not in the

Page 105

[1] words you used.

[2] Q: Okay.

[3] A: I would be in touch with individuals,
[4] both at Anniston and in St. Louis, and, invariably,
[5] my questions would be, How's the Anniston study
[6] going? Of course, I don't remember the specific
[7] words, but I was assured that there — continuing
[8] efforts were underway, that they hadn't dropped the
[9] ball.

[10] Q: Do you have any specific recollection of
[11] anybody ever telling you of any study to find out
[12] where the wastes that had come off of the landfill
[13] went?

[14] A: Do I have the results of a specific
[15] study?

[16] Q: Yes.

[17] A: The only studies I recall are those that
[18] said we found the waste right outside the tank or
[19] opposite the pit or the sump. That kind of report
[20] would come back to me.

[21] Q: Did they ever go downhill from the sump?

[22] A: No.

[23] MR. WHITE: During your period of time,
[24] now. Is that what you're talking about?

[25] Q: (By Mr. Wright) To the best of your

Page 106

[1] knowledge, ever, at Monsanto, before 1995 or '94,
[2] did anybody ever test for PCBs downhill from the
[3] sump to find out where they went?

[4] A: I don't know the answer for all those
[5] years, no.

[6] Q: Okay. To the best of your knowledge, as
[7] we sit here today, you're not aware of any such
[8] study?

[9] A: There again, I need help defining when
[10] does that study start and stop?

[11] Q: Well, I need help defining that, too, to
[12] be honest.

[13] MR. WHITE: And I don't think he would
[14] have had any involvement. Maybe you did,
[15] but —

[16] Q: (By Mr. Wright) I'm just asking about
[17] your involvement. I mean, there may have been 50
[18] guys that came after you that you don't know about,
[19] but all I'm asking you for is your knowledge.

[20] To the best of your knowledge, did that
[21] study for where the PCBs went downhill from where
[22] the sump was located, did that study ever take
[23] place, to the best of your knowledge,
[24] Mr. Papageorge?

[25] A: To the best of my knowledge, a study was

Page 107

[1] underway. However along it got, I wasn't there long
[2] enough to hear the end.

[3] Q: All right. Let me ask you this: Would
[4] you expect — would you expect it to take 25 years
[5] to get downhill from the sump at the landfill?

[6] A: Well, sir, this is a complex situation in
[7] terms of learning how to do a study like this,
[8] interpreting the results and communicating the
[9] results, so 25 years may have been what it really
[10] took.

[11] Q: All right.

[12] A: I have no measure of that, sir.

[13] Q: And so, as a consultant to Monsanto's
[14] attorneys, as a former — well, what did you retire
[15] as at Monsanto? What was your title when you
[16] retired?

[17] A: My title was manager of industrial
[18] hygiene or some such subject.

[19] Q: As a former manager of industrial
[20] hygiene, as the former PCB coordinator for Monsanto,
[21] you don't have a problem in principle if it took
[22] 25 years to decide to sample for PCBs downhill from
[23] the landfill and from the sump at the landfill and
[24] in the residential neighborhood downhill from the
[25] landfill to determine where Monsanto's PCB waste

Page 108

[1] ...ent after it left the landfill?
[2] R. WHITE: Object to the form. You
[3] mischaracterized his prior testimony.
[4] MR. WRIGHT: You can answer it. I
[5] asked you a question.
[6] MR. WHITE: I can state my objection.
[7] THE WITNESS: As I understand it, I
[8] have no problem with this kind of activity
[9] that you just described.
[10] Q: (By Mr. Wright) Taking 25 years to
[11] fruition or to begin, actually?
[12] MR. WHITE: Same objection.
[13] Q: (By Mr. Wright) You can answer.
[14] A: Well, sir, the PCB issue was so unique
[15] that I don't know of anyone that can assign 25 years
[16] or more or less, so I have no way of measuring how
[17] long it should have taken to get to the end result.
[18] Q: Let me ask you this: If you had stayed
[19] as plant manager there in Anniston, and the program
[20] you instituted went forward, would it have taken you
[21] 25 years to finally sample for PCBs in the
[22] residential neighborhood downhill from the Anniston
[23] dump?
[24] A: I don't know that I can answer that.
[25] MR. WHITE: If we are at a good

Page 109

[1] stopping point —
[2] MR. WRIGHT: Let me ask him about two
[3] other documents and then we can take a break.
[4] (Plaintiffs' Exhibits 10 and 11 were
[5] marked for identification.)
[6] Q: (By Mr. Wright) I'm going to ask you
[7] about Exhibit 11 first. This is a document dated
[8] July of 1970 from the — it's entitled Public
[9] Relations Report, and Howard Bergen is the first
[10] recipient. I will tell you, in fairness, you are
[11] not a recipient. However, you may have some
[12] knowledge about one aspect of this.
[13] I'm asking you about the third paragraph
[14] and I will just read it and then I will ask you
[15] about it: "Assistance was provided the Anniston
[16] plant in preparing replies to possible press queries
[17] regarding mercury pollution and the naming of
[18] Monsanto in a recent class action based on the 1899
[19] Refuse Act.
[20] "Our position statement on possible
[21] mercury losses" — well, then it goes on to talk
[22] about the Krummrich plant.
[23] Do you remember the concern about press
[24] lies regarding mercury pollution and Monsanto
[25] being named in a Refuse Act class action?

Page 110

[1] A: No, I don't.
[2] Q: Were you aware, in August of 1970, about
[3] the Alabama Water Improvement Commission informing
[4] the Anniston plant that the FDA had furnished them,
[5] and by "them," I mean AWIC, with fish flesh analysis
[6] from samples taken in the Choccolocco-Coosa
[7] watershed indicating appreciable levels of Aroclor
[8] and that mercury was also present in those fish?
[9] MR. WHITE: Can we see what you're
[10] reading from?
[11] MR. WRIGHT: Yes. That's referenced in
[12] a memo dated August of 1970 entitled Aroclor
[13] Wastes, Confidential, Read and Destroy, and I
[14] believe you're a recipient on that at the
[15] General Offices, correct?
[16] THE WITNESS: Yes, that is correct.
[17] MR. WHITE: Which paragraph were you
[18] reading from there, Larry?
[19] MR. WRIGHT: I think Paragraph 1
[20] entitled Regulatory Action.
[21] Q: (By Mr. Wright) Do you remember the
[22] FDA — actually, not the FDA. Do you remember AWIC
[23] furnishing results that the FDA got in August of
[24] 1970?
[25] A: I remember Mr. Crockett's interest in

Page 111

[1] PCBs, and I remember the plant personnel
[2] communicating with him.
[3] Q: Do you remember the FDA being involved in
[4] an investigation and finding PCBs and mercury in
[5] fish downstream from the Anniston plant?
[6] A: Yes, I do.
[7] Q: Okay.
[8] A: Yes, I do remember that.
[9] Q: And that was before the discussion about
[10] shutting down the Anniston plant that is referenced
[11] in Exhibit Number 1, correct? I will refresh your
[12] recollection.
[13] A: Yes. This is August of 1970.
[14] Q: This is August of 1970, and December of
[15] 1970 is when you, according to Mr. Savage, anyway,
[16] talked about Medical and Legal preferring that
[17] Anniston get shut down, correct?
[18] A: Yeah.
[19] Q: So, does that refresh your recollection
[20] that an investigation by the FDA was one of the
[21] things that Medical and Legal was concerned about,
[22] and that led them to prefer Anniston being shut down
[23] rather than Krummrich being shut down?
[24] MR. WHITE: I'm going to object —
[25] MR. WRIGHT: Are you going to instruct

Page 112

[1] him not to answer?
[2] MR. WHITE: I'm going to ask him a
[3] question.
[4] MR. WRIGHT: I prefer you don't.
[5] MR. WHITE: Can you read the question
[6] back to him?
[7] (The record was read.)
[8] MR. WRIGHT: I'm just asking about an
[9] FDA investigation. That's all I'm asking
[10] about. You can answer, sir.
[11] MR. WHITE: You understand the
[12] question?
[13] THE WITNESS: I understand the
[14] question. I'm having difficulty recalling
[15] the role that FDA played in informing the
[16] Alabama Water Improvement Commission.
[17] MR. WHITE: Read this (indicating) if
[18] that helps you. That's what he is evidently
[19] referring to.
[20] Q: (By Mr. Wright) I mean, the FDA was
[21] obviously investigating something if they're
[22] providing PCB and mercury results to AWIC, correct?
[23] A: Well, they're also looking at DDT.
[24] Q: Yes.
[25] A: And I, at this point in time, don't know

Page 113

[1] what triggered the DDT, mercury or PCBs and they
[2] accidentally saw the remaining two.
[3] Q: Right.
[4] A: Usually one in a material will trigger a
[5] study and the others are more or less found
[6] accidentally.
[7] Q: Don't you think one thing that might have
[8] triggered it was the Bass lawsuit by the sports
[9] fishermen in Alabama?
[10] A: Well, your guess is as good as mine.
[11] Q: Well, actually, mine isn't quite as good
[12] as yours because you were there during the time. Is
[13] that a possibility, that the Bass lawsuit stimulated
[14] the FDA to conduct an investigation and the FDA
[15] began investigating and found PCBs and Mercury and
[16] DDT in the fish downstream from the Anniston plant?
[17] MR. WHITE: Well, now, I object —
[18] MR. WRIGHT: Are you going to instruct
[19] him not to answer?
[20] MR. WHITE: Good Lord, Larry —
[21] MR. WRIGHT: Let him answer the
[22] question. I beg of you.
[23] MR. WHITE: You're asking about
[24] possibilities, and that's guessing. Don't
[25] guess. If you know, if this is connected to

Page 114

[1] that, connected to the next thing, say so.
[2] MR. WRIGHT: If you know it's a
[3] possibility, you can answer.
[4] MR. WHITE: Anything is a possibility.
[5] MR. WRIGHT: If you don't know it's a
[6] possibility, then you don't need to answer.
[7] MR. WHITE: Don't guess, Bill.
[8] THE WITNESS: I don't know.
[9] MR. WRIGHT: It's a shame we are not
[10] videoing.
[11] MR. WHITE: I wish we were.
[12] MR. WRIGHT: Let me ask the question
[13] again. Jere, whatever objections you might
[14] dream up —
[15] MR. WHITE: Don't guess is a perfect
[16] instruction to any witness.
[17] MR. WRIGHT: Give him any other
[18] instructions you think he needs before I ask
[19] this question because I'm going to ask the
[20] same question.
[21] MR. WHITE: I will give him the same
[22] instruction.
[23] MR. WRIGHT: I prefer, though, that you
[24] give it to him now so he can —
[25] MR. WHITE: Let me hear the question,

Page 115

[1] first. He said — he already answered that
[2] he doesn't know.
[3] Q: (By Mr. Wright) Is it possible that the
[4] FDA investigation was kicked off by the Bass
[5] lawsuit, by the sports fishermen in Alabama?
[6] MR. WHITE: Is that your question?
[7] MR. WRIGHT: Yes.
[8] MR. WHITE: If you know, answer it.
[9] Don't guess.
[10] THE WITNESS: I do not know.
[11] MR. WRIGHT: Why don't we take a break.
[12] (A recess was taken.)
[13] Q: (By Mr. Wright) Going back to the
[14] precautions that Monsanto took with its workers in
[15] its production facilities for Aroclor production,
[16] Monsanto had been aware for many years before you
[17] got to Anniston that too much PCB inhalation or
[18] ingestion could be a systemic poison?
[19] MR. WHITE: Object to form.
[20] Q: (By Mr. Wright) You can answer.
[21] A: Well, I have a problem with the words
[22] "too much." There is an effect level determined by
[23] animal studies, and these animal studies were
[24] conducted to help the user and manufacturer of these
[25] chemicals to set workplace standards, how much can

Page 116

[1] breathe and how much can you eat and so on; so
[2] nsanto did have the typical industrial chemical
[3] evaluation, which helps prepare a warning statement
[4] that's put on labels of industrial chemicals; for
[5] example, such words as "do not breathe fumes," "do
[6] not get on skin," and "do not smoke," so on.
[7] Q: "Do not ingest"?
[8] A: "Do not" — yeah, "do not breathe as an
[9] inhalant" and so on.
[10] Q: Right.
[11] A: So we did have that kind of information,
[12] and to minimize any harm from what is known as
[13] normal handling of industrial chemicals, you provide
[14] the necessary protective equipment.
[15] Q: Okay.
[16] A: That we discussed earlier.
[17] Q: All right. But Monsanto knew that if,
[18] for whatever reason, the precautions were not
[19] followed, and too much PCBs were inhaled or ingested
[20] or acquired through the skin, that a systemic
[21] poisoning could occur in the human being?
[22] MR. WHITE: Object to form.
[23] THE WITNESS: I have heard the words
[24] "systemic poisoning."
[25] Q: (By Mr. Wright) I mean, it comes

Page 117

[1] directly from a Monsanto document?
[2] A: I understand that, but those words are
[3] used by different people in different ways. You can
[4] go from just the irritant to the skin to going into
[5] a coma and still call it systemic poisoning.
[6] Q: Okay. And Monsanto knew that any one of
[7] those — that either end of the spectrum could occur
[8] if too much PCBs were taken into the body? In other
[9] words, you could just have a rash or you could go
[10] into a coma and die if too much PCBs ended up being
[11] taken into the body?
[12] A: I don't know if a coma is a good example,
[13] but you can, as I understand it, although I have
[14] never seen evidence, that one can suffer liver
[15] damage with these kinds of chemicals, not just
[16] PCBs.
[17] There are many things that are like this,
[18] so you will note that the labels on PCB products
[19] contain those words like "don't inhale" and "keep it
[20] off your skin," so on.
[21] Q: Right.
[22] A: And we provided the workers with
[23] pirators to take care of the inhaling problem,
[24] ential problem, or we provided these gloves we
[25] talked about earlier to keep it off the skin, and so

Page 118

[1] on.
[2] Q: And all of that was because Monsanto knew
[3] from the Thirties on that PCBs could cause systemic
[4] effects up to and including death?
[5] MR. WHITE: Object to the form of the
[6] question.
[7] Q: (By Mr. Wright) In the event that too
[8] much was inhaled or ingested or absorbed through the
[9] skin?
[10] A: It depends on the level of exposure and
[11] the time of exposure.
[12] Q: Yes.
[13] A: And the type of PCB.
[14] Q: That too much of a certain type of PCBs
[15] over too long a period of time could lead to
[16] systemic poisoning and potentially even death?
[17] MR. WHITE: Same objection.
[18] THE WITNESS: Yes.
[19] Q: (By Mr. Wright) All right. And did
[20] Monsanto — let me ask you this: I'm sorry.
[21] And Monsanto knew, after 1970, that PCBs
[22] could accumulate in the bodies of human beings,
[23] correct?
[24] MR. WHITE: Have we seen that?
[25] MR. WRIGHT: If you haven't, you're not

Page 119

[1] ready to try this case.
[2] MR. WHITE: Okay. I'll be the first to
[3] admit that last part.
[4] THE WITNESS: In 1970, I personally was
[5] not aware of this mounting accumulation in
[6] human beings.
[7] Q: (By Mr. Wright) Well, let's talk about
[8] that. You were made aware of the Jensen comments
[9] that had been communicated to Monsanto by the Rizen
[10] and Strand people in November of 1966, correct?
[11] A: Yes.
[12] Q: And one of the things that Dr. Jensen
[13] found or concluded, based upon his studies of
[14] himself and his family, was that PCBs were
[15] accumulating in human beings and that PCBs were
[16] passed from mother to baby through breast milk. You
[17] saw that in the document, correct?
[18] A: Yes, but I — to this day, I interpret
[19] Dr. Jensen's report as containing an awful lot of
[20] speculation, no confirmation of any of these
[21] findings to this day.
[22] Q: Well, to this day, it's your testimony
[23] that, to this day, it has not been confirmed that
[24] PCBs are passed from mother to child through breast
[25] milk? You don't think that's true as of this day?

Page 116 - Page 119 (32)

Min-U-Script® BROWN REPORTING, INC. (404) 876-8979

HARTOLDMON0017830

Page 120

[1] A: I have seen nothing to support that.
[2] Q: All right. And you're as sure about that
[3] as you are about all the rest of your testimony?
[4] MR. WHITE: Well, let's not compare
[5] testimony.
[6] MR. WRIGHT: Well, it's fair.
[7] MR. WHITE: It is not fair. We're not
[8] going to do that.
[9] MR. WRIGHT: Are you instructing him
[10] not to answer?
[11] MR. WHITE: I'm instructing him not to
[12] answer.
[13] Q: (By Mr. Wright) Are you sure about that?
[14] A: Well, sir, I have been to Sweden. I have
[15] talked to Dr. Widmark. Dr. Jensen did not show up
[16] for our meeting which was scheduled. I can only
[17] assume that Dr. Widmark did not want to discuss
[18] these personal things with these strangers.
[19] I can't help but believe that some of
[20] what he put in print was speculative and they were
[21] not in what — not in — not in what the scientific
[22] community calls literature that the scientific
[23] community can review and comment on.
[24] Q: Okay. With all due respect, sir, we're
[25] going to — we're on the verge of dropping off into

Page 121

[1] a chasm that, in the interest of time, I don't want
[2] to drop into. Let me ask you this question very
[3] simply.
[4] You know that, in November of 1966,
[5] Monsanto was made aware of the findings of at least
[6] one scientist, Dr. Jensen, that PCBs were
[7] accumulating in human beings and, in fact, were
[8] being passed from mother to baby through breast
[9] milk? Monsanto was aware of that information?
[10] MR. WHITE: Object to form.
[11] Q: (By Mr. Wright) You can answer.
[12] A: In 1966, we received preliminary
[13] information that referred to chlorinated biphenyls.
[14] Q: And that was cleared up within two weeks,
[15] correct, sir, in a short period of time?
[16] A: I don't know about the two weeks.
[17] Q: In fact, it was confirmed by
[18] Mr. Richardson of the Shell Company in England
[19] within a week of that report. Are you aware of
[20] that?
[21] A: No.
[22] Q: All right. That's another chasm I'm not
[23] going to jump into.
[24] A: All right.
[25] Q: What I am going to ask you, though, is is

Page 122

[1] it not true, sir, that it was determined, after
[2] November of 1966, that, in fact, PCBs do
[3] bioaccumulate in the fat tissue of animals?
[4] MR. WHITE: Object to form.
[5] Q: (By Mr. Wright) You can answer.
[6] A: In November of '66, it was a speculative
[7] conclusion.
[8] Q: That was confirmed after November of '66?
[9] A: Several years later.
[10] Q: Well, all right. Tell me your best
[11] understanding of when it was confirmed that PCBs
[12] bioaccumulate in animals?
[13] A: I don't remember a specific date, but I
[14] do know in the early Seventies is as close as I can
[15] come.
[16] Q: Well, what did you make of the hog
[17] findings that are our Exhibit Number 8 from December
[18] of 1970? Did that not tell you that PCBs were
[19] bioaccumulating in animals?
[20] A: Well, that fits my early Seventies
[21] comment.
[22] Q: 1970s, all right. Are you aware that
[23] there were fat samples that were analyzed — human
[24] fat samples that were analyzed in about that same
[25] time period?

Page 123

[1] A: By whom?
[2] MR. WHITE: 1970?
[3] Q: (By Mr. Wright) By anybody but
[4] particularly by Monsanto itself?
[5] A: Human samples in 1970?
[6] Q: Yes.
[7] A: I don't remember that.
[8] Q: Do you know whether human beings had ever
[9] been tested for the presence of PCBs prior to —
[10] well, prior to the end of 1970? Do you know that
[11] one way or the other?
[12] A: I was not aware of any.
[13] Q: Okay. Would that have been something
[14] that you feel like you should have been aware of in
[15] your role as Monsanto's point man on the PCB
[16] problem?
[17] MR. WHITE: Objection. Calls for
[18] speculation. You're assuming it happened.
[19] Q: (By Mr. Wright) You can answer.
[20] A: I would only have been aware if somebody
[21] on my team, who was involved with analysis and had
[22] contacts with other laboratories, you know, telling
[23] me that.
[24] Q: Was Dr. Tucker on your team?
[25] A: Yes.

Page 124

Q: Okay. Now, assuming that — well, let me
just ask it flat-out this way.
MR. WHITE: As opposed to other ways?
MR. WRIGHT: Yeah. I think I know the
answer.
Q: (By Mr. Wright) Did you or anybody else
on behalf of Monsanto ever tell the residents who
were neighbors of the Monsanto Anniston plant that
PCBs accumulate in animals or humans?
MR. WRIGHT: Talking about during his
tenure?
MR. WRIGHT: Ever. Does he know
whether that was ever communicated to the
neighbors in Anniston of the Monsanto plant?
THE WITNESS: Not to my knowledge.
Q: (By Mr. Wright) Now, there is a question
of these studies, these toxicology studies at
Industrial Bio Test. Let me ask you, generally,
first, were there ever — did Monsanto ever
commission any studies to study the
endocrinological —
MR. WHITE: Don't help him.
MR. WRIGHT: Eddie?
(Discussion ensued off the record.)
Q: (By Mr. Wright) The endocrine effects

Page 125

of —
A: No, I can't pronounce that word either.
Q: Let me restate the question properly
using American grammar.
MR. WHITE: You have been at this too
long, Larry.
Q: (By Mr. Wright) Did Monsanto ever
commission any studies to study the endocrine
effects in humans of PCB exposure?
A: No.
Q: Did Monsanto ever commission any studies
to study the endocrine effects in animals of PCB
exposure, the endocrine effects?
A: Not to my knowledge.
Q: Did Monsanto ever commission any studies
to study the effects on metabolism of PCBs in
humans?
A: No.
Q: Did Monsanto ever commission any studies
to determine neurological effects, either in humans
or animals, of PCBs?
A: Not to my knowledge.
Q: Monsanto did commission some toxicology
studies of PCBs through the firm, Industrial
Bio Test laboratories, correct?

Page 126

A: Correct.
Q: Did Monsanto commission studies through
anybody else other than Industrial Bio Test?
A: There was a study that I was made aware
of, but not involved in, with primates.
Q: Is that a Monsanto study or just one that
Monsanto heard about?
A: I'm under the impression that Monsanto
was involved, and that's as far as I know.
Q: Okay. Let's talk about that, because, in
all honesty, I'm unaware of that.
When do you think that study took place?
A: Early Seventies is as close as I can
come.
Q: Who do you think did the study?
A: I think it was a laboratory right here in
Atlanta.
Q: Any hints about the name of either the
laboratory or the researcher?
A: I can't remember it now.
Q: There are some government laboratories
here in Atlanta. Was it a government study?
A: I really don't remember.
Q: What were the results; do you remember
that?

Page 127

A: Again, I don't remember.
Q: What were they studying?
A: I don't know.
Q: All right. Other than that, everything
else was done at IBT, as far as you know?
MR. WHITE: Where are we now in
"everything else?"
MR. WRIGHT: Well, I know about the
Drinker studies.
MR. WHITE: There were a lot of
studies.
MR. WRIGHT: There were some Kettering
studies early on. I'm talking about chronic
exposure studies after 1968.
THE WITNESS: Well, there were the
typical so-called subacute studies to
establish what levels can you feed the
animals before they die because you want them
to last their lifetime.
Q: (By Mr. Wright) Right.
A: Following that, there were the lifetime
feeding studies to rats. There were two-year
feeding studies to beagle dogs. There were chicken
studies.
Q: All of those were done at IBT? That's

Page 128

[1] what I'm asking?
[2] A: Correct.
[3] MR. WHITE: I think what he's asking
[4] you, Bill, is were there studies done by
[5] entities other than IBT.
[6] MR. WRIGHT: On behalf of Monsanto. I
[7] know there were studies done all around the
[8] world by other folks eventually.
[9] Q: (By Mr. Wright) Did Monsanto have
[10] anybody else doing studies for them other than IBT?
[11] A: No, not to my knowledge.
[12] Q: Okay. Now, you had some knowledge of the
[13] IBT studies while they were going on?
[14] A: Yes.
[15] Q: And I think I have seen where you say you
[16] made maybe three visits to the IBT laboratories?
[17] A: That is correct.
[18] Q: Do you have any better recollection now
[19] about when those visits were?
[20] A: Not really.
[21] Q: Okay. Now, do you ever remember Monsanto
[22] being concerned about the fact that the early
[23] results from the IBT studies were showing Aroclors
[24] to be more toxic than had initially been hoped by
[25] Monsanto?

Page 129

[1] MR. WHITE: Object to form.
[2] Q: (By Mr. Wright) Do you remember that?
[3] A: I don't remember that evaluation of the
[4] results, no.
[5] Q: Do you remember any discussion about
[6] because of that, i.e., the studies were turning out
[7] more toxic than Monsanto had hoped, that Monsanto
[8] was asking IBT to rerun the studies to try to get
[9] better results?
[10] MR. WHITE: Object to form.
[11] Q: (By Mr. Wright) Do you remember that
[12] occurring?
[13] A: To my knowledge, they weren't rerun.
[14] Q: Would it have been unethical or
[15] irresponsible to request IBT to rerun the studies to
[16] try to get different results?
[17] MR. WHITE: Under what set of
[18] circumstances?
[19] MR. WRIGHT: That you're concerned the
[20] first two results are too toxic and you want
[21] IBT to rerun them to try to get different
[22] results.
[23] MR. WHITE: I object to the form.
[24] Q: (By Mr. Wright) Would that have been
[25] irresponsible?

Page 130

[1] A: Certainly.
[2] Q: Now, would it have been irresponsible for
[3] Monsanto to request IBT to change a conclusion in a
[4] report on the carcinogenicity of Aroclors?
[5] A: That depends entirely on what the study
[6] results are, and how the author of the report
[7] described them and concluded.
[8] Q: Well, isn't it up to the author of the
[9] report to make his own description and conclusion
[10] without the interference from the client that is
[11] paying him to do the study?
[12] A: Well, that's generally the way. However,
[13] in a study like this PCB study, where more than one
[14] type of PCB was studied, ending up with three
[15] reports with roughly the same results, the same
[16] conclusions had to apply. You can't select one and
[17] make it differ from the other two kind of thing.
[18] Q: All right. Now, I'm going to try to sift
[19] through a few things here.
[20] When you were at the plant, were there
[21] periodic complaints about air pollution?
[22] MR. WHITE: By who?
[23] MR. WRIGHT: By neighbors of the
[24] plant?
[25] THE WITNESS: I don't recall any

Page 131

[1] neighbor ever complaining.
[2] Q: (By Mr. Wright) Well, do you recall that
[3] in these Technical Services Department's monthly
[4] reports, there was a section for community and
[5] governmental relations and a section for complaints?
[6] A: I don't remember that.
[7] MR. WRIGHT: I will get this marked.
[8] (Plaintiffs' Exhibit 12 was marked for
[9] identification.)
[10] Q: (By Mr. Wright) I'm marking as
[11] Exhibit 12 the Technical Services Department Monthly
[12] Report from May of '69, and I'm going to turn your
[13] attention to Page DSW 014891, and you see the
[14] section I'm referring to, Community and Governmental
[15] Relations. It says —
[16] MR. WHITE: Wait a minute. We can read
[17] it.
[18] MR. WRIGHT: Led me read it into the
[19] record: "Received two air pollution
[20] complaints during May. They were aggravated
[21] by the weather, i.e., no wind plus high
[22] humidity prevented the dispersion of SO2
[23] fumes."
[24] THE WITNESS: Let's see. What is the
[25] date of this?

Page 132

Page 134

MR. WRIGHT: May of '69. You were still there in May of '69, correct?

[3] THE WITNESS: Yes, sir.

[4] Q: (By Mr. Wright) All right. Does that
[5] refresh your recollection that, from time to time,
[6] there were air pollution complaints from the
[7] Anniston facility?

[8] A: This does refer to two of them for this
[9] particular month of May of '69, and it does refer to
[10] sulphur dioxide fumes.

[11] Q: Do you think there were never any other
[12] complaints of air pollution from the Anniston
[13] facility?

[14] A: I just don't remember any.

[15] Q: All right. Now, the other thing I wanted
[16] to ask you about here, sir, is do you remember,
[17] while you were there, that free globules of Aroclors
[18] were found in the waterway below the plant outfall?

[19] A: Globules?

[20] Q: Globules?

[21] A: I remember a reference to globules, but
[22] it struck me that a globule could be a little drop
[23] or it could be a larger amount. I recall the
[24] instance here, yes.

[25] Q: All right. Here is another reference to,

Page 133

Page 135

[1] I think, the same type of phenomenon. This is
[2] talking about a waste audit of the Aroclor and
[3] HCL Department were started during May; "Visual
[4] inspection of Snow Creek for visible 'pockets'
[5] deposits of liquid Aroclor started with completion
[6] by 7-1."

[7] Do you see that?

[8] A: I see that.

[9] Q: Was that one of the things that you asked
[10] your folks to do, was to go down and look and see if
[11] they could see visible pockets of Aroclor on the
[12] bottom of the —

[13] A: That's one of the things I asked as part
[14] of their evaluation of the entire site.

[15] Q: Right. And when they did go and look,
[16] they found either pockets or free globules, or
[17] whatever you want to call it, of two-phase liquid
[18] Aroclor around the bottom of the waterway?

[19] A: Correct.

[20] Q: Now, would common sense tell you that
[21] that was not the first time in Monsanto's history
[22] that either pockets or globules or two-phase or
[23] whatever you want to call it had escaped from the
[24] Anniston plant?

[25] A: Oh, I have a hard time with the word

[1] "common sense."

[2] Q: Deductions, would that be a better word?

[3] Could you deduce that, in the history of Monsanto's
[4] production there at Anniston, that that was not the
[5] first time that Aroclors in their liquid phase had
[6] escaped from the plant and gone down the waterway?

[7] MR. WHITE: Object to the form. Does
[8] that say gone down the waterway, Larry?

[9] MR. WRIGHT: It says "visual inspection
[10] of Snow Creek for visible pockets deposits of
[11] liquid Aroclor."

[12] MR. WHITE: All right.

[13] THE WITNESS: There again, the use of
[14] the expression Snow Creek really —

[15] Q: (By Mr. Wright) I know. That is why I
[16] limited it to the waterway rather than Snow Creek so
[17] we don't have to argue whether —

[18] MR. WHITE: We're not arguing.

[19] MR. WRIGHT: — whether they're talking
[20] about the drainage ditch going through the
[21] neighborhood or actually, literally,
[22] Snow Creek further down.

[23] THE WITNESS: This would not be
[24] unusual. It's an indicator that you better
[25] go back and clean up that sump.

[1] Q: (By Mr. Wright) All right. Is it also
[2] an indicator that you ought to try to find out where
[3] else the Aroclors went in the past?

[4] A: Well, that's almost a natural thing to
[5] do, way of doing business here.

[6] Q: The next Technical Services Department
[7] Monthly Report is — that I'm going to refer to is
[8] June, and it references something I want to ask you
[9] about?

[10] MR. WHITE: June of '69?

[11] MR. WRIGHT: Yes. This is Number 13.

[12] (Plaintiffs' Exhibit 13 was marked for
[13] identification.)

[14] Q: (By Mr. Wright) Down here, again, in the
[15] Pollution Control Legislative Action Section: "The
[16] Alabama State Legislature is working actively on an
[17] Air Pollution Bill. The bill presently in the
[18] legislature is a compromise on the original Bill
[19] sponsored by the Associated Industries of Alabama.
[20] Bill introduced to change Alabama Water Improvement
[21] Commission representation from six to one industry
[22] members was scheduled by the Committee and will
[23] probably be killed."

[24] That's referring to two different
[25] legislative items. The first is the Air Pollution

Page 136

[1] Bill. Do you remember anything about that Air
[2] Pollution Bill?
[3] A: I remember some activity in that area,
[4] yes.
[5] Q: Did you have any discussions with Alabama
[6] governmental officials, either representatives or
[7] anybody?
[8] A: I personally —
[9] MR. WHITE: About this —
[10] Q: (By Mr. Wright) About the Air Pollution
[11] Bill?
[12] A: I personally did not.
[13] Q: Did Monsanto's representatives have any
[14] discussions with anybody about —
[15] A: As best I can recall, Bunky — Gene
[16] Wright was the contact.
[17] Q: All right. Likewise, with the bill to
[18] change the Alabama Water Improvement Commission
[19] representation from six industry representatives to
[20] one industry representatives, do you remember
[21] anything about that?
[22] A: Only that the discussion was going on,
[23] and —
[24] Q: If there were six industry
[25] representatives on the Alabama Water Improvement

Page 137

[1] Commission, how many other representatives other
[2] than industry were there on that Commission?
[3] A: I don't remember.
[4] Q: All right. Did industry have a majority
[5] on the Commission?
[6] A: I don't remember.
[7] Q: Did you ever have any dealings with the
[8] Alabama Water Improvement Commission during your
[9] time at Monsanto — I'm sorry, at Anniston?
[10] A: I met Joe Crockett.
[11] Q: Where did you meet him?
[12] A: When he was at the plant, but we — as I
[13] remember it, we didn't discuss any serious
[14] business. It was more of a social kind of thing and
[15] then he went off with the other Anniston plant
[16] people and had their business discussion.
[17] Q: Do you have any recollection when that
[18] might have been?
[19] A: I believe late Sixties is as close as I
[20] can come.
[21] Q: Who had the best relationship with him at
[22] the Anniston plant?
[23] MR. WHITE: What do you mean by "best
[24] relationship"? Closest?
[25] MR. WRIGHT: Yeah, the closest.

Page 138

[1] MR. WHITE: Dealt with him the most?
[2] MR. WRIGHT: If you want to interpret
[3] it that way, yeah.
[4] THE WITNESS: I really don't know.
[5] Q: (By Mr. Wright) Okay.
[6] (Plaintiffs' Exhibit 14 was marked for
[7] identification.)
[8] Q: (By Mr. Wright) Look at this document.
[9] The reason I'm asking you about it is that this is a
[10] document dated August 21st of '69. It's entitled
[11] Pollution Summary Report, Organic Division, Second
[12] Quarter, '69. It says: "This is the sixth of
[13] regular quarterly reports summarizing pollution
[14] accomplishments and problems around the division."
[15] Do you see that?
[16] A: I do.
[17] Q: Do you remember getting documents like
[18] that?
[19] A: Yes.
[20] Q: Or like this?
[21] A: Yes.
[22] Q: Did you get the first five, or any of the
[23] first five?
[24] A: I don't recall. There were several, is
[25] all I can say.

Page 139

[1] Q: Do you remember a meeting in January of
[2] 1970, and this is right after you took your new job,
[3] when y'all went and met with General Electric
[4] regarding PCBs?
[5] A: I do.
[6] Q: Where was that meeting held?
[7] A: In St. Louis.
[8] Q: And do you recall a discussion at that
[9] meeting about the Industrial Bio Test ongoing
[10] research?
[11] A: I do.
[12] Q: Do you recall the discussion at that
[13] meeting about the results of Industrial Bio Test not
[14] being as favorable as Monsanto had hoped or
[15] anticipated?
[16] A: Well, there was some discussion on this
[17] and the information that was being developed, and
[18] the prolonged study was showing this persistence
[19] feature as compared to the short-term worker
[20] exposure studies that I mentioned earlier.
[21] Q: Do you remember it being — I'm sorry.
[22] Were you through?
[23] A: That's about all I can remember.
[24] MR. WHITE: Maybe if he looked at what
[25] you're referring to.

Page 140

MR. WRIGHT: Let me ask one more
question and he can look at it all he wants.
MR. WHITE: All right.
Q: (By Mr. Wright) Do you remember it being
discussed that some of the studies will be repeated
to arrive at better conclusions?
A: Boy, that doesn't ring a bell at all.
(Plaintiffs' Exhibit 15 was marked for
identification.)
Q: (By Mr. Wright) Let me show you this
document. Look at Section D, Status of Aroclor
Studies at Industrial Bio Test, Table II. Let me
just read it. It's short: "In essence, results
reported by Mr. Wheeler on chronic animal toxicity
tests and animal reproducibility studies underway
are not as favorable as we had hoped or
anticipated. Particularly alarming is evidence of
effect on hatchability and production of thin
eggshells regards white leghorn chickens. These
studies will be repeated to arrive at better
conclusions?"
MR. WHITE: You skipped a line.
Q: (By Mr. Wright) "The studies involved
Aroclor 1242, 1254, and 1260. Some of the studies
will be repeated to arrive at better conclusions."

Page 141

First of all, did I read that accurately?
A: Yes, you did.
Q: Does that refresh your recollection that
there was a discussion about some of the IBT studies
being reproduced to arrive at better conclusions?
A: I recall that now.
Q: Were you in favor of that plan or did you
protest?
MR. WHITE: If you know.
THE WITNESS: I did not protest because
the individual reporting this was involved
with toxicology.
Q: (By Mr. Wright) You deferred to
Mr. Wheeler?
A: Correct.
Q: When was a sump finally installed at the
Anniston plant to trap fugitive PCBs?
A: Early '71.
Q: Why did you not put a sump in when you
were the plant manager of Anniston?
A: A second sump was recommended and the
Technical Services Department actively pursued it,
and you'll notice in some of the reports references
to the progress being made, and trying to size it in
terms of what was it expected to do and, finally,

Page 142

contracting it out and they ran into some
difficulties which delayed the project so, finally,
they got it installed.
Q: What were the difficulties?
A: As I remember, they were digging out to
form a pond.
Q: A sump is essentially a pit, correct?
A: Yes, and they ran into underground water,
as I remember, and they had to seal that off. Now,
that was 30 years ago, so — but I do remember they
had some difficulty putting this new sump next to
the current one.
Q: Now, we may be talking about different
things. I'm not talking about the second limestone
pit.
A: Oh, that's what I'm talking about.
Q: That's what you're talking about?
A: Yes.
Q: I'm talking about a sump at the north end
of the Aroclor building.
A: Oh, underneath the operating unit?
Q: Well, no. I'm talking about outside the
operating unit to catch the PCBs that escaped from
the Aroclor unit in their two-phase form. This sump
was, as I understand it, was intended to try to

Page 143

catch some of the liquid PCBs that were escaping
from the Aroclor unit before they ever got to the
limestone pit.
A: Oh, okay.
Q: Do you remember anything about that?
A: There was a sump outside the producing
unit and there was a sump underneath the concrete
floor, right underneath the tanks and all, so —
Q: Talking about the ditch or — I call it
the ditch, but there was a concrete — well, ditch
is the best term that I've got.
A: All right.
Q: That ran through the Aroclor production
facility to carry the waters into the sewer. Is
that what you're talking about?
A: I guess we are.
Q: Okay.
A: It's a device to catch any spillage and
control it so that it doesn't get away from them.
Q: All right. It controls it by routing it
to the sewer system, correct? Let me tell you how
it's been described to me by the guys that worked in
the Aroclor facility back then.
A: All right.
Q: There was a concrete pad. The

Page 144

[1] chlorinators were positioned on that pad.
[2] A: Yeah.
[3] Q: And then there was a — well, what they
[4] have described as a ditch, I think, but the way they
[5] described it is that it's an indentation in the
[6] concrete that channels water through the Aroclor
[7] area and directs it to the sewer. And what they
[8] said is that they washed down the Aroclor area three
[9] times a day, at the end of each shift, and that
[10] those concrete ditches or whatever you want to call
[11] it, drains, whatever you want to call it, carried
[12] the waste water into the sewer system.
[13] Does that sound familiar, first of all?
[14] A: Not quite.
[15] Q: Okay. What do you recall?
[16] A: That doesn't mean that my recollection is
[17] accurate.
[18] Q: What do you recall?
[19] A: I remember a basin underneath the
[20] operating unit that would collect a mixture of water
[21] and PCBs, and every now and then, they would turn on
[22] the pump and pump out of it.
[23] Q: Okay.
[24] A: I do not remember a V-shaped trough. I
[25] have a hard time remembering what they mean by

Page 145

[1] sending it to the sewer. Where would it go from
[2] there?
[3] Q: Well, my understanding is that it went
[4] into the sewer system and that routed it to the
[5] limestone pit?
[6] A: Oh, that part. They call that the sewer.
[7] Q: That's what they called the sewer?
[8] A: Okay. I jumped to a conclusion that this
[9] went to the city system.
[10] Q: Oh, no, no. They called that the HCL
[11] sewer or the Aroclor sewer.
[12] A: Okay. That makes sense.
[13] Q: Okay.
[14] MR. WHITE: Describe it so I will
[15] understand what the two of y'all just said.
[16] THE WITNESS: Well, within the
[17] department, they had a channel.
[18] Q: (By Mr. Wright) There you go. That's a
[19] good word.
[20] A: He described it as a V. I thought it was
[21] more a U, but, nonetheless, I tripped over it many
[22] times.
[23] Q: I wondered if people tripped over that
[24] thing.
[25] MR. WHITE: Keep going. Where did that

Page 146

[1] go?
[2] THE WITNESS: That goes to these
[3] limestone pits we actually talked about.
[4] Q: (By Mr. Wright) It went to what they
[5] called the Aroclor sewer which routed it through the
[6] plant and down to the limestone pit?
[7] A: Right.
[8] Q: Okay.
[9] A: And that other tank I talked about was
[10] right underneath a lot of the equipment, and it
[11] would be pumped out.
[12] Q: Okay. So that could reasonably be called
[13] a sump?
[14] A: Yeah.
[15] Q: I guess.
[16] A: Yeah, all right.
[17] Q: What I'm talking about is the sump that
[18] was placed between the Aroclor production facility
[19] and the limestone pit?
[20] A: Right.
[21] Q: And I believe it was placed there in
[22] about May of 1970. Does that ring a bell?
[23] A: That's correct.
[24] Q: Okay. And my question is, specifically,
[25] why was a sump not put there before May of 1970 to

Page 147

[1] catch the Aroclors that were escaping from the
[2] Aroclor facility before they got to the emission
[3] point to the plant?
[4] A: Okay. Based on the knowledge that the
[5] plant had at the time, and without the up-to-date
[6] analytical procedures and what-have-you, they
[7] sincerely believed that the limestone pit would
[8] serve as the device for preventing the uncontrolled
[9] emissions, and it turns out that it didn't work as
[10] well as they thought it would until they started
[11] analyzing the water.
[12] Q: Well, once they learned that it wasn't
[13] working, and that PCBs were escaping and were
[14] persisting in the waterway downstream from the
[15] effluent point, why did they not immediately put in
[16] a sump?
[17] MR. WHITE: Object to the form.
[18] Q: (By Mr. Wright) You can answer.
[19] A: Well, they did it immediately if, by the
[20] use of the word "immediately," you imply that as
[21] fast as technically and humanly possible, so they
[22] put in that second limestone pit. That was the
[23] answer that was thought of at that point in time.
[24] Q: Do you know when that was concluded? Is
[25] that the one you said was done in '71?

Page 148

A: Yes, early '71.

[1] Q: Just before the liquid Aroclor plant was
[2] shut down?

[3] A: Correct.

[4] Q: Are you aware that in March of 1970, the
[5] Japanese plant already had a sump to minimize PCBs
[6] escape from the plant?

[7] A: I just don't remember that detail.

[8] (Plaintiffs' Exhibit 16 was marked for
[9] identification.)

[10] Q: (By Mr. Wright) Let me show you a letter
[11] from J. R. Durland. He was the Japanese Monsanto
[12] representative?

[13] A: Yes.

[14] Q: He refers to Monsanto's Japanese plant
[15] and states that they have a sump and a pond and,
[16] therefore, they think that their effluent is going
[17] to be very low, correct?

[18] A: You are correct. What he described here
[19] is what the Anniston plant had.

[20] Q: Eventually?

[21] A: Well, yeah, when you consider the sump is
[22] new.

[23] (Plaintiffs' Exhibit 17 was marked for
[24] identification.)

Page 149

[1] Q: (By Mr. Wright) I'm sorry. When is that
[2] last document dated?

[3] A: March 1970.

[4] Q: Does it say March what?

[5] A: March 23.

[6] Q: In fact, three days later is when a sump
[7] was first proposed at Anniston, correct, looking at
[8] this next Exhibit 17?

[9] A: I have scanned the summary.

[10] Q: Right. And the thing I want to focus on
[11] is the recommendation for Phase One and Item
[12] Number 1 is: "Install a sump at the north end of
[13] the Aroclor Department to collect leaks, spills and
[14] suspended PCB from department effluent. Approximate
[15] cost, 15,000."

[16] Do you see that?

[17] A: I see that, yes.

[18] Q: And that was documented as being a
[19] proposal three days after you were informed in your
[20] letter that the Japanese already had a sump and a
[21] pond to control PCBs in their effluents, correct?

[22] MR. WHITE: Well, do we know when this
[23] was received?

[24] MR. WRIGHT: All we know is when it was
[25] dated.

Page 150

[1] MR. WHITE: The dates correspond to
[2] your question, you're correct.

[3] THE WITNESS: Yes.

[4] MR. WHITE: In terms of the dates of
[5] their reports.

[6] Q: (By Mr. Wright) By the way, Monsanto had
[7] telephones in March of 1970, didn't they?

[8] MR. WHITE: We assume that was the case.

[9] Q: (By Mr. Wright) They had teletypes? May
[10] not have had faxes yet but had telephones,
[11] teletypes, means of communicating quickly?

[12] MR. WHITE: Smoke signals.

[13] Q: (By Mr. Wright) Monsanto had means of
[14] communicating with Japan besides just in writing,
[15] correct?

[16] A: That's true. I'm trying to think. This
[17] was a new plant —

[18] MR. WHITE: Hold on. He just asked you
[19] if they had ways to communicate. Listen to
[20] the question.

[21] (Plaintiffs' Exhibit 18 was marked for
[22] identification.)

[23] Q: (By Mr. Wright) Our next exhibit is 18.
[24] Does this refresh your recollection that Monsanto
[25] knew in 1970 that animals were accumulating PCBs in

Page 151

[1] their milk? It's a document dated March 30th, 1970,
[2] that documents a finding of PCBs in milk in Ohio,
[3] correct?

[4] A: Yes.

[5] Q: And it says: "All in all" - this is the
[6] third paragraph - "All in all, this could be quite a
[7] serious problem, having legal and publicity
[8] overtones," correct?

[9] A: It does say that, yes.

[10] Q: And that's a letter from Emmet Kelly, the
[11] Director of the Medical Department, to you, correct?

[12] A: Correct.

[13] Q: On the second page is a confirmation of
[14] these findings by Monsanto's Analytical Chemist,
[15] Scott Tucker, correct?

[16] A: Correct.

[17] Q: So, as of April of 1970, there was no
[18] question in Monsanto's mind that PCBs were
[19] accumulating in animal milk as a result of the
[20] ingestion of PCB-contaminated material, correct?

[21] A: Correct.

[22] Q: Did Monsanto ever advise the neighbors of
[23] Monsanto in Anniston that PCBs could accumulate in
[24] animal milk and be transmitted to human beings as a
[25] result of the animals consuming contaminated food?

Page 152

[1] MR. WHITE: Object to the form.
[2] Q: (By Mr. Wright) You can answer.
[3] A: There was no relationship with Monsanto's
[4] neighbors and this incident in Ohio.
[5] Q: So the answer is no?
[6] A: Correct.
[7] Q: Monsanto was aware, shortly after this,
[8] that the FDA was intending to impose a limit of
[9] point 5 PPM in milk, correct?
[10] (Plaintiffs' Exhibit 19 was marked for
[11] identification.)
[12] Q: (By Mr. Wright) That is Exhibit 19 I'm
[13] talking about.
[14] A: Well, I have read this memorandum. I
[15] sense from Dr. Kelly's comments that there was
[16] frustration in terms of what it is that was going to
[17] happen.
[18] Q: All right. You can also sense from
[19] Dr. Kelly's comments where he says: "I am not so
[20] sure whether it might not do more harm than good for
[21] us to start poking around to find out. Let me know
[22] if anyone has any firm convictions that I should
[23] start digging," that he was concerned about asking
[24] too many questions because he might stimulate such a
[25] limit being imposed, which would be adverse to

Page 153

[1] Monsanto's interest?
[2] MR. WHITE: Is that your interpretation
[3] or is that a question?
[4] MR. WRIGHT: That's my question of
[5] whether that's a reasonable interpretation of
[6] that statement in the document.
[7] THE WITNESS: I don't know.
[8] Q: (By Mr. Wright) We don't have time for
[9] any more documents, so let me ask you a few skipping
[10] around questions.
[11] You've testified in many other PCB cases,
[12] correct?
[13] MR. WHITE: Object to "many." Give him
[14] some —
[15] Q: (By Mr. Wright) You have testified in a
[16] whole bunch of other PCB cases?
[17] MR. WHITE: I object to "whole bunch."
[18] Q: (By Mr. Wright) Can you tell me how many
[19] times you have testified in PCB cases or are there
[20] too many for you to tell?
[21] A: I have never kept score, but as best I
[22] can tell, it's about 30 years times since 1971 or
[23] '72.
[24] MR. WHITE: That is depositions and
[25] trial?

Page

[1] THE WITNESS: And trial. Anything
[2] under oath.
[3] Q: (By Mr. Wright) How many of those
[4] cases — let me just ask you this: How many of
[5] those cases did Monsanto lose at trial?
[6] MR. WHITE: We ain't going into that.
[7] MR. WRIGHT: Why not? Am I not allowed
[8] to ask that? I don't know who else I'm going
[9] to get it from. Y'all won't tell me.
[10] MR. WHITE: Let's do this. If you know
[11] the results of any of the cases, the trials,
[12] you can tell him. That's fine.
[13] Q: (By Mr. Wright) Y'all have lost some,
[14] right? You lost the Bad Axe, Michigan, case, right?
[15] A: The Bad Axe and there is a school case.
[16] That's all that comes to mind.
[17] Q: What about the Fisher case? You don't
[18] remember that one?
[19] MR. MOORE: Summary judgment for the
[20] defense.
[21] Q: (By Mr. Wright) What about the South
[22] Carolina case?
[23] A: South Carolina?
[24] Q: Yes. There was a South Carolina case.
[25] MR. MOORE: Not tried.

Page 155

[1] MR. WRIGHT: How many have y'all lost,
[2] David?
[3] MR. WHITE: That he testified in?
[4] (Discussion ensued off the record.)
[5] Q: (By Mr. Wright) Let's go back on the
[6] record. I understand that you are under a
[7] consulting contract with the law firm of Smith,
[8] Helms, Mullis & Moore whose offices we are in right
[9] now?
[10] A: Yes.
[11] Q: And you're paid about \$100,000 a year and
[12] have been for the past 13 or 14 years?
[13] A: The pay is \$1,000 a month.
[14] Q: I thought it was 8500 a month. When did
[15] they cut you back?
[16] A: Early — let me think. Early last year.
[17] Q: Before that, it had been about 100,000 a
[18] year?
[19] A: About.
[20] Q: By my math, that would have been about a
[21] million three before last year?
[22] A: I haven't calculated that.
[23] Q: All right. Do you have any reason to
[24] differ with my math, 13 years at 100,000 a year?
[25] MR. WHITE: It is what it is.

Page 156

Q: (By Mr. Wright) Okay. And why did they
cut you back to 1,000 a month last year?
[3] A: As I understood it, it's the reduced
[4] activity.
[5] Q: Now, where did you live in Anniston when
[6] you lived in Anniston? Can you describe it?
[7] MR. WHITE: Give him the address, if
[8] you remember.
[9] Q: (By Mr. Wright) Do you remember the
[10] address? If not, just tell me whereabouts it was.
[11] A: Crestview was the street as I remember
[12] and I would go up 10th Street and up the mountain
[13] and the home was near the top.
[14] Q: Was there ever any air testing done for
[15] PCBs at the Anniston plant?
[16] A: There were some attempts to analyze and
[17] they found no presence in the air samples.
[18] Q: Did you ever see the written results?
[19] A: I saw the results that indicated a zero
[20] presence kind of summary.
[21] Q: When is the last time you have ever seen
[22] those written results?
[23] A: Last week.
[24] Q: Oh, really? When were they dated?
[25] A: Early Seventies, right after the plant

Page 157

[1] got their analytical instrument and so it would have
[2] to be '70, '71, something like that.
[3] (Discussion ensued off the record.)
[4] Q: (By Mr. Wright) Are you sure that you
[5] saw results of that air sampling?
[6] A: No. I really saw comments that attempts
[7] had been made.
[8] Q: All right. Then you have seen what I
[9] have seen because I have never seen the actual
[10] results.
[11] A: Okay.
[12] Q: You mentioned in one of your past
[13] depositions the time when an operator got his hands
[14] covered with PCBs and it was brought to your
[15] attention and you were disappointed in him and told
[16] him to do something different next time. Do you
[17] remember that incident?
[18] A: I do.
[19] Q: Who was that employee?
[20] A: I don't recall his name, but he was one
[21] of the old-timers carrying a title of chief operator
[22] which was the top of the union ranks, and he,
[23] because he wanted to, worked the midnight shift.
[24] Q: I don't need to know about the incident
[25] because I think you described it. I just want to

Page 158

[1] know if you remember the guy's name?
[2] A: I don't remember.
[3] Q: Do you remember what happened to him? Is
[4] he still alive?
[5] A: I do not know that.
[6] Q: At some point, Monsanto determined that
[7] there were dibenzofurans in its PCBs, correct?
[8] A: That's what I heard.
[9] Q: You don't remember seeing the analytical
[10] results that showed that?
[11] A: All I saw was a listing of the amount
[12] found.
[13] Q: Do you remember — well, let me ask you
[14] this: You're aware that Monsanto preserved some
[15] PCBs for distribution to researchers researching the
[16] toxicity of PCBs, correct?
[17] A: Yes. When you say preserved, that kind
[18] of made me hesitate.
[19] Q: Monsanto had samples preserved or set
[20] aside that it would furnish parts of to researchers
[21] if they requested samples of it, for example,
[22] Aroclor 1242 or 1254 or 1260?
[23] A: All right. Those were just jars, like
[24] jelly jars, on the laboratory shelf with the
[25] different —

Page 159

[1] Q: Lot number?
[2] A: — lot numbers and the PCBs, 1242 and so
[3] on.
[4] Q: Right.
[5] A: Whenever they would ask for a sample, we
[6] would reach up and put one in the proper carton and
[7] send it to them.
[8] Q: Are you aware of whether the samples that
[9] you provided to other researchers were the PCBs that
[10] contained furans or were they furan-free PCBs that
[11] were provided to the other researchers?
[12] A: That I don't know.
[13] Q: Okay. Do you recall, going back to
[14] Anniston, now, do you recall there being a desire to
[15] concrete the production and loading facilities in
[16] order to channel storm water and prevent runoff
[17] pollution?
[18] A: You say the loading facilities?
[19] Q: And/or production facilities, anywhere
[20] where PCBs might be spilled. Do you remember there
[21] being any desire to concrete those so as to control
[22] the storm water runoff?
[23] A: I remember, yes, some thought being given
[24] to that.
[25] Q: Do you remember making a request to

Page 160

[1] Monsanto Corporate in 1968 for funds to do that and
[2] the Corporate folks denying that request?
[3] A: I don't remember any denial.
[4] Q: Would that be something that would stick
[5] in your memory, if it had occurred?
[6] MR. WHITE: Object to the form.
[7] Q: (By Mr. Wright) You can answer.
[8] A: Definitely, yeah.
[9] Q: You indicated in one of your earlier
[10] depositions that one of the early warning signs of
[11] too much vapor exposure of PCBs is feeling like
[12] someone's developing a chest cold; is that right?
[13] A: Yes.
[14] Q: Again, did y'all ever warn the neighbors
[15] of Monsanto that that was one of the early warning
[16] signs of too much vapor exposure?
[17] A: Well, the condition under which that
[18] symptom would show up would be such that you would
[19] have an awful lot in the way of vapor fumes. You
[20] couldn't see through them.
[21] MR. WHITE: You could not see through
[22] them?
[23] THE WITNESS: That's right. It would
[24] be a cloud of vapors and you would have to
[25] walk through with a respirator on. It's not

Page 161

[1] just that ambient flow around the opening in
[2] the tank, so the neighbor getting exposed to
[3] the vapor that would cause that chest cold
[4] syndrome, that's almost impossible to happen.
[5] Q: (By Mr. Wright) Well, when there were
[6] those clouds of vapors created, those clouds of PCB
[7] vapors, were they contained or were they exposed to
[8] the atmosphere? The plant was open to the
[9] atmosphere, wasn't it?
[10] A: Yeah, but there were suctioning pipes
[11] that drew it up into the —
[12] Q: Into the what?
[13] A: Into the vacuum generators.
[14] Q: And blew it out the top of the plant?
[15] A: No, they blew it out through the
[16] hydrochloric acid generators and the little bit that
[17] would show up at the opening during which the
[18] operator is pouring lime in it would hardly be
[19] visible unless you really looked for it, so it would
[20] not be the kind of cloud you picture in a rainstorm.
[21] Q: Well, I thought you just testified, in
[22] response to Mr. White's question, that it would be a
[23] cloud that you could walk through and you would have
[24] to have a respirator on in order to walk through
[25] it?

Page 16.

[1] MR. WHITE: That would cause those
[2] types of symptoms. That's not what he said
[3] was involved in production.
[4] Q: (By Mr. Wright) Okay.
[5] A: The symptom of the chest cold would occur
[6] only under that condition, not the little bit that
[7] came out of the vent of the tank.
[8] Q: Is it your testimony that condition never
[9] occurred in Alabama?
[10] A: I have never seen it, but the
[11] instructions on the label include that in the event
[12] the customer has got a different system than we
[13] have.
[14] Q: Where did you learn that the early
[15] warning signs of too much vapor is feeling like a
[16] chest cold? Did you ever experience that yourself?
[17] A: No. I got that from Monsanto's Medical
[18] Department.
[19] Q: Where did they get it from? If this
[20] phenomena had never occurred before, where did they
[21] get that —
[22] MR. WHITE: Phenomena at Anniston.
[23] Q: (By Mr. Wright) Had it occurred at
[24] Krummrich?
[25] A: I don't know.

Page 163

[1] Q: Let me dot a couple more I's and cross a
[2] couple more T's and we will adjourn.
[3] A: Okay.
[4] Q: A comment that I saw in one of your
[5] earlier depositions is that you were responsible for
[6] open and free communications with everybody and
[7] everywhere. Is that still a fair statement of what
[8] your responsibility was from '70 to '76?
[9] A: Yeah.
[10] Q: Do you still agree that providing
[11] improper or incomplete information to a government
[12] agency would be irresponsible?
[13] A: Definitely.
[14] Q: Do you recall a 1975 memo that you wrote
[15] to Howard Bergen entitled PCB Review that said, "PCB
[16] materials may be more hazardous to working personnel
[17] than previously considered"? Do you remember a memo
[18] like that?
[19] MR. WHITE: You don't have it?
[20] Q: (By Mr. Wright) I don't have it. I
[21] could dig it up, but for the time being, I'm asking
[22] do you remember it?
[23] A: I just don't remember that.
[24] Q: Did I gather correctly that, at most,
[25] 5 percent of transformers were filled with PCBs?

Page 164

MR. WHITE: At what time?

Q: (By Mr. Wright) I guess ever?

A: At most? I don't have a number to share with you. I don't know.

Q: That's a quote from one of the earlier depositions. I don't have time to dig it up right now, but that does not ring a bell to you?

A: No, it doesn't.

Q: Is it fair to say that a very small percentage, whether it's 5 or something in that range, of transformers were PCB-filled?

MR. WHITE: Again, Larry, I think, in all fairness, we know there is a change in time, so whenever it is we're talking about — I mean, today, I'm sure that's the case. Much less, probably zero. We don't have to dig it out if it says it somewhere.

Q: (By Mr. Wright) I'm asking if you think that's a correct statement. If you don't remember —

MR. WHITE: He said he didn't remember.

MR. WRIGHT: I will dig it out later.

Q: (By Mr. Wright) What I do have at my hands is you remember when Dr. Kimbrough came out with her — in her pathologist's opinion that PCB

Page 165

1260 caused cancer in rats. Do you recall that? I think it's about '74 or '75?

A: Yes, I remember that.

Q: You remember that Mr. Levinkus and Dr. Donovan and Dr. Gordon went over and met with Dr. Kimbrough and her pathologist and they reviewed the slides on Monsanto's behalf?

A: Yes.

Q: And do you recall the trip memos where they indicated that they had to agree with Dr. Kimbrough's analysis that there were carcinogenic tumors indicated on her slides?

A: I remember that.

Q: Did Monsanto ever advise the government that Monsanto agreed with Dr. Kimbrough's analysis of those slides?

A: As far as I remember, Dr. Kimbrough withdraw that conclusion.

Q: With all due respect, I'm not asking about that right now.

MR. WHITE: They don't want to talk about that.

MR. WRIGHT: After she started getting paid by Monsanto, I don't much care about what she did.

Page 166

MR. WHITE: That doesn't surprise me.

Q: (By Mr. Wright) What I'm asking is before she started getting paid by Monsanto, and back when she was still of the opinion that PCB 1260 caused cancer in rats, did Monsanto ever advise the Federal Government that Monsanto, through its agents, Doctors Gordon and Donovan, agreed with Dr. Kimbrough's and her pathologist's findings?

A: They did not because Dr. Kimbrough, as I remember, was an employee of the government.

Q: Okay. So they left it up to Dr. Kimbrough to say, gee, guys, Monsanto agrees with me. Monsanto never sent a document indicating that they agreed with Dr. Kimbrough's findings?

MR. WHITE: Isn't that kind of a circular question? Are you asking did Monsanto send a letter to Dr. Kimbrough asking if they agreed with Kimbrough?

Q: (By Mr. Wright) Did they send a document to Dr. Kimbrough, or anybody else at the Federal Government, the EPA, FDA, the Centers for Disease Control, did Monsanto ever advise them in writing that they agreed with Dr. Kimbrough's findings?

A: No.

Q: Did they, in fact, send communications to

Page 167

agents of the Federal Government that they disagreed with Dr. Kimbrough's findings?

A: No.

Q: If they had done so, after Dr. Gordon and Dr. Donovan met with Dr. Kimbrough and agreed with her findings, had Monsanto sent such a communication to the Federal Government, i.e., that Monsanto disagrees with Dr. Kimbrough's interpretation of her work, that would have been misleading the Federal Government, correct?

MR. WHITE: Object to the form. I mean, too many ifs.

Q: (By Mr. Wright) You can answer.

A: Well, if it isn't based on good technical evaluation, it would be misleading, yes.

MR. WHITE: How close are you?

MR. WRIGHT: You have bludgeoned me into relinquishing my questioning of this witness.

(Discussion ensued off the record.)

Q: (By Mr. Wright) Do you remember, in 1970, trying to get the State of Indiana to allow Westinghouse to landfill PCBs and the State of Indiana indicating that they did not want PCBs landfilled?

Page 168

[1] A: Yes, it's — yes, you're right.
[2] Q: Did that concern you because you knew
[3] that Monsanto in Anniston had been taking PCBs to
[4] the dump or the landfill or whatever you want to
[5] call it and continued to do so?
[6] A: Again, it didn't concern me because I had
[7] nothing at my disposal that assured me that that
[8] practice was not tolerable. The answer is it didn't
[9] concern me.
[10] MR. WRIGHT: I got to quit.
[11] (Deposition concluded at 4:00 p.m.)
[12]
[13]
[14]
[15]
[16]
[17]
[18]
[19]
[20]
[21]
[22]
[23]
[24]
[25]

Page 16

[1]	INDEX TO EXHIBITS		
[2]	Plaintiff's		
[3]	Exhibit	Description	Page
[4]			
[5]	1	Minutes of 12/4/70 meeting	15
[6]	2	Letter - January 5, 1967	
[7]	3	Report by Denzel Ferguson	
[8]		dated February 8, 1967	31
[9]	4	Report by Denzel Ferguson	
[10]		dated March 2, 1967	35
[11]	5	Report by Denzel Ferguson	
[12]		dated March 10, 1967	39
[13]	6	Technical Services Department	
[14]		Monthly Report - January '69	43
[15]	7	Progress Report dated	
[16]		February 24, 1969, from	
[17]		Technical Services Department	48
[18]	8	Memo - December 22, 1970, from	
[19]		S. Tucker to W. Papageorge	75
[20]	9	Document entitled Recommendations	
[21]		of Task Force On Plant Dump	
[22]		dated March 31, 1970 to J. Corder	
[23]		from M. Mullally	80
[24]	10	Technical Services Department	
[25]		Monthly Report - August 1970	109
	11	Document entitled Public	
		Relations Report dated July	
		1970	109
	12	Technical Services Department	
		Monthly Report - May '69	131
	13	Technical Services Department	
		Monthly Report - June '69	135

Page 170

Page 172

[1]

INDEX TO EXHIBITS

Plaintiff's

[3] Exhibit Description Page
[4]
[5] 14 Document entitled Pollution
Summary Report, Organic Division,
Second Quarter, '69 138
[6]
[7] 15 St. Louis Meeting with General
Electric 140
[8] 16 Letter from J. R. Durland 148
[9] 17 March 23, 1970 Summary 148
[10] 18 Letter - March 30, 1970
from E. Kelly to W. Papageorge 150
[11]
[12] (Original Exhibits Plaintiffs 1 through 18 have
been attached to the original transcript.)
[13]
[14]
[15]
[16]
[17]
[18]
[19]
[20]
[21]
[22]
[23]
[24]
[25]

Page 171

[1]

[2]

[3]

CERTIFICATE
STATE OF GEORGIA:
COUNTY OF FULTON:

[4]

[5] I hereby certify that the foregoing
[6] transcript was taken down, as stated in
[7] the caption, and the questions and answers
[8] thereto were reduced to typewriting under
[9] my direction; that the foregoing pages 1
[10] through 170 represent a true, complete, and
[11] correct transcript of the evidence given
[12] upon said hearing, and I further certify
[13] that I am not of kin or counsel to the
[14] parties in the case; am not in the regular
[15] employ of counsel for any of said parties;
[16] nor am I in anywise interested in the result
[17] of said case.
[18] This, the 14th day of March, 2001.
[19]
[20]
[21]
[22]
[23]
[24]
[25]

[1] MARCIA W. WELCH, CCR-A-172
[2] My commission expires on the
[3] 1st day of March, 2002.
[4]
[5]

[1] DEPOSITION OF WILLIAM B. PAPAGEORGE, P.E./MWW

I do hereby certify that I have read all

[2] questions propounded to me and all answers
given by me on March 13, 2001, taken before

[3] Marcia W. Welch, and that:

[4] 1) There are no changes noted.

2) The following changes are noted:

[5]

Pursuant to Rule 30 (7)(e) of the Federal Rules

[6] of Civil Procedure and/or the Official Code of

Georgia Annotated 9-11-30(e), both of which read in

[7] part: Any changes in form or substance which you

desire to make shall be entered upon the

[8] deposition...with a statement of the reasons

given...for making them. Accordingly, to assist you

[9] in effecting corrections, please use the form below:

[10] Page No. Line No. should read:

[11]

[12] And the reason for the change is:

[13]

Page No. Line No. should read:

[14]

[15]

And the reason for the change is:

[16]

[17] Page No. Line No. should read:

[18]

[19] And the reason for the change is:

[20]

Page No. Line No. should read:

[21]

[22]

And the reason for the change is:

[23]

[24] Page No. Line No. should read:

[25]

[1] DEPOSITION OF WILLIAM B. PAPAGEORGE, P.E./MWW
And the reason for the change is:

[2] Page No. Line No. should read:

[3]

[4]

And the reason for the change is:

[5]

[6] Page No. Line No. should read:

[7]

[8] And the reason for the change is:

[9]

Page No. Line No. should read:

[10]

[11]

And the reason for the change is:

[12]

[13] Page No. Line No. should read:

[14]

[15] And the reason for the change is:

[16]

Page No. Line No. should read:

[17]

[18]

And the reason for the change is:

[19]

[20] Page No. Line No. should read:

[21]

[22] And the reason for the change is:

[23]

Page No. Line No. should read:

[24]

[25]

[1] DEPOSITION OF WILLIAM B. PAPAGEORGE, P.E./MWW
And the reason for the change is:

[2] Page No. Line No. should read:

[3]

[4]

And the reason for the change is:

[5]

[6] Page No. Line No. should read:

[7]

[8] And the reason for the change is:

[9]

Page No. Line No. should read:

[10]

[11]

And the reason for the change is:

[12]

[13] Page No. Line No. should read:

[14]

[15] And the reason for the change is:

[16]

Page No. Line No. should read:

[17]

[18]

And the reason for the change is:

[19]

[20] Page No. Line No. should read:

[21]

[22] And the reason for the change is:

[23]

Page No. Line No. should read:

[24]

[25]

Page 175

DEPOSITION OF WILLIAM B. PAPAGEORGE, P.E./MWW

and the reason for the change is:

[1] Page No. Line No. should read:
[2]
[3]
[4]

[5] And the reason for the change is:
[6]

[7] If supplemental or additional pages are necessary,
[8] please furnish same in typewriting annexed to this
[9] deposition.

[10] WILLIAM B. PAPAGEORGE, P.E.

[11] Sworn to and subscribed before me,
[12] this the day of 2001.

[13] Notary Public.
[14] My commission expires:

[15]
[16]
[17]
[18]
[19]
[20]
[21]
[22]
[23]
[24]
[25]

Page 176

[1] COURT REPORTER DISCLOSURE

[2] DEPOSITION OF: WILLIAM B. PAPAGEORGE

[3] Pursuant to Article 8.B. of the Rules and
[4] Regulations of the Board of Court Reporting of the

[5] Judicial Council of Georgia which states: "Each
[6] court reporter shall tender a disclosure form at the

[7] time of the taking of the deposition stating the
[8] arrangements made for the reporting services of the

[9] certified court reporter, by the certified court
[10] reporter, the court reporter's employer, or the

[11] referral source for the deposition, with any party
[12] to the litigation, counsel to the parties or other

[13] entity. Such form shall be attached to the
[14] deposition transcript," I make the following

[15] disclosure:

I am a Georgia Certified Court Reporter. I am

[16] here as a representative of Brown Reporting, Inc.

Brown Reporting was contacted by the offices of

[17] Law Offices of Larry Wright

to provide court reporting services for the

[18] deposition. Brown Reporting will not be taking this
[19] deposition under any contract that is prohibited by

[20] OCGA 15-14-37(a) and (b).

Brown Reporting has no contract/agreement to

[21] provide reporting services with any party to the
[22] case, any counsel in the case, or any reporter or

[23] reporting agency from whom a referral might have
[24] been made to cover this deposition. Brown Reporting

[25] will charge its usual and customary rates to all
[26] parties in the case, and a financial discount will

[27] not be given to any party to this litigation.

[28]

/s/ Marcla W. Welch, CCR-A-172 03/13/01

[29]

Signature of attorneys present: Date:

[30]

/s/ Larry Wright 03/13/01

[31]

/s/ Jere White 03/13/01

[32]

[33] Return this form after review and/or signatures to
[34] the court reporter for inclusion in the record.

[35] Please use reverse side for additional signatures.

[36]

Lawyer's Notes

\$	1970s 122:22 1971 5:9; 10:1; 11:3; 12:20; 13:20; 43:2; 71:18; 153:22 1975 163:14 1979 72:15 1995 100:13; 106:1 19th 3:14	55:3; 83:17; 84:12 66 79:9; 122:6, 8 67 28:24; 32:15; 39:17 68-69 101:19 69 26:22; 43:16, 20; 44:8; 45:14; 47:7; 48:18; 50:25; 55:3, 13; 86:3; 131:12; 132:1, 2, 9; 135:10; 138:10, 12	acquired 116:20 acronym 72:20 across 79:3 act 13:25; 14:3; 109:19, 25 action 7:20; 49:14; 104:3; 109:18, 25; 110:20; 135:15 actions 42:24; 83:2 actively 5:13; 135:16; 141:22 activity 5:19; 16:21; 17:12; 103:2; 108:8; 136:3; 156:4 actual 157:9 actually 15:17; 66:24; 87:6, 18; 90:17; 108:11; 110:22; 113:11; 134:21; 146:3 add 13:14 addition 67:2 address 3:19; 156:7, 10 addressed 25:16 addressing 41:3 adjourn 163:2 admit 119:3 adult 35:20 adverse 152:25 advice 10:8 advise 71:5; 151:22; 165:14; 166:5, 22 advised 10:9, 9, 16; 66:12; 88:1 affected 34:18 afraid 17:19; 44:13 afternoons 40:17 again 21:20; 29:8; 33:11; 36:15; 38:4; 39:17; 40:10; 50:17; 62:18; 70:6; 92:18; 106:9; 114:13; 127:1; 134:13; 135:14; 160:14; 164:12; 168:6 against 5:8; 6:13; 7:24; 26:17 agency 163:12 agents 166:7; 167:1 aggravated 131:20 ago 15:1; 60:12; 142:10 agree 13:18; 49:14; 63:7; 163:10; 165:10 agreed 165:15; 166:7, 14, 18, 23; 167:5 agrees 166:12 ahead 38:2; 41:8; 94:5 ain't 154:6 air 69:9; 130:21; 131:19; 132:6, 12; 135:17, 25; 136:1, 10; 156:14, 17; 157:5 Alabama 4:12; 14:11; 17:9; 71:14; 110:3; 112:16; 113:9; 115:5; 135:16, 19, 20; 136:5, 18, 25; 137:8; 162:9	alarming 140:17 alive 10:3; 23:14, 18, 20; 36:8, 22; 158:4 allegation 94:11 allegations 92:6, 12, 14, 17; 93:1; 94:22; 95:13, 23 alleged 24:25; 25:4, 6 allotted 62:15 allow 167:22 allowed 60:5; 66:10; 154:7 alluding 42:25 almost 13:10, 25; 135:4; 161:4 alone 33:2 along 78:9; 87:3; 97:25; 107:1 although 27:17; 54:4; 74:7; 90:13; 117:13 always 52:17; 103:6 ambient 161:1 America 35:14 American 125:4 amount 4:9; 28:12; 45:24; 51:17; 52:21; 54:13; 132:23; 158:11 analyses 37:2; 39:9; 41:13 analysis 38:14; 39:7; 41:10, 11; 76:11; 110:5; 123:21; 165:11, 15 analytical 69:19; 90:10; 147:6; 151:14; 157:1; 158:9 analyze 98:25; 156:16 analyzed 49:10; 75:13; 122:23, 24 analyzer 103:21 analyzing 147:11 And/or 159:19 animal 93:13, 20, 25; 95:16; 115:23, 23; 140:14, 15; 151:19, 24 animals 28:9; 33:14, 19; 63:1; 72:9; 92:10; 93:2, 7, 10; 94:11, 23; 122:3, 12, 19; 124:9; 125:12, 21; 127:18; 150:25; 151:25 Anniston 3:18; 4:4, 11; 5:1, 9, 10; 7:25; 8:1; 9:18; 10:11; 11:22, 23; 15:12, 13, 21, 24; 16:1, 14, 25; 17:6, 10, 11; 18:10; 20:17; 21:23, 24; 22:3; 23:8; 24:1; 25:23; 26:22; 27:14, 15, 21; 29:4, 19; 30:20; 36:21; 37:7; 47:18; 48:18, 22; 50:14; 55:2; 56:13, 18, 19; 63:12, 16; 69:1, 2, 3, 5, 10; 71:6, 12, 14; 73:5; 74:11, 17; 75:2; 77:14; 85:7; 105:4, 5; 108:19, 22; 109:15; 110:4; 111:5, 10, 17, 22; 113:16; 115:17; 124:8, 14; 132:7, 12; 133:24; 134:4; 137:9, 15,	
0					
014891 131:13					
1	2 15:19; 28:18; 29:13; 82:17 20 67:19 2001 171:18 2002 171:22 202 40:15; 89:24 21st 76:4; 87:24; 138:10 22nd 87:25 23 149:5 24 99:6 24-hour 77:23 24th 48:17 25 100:5, 11; 107:4, 9, 22; 108:10, 15, 21 2800 87:24 2nd 38:8	7 16:14; 21:20; 48:13, 16; 57:19 7-1 133:6 70 71:21; 157:2; 163:8 71 71:19; 141:18; 147:25; 148:1; 157:2 72 153:23 74 165:2 75 45:21; 165:2 76 163:8			
	2	7			
1 14:25; 15:2; 24:12; 82:16; 83:4; 110:19; 111:11; 149:12; 171:9 1,000 156:2 10 109:4 100,000 155:17, 24 107013 29:9 10th 39:16; 156:12 11 109:4, 7 11th 43:2 12 131:8, 11 1242 87:23, 24, 25; 140:24; 158:22; 159:2 1254 140:24; 158:22 1260 140:24; 158:22; 165:1; 166:4 12th 76:4 13 135:11, 12; 155:12, 24 14 138:6; 155:12 14th 171:18 15 140:8 15,000 149:15 150 71:3 150414 21:17 15th 87:23 16 87:19; 148:9 17 148:24; 149:8 170 171:10 18 87:3; 150:21, 23 1899 109:18 19 26:22; 152:10, 12 1965 26:22 1966 119:10; 121:4, 12; 122:2 1967 29:9, 22; 30:11; 31:4; 38:8; 40:23 1968 127:14; 160:1 1969 49:22; 57:7 197-whatever 100:15 1970 71:20; 76:4; 80:16; 81:3; 83:21; 84:22; 87:23; 88:7; 89:6; 91:18, 22; 92:8; 96:18, 20; 98:3; 100:13; 109:8; 110:2, 12, 24; 111:13, 14, 15; 118:21; 119:4; 122:18; 123:2, 5, 10; 139:2; 146:22, 25; 148:5; 149:3; 150:7, 25; 151:1, 17; 167:22	25 100:5, 11; 107:4, 9, 22; 108:10, 15, 21 2800 87:24 2nd 38:8	8 75:25; 76:1; 122:17 80 72:15 8500 155:14 8th 31:4			
	3	8			
3 19:13; 31:3, 8; 37:17 30 58:12, 13; 142:10; 153:22 30(b)(6 3:13; 4:3 30(b)(5 3:13 30,000 58:8, 11, 12, 16; 61:14 30th 151:1 31st 80:15 35,000 87:23; 89:7; 96:15, 21		9 80:12, 15 94 106:1			
	4	9			
4 15:22; 35:21, 24; 38:1 4:00 168:11		A			
	5	ability 68:14; 90:11 absorbed 65:19; 118:8 accident 36:3 accidentally 113:2, 6 accomplish 83:6 accomplishments 138:14 according 84:12; 111:15 accumulate 31:18; 32:9; 118:22; 124:9; 151:23 accumulated 46:23 accumulating 32:19, 25; 33:5, 13, 18; 53:3; 119:15; 121:7; 150:25; 151:19 accumulation 28:8; 34:1, 6, 11; 86:18; 93:3; 119:5 accurate 144:17 accurately 49:1, 2; 141:1 acid 46:12; 47:2, 7; 57:20; 58:3; 59:3, 16; 62:18; 161:16 acid-washed 46:25 acknowledge 33:17			
	6				
6 43:12, 14; 55:11 64,800 87:22 65 44:23; 45:8, 10, 13;					

22; 141:17, 20; 148:20;
149:7; 151:23; 156:5, 6;
159:14; 162:22; 168:3
answered 51:2; 53:12;
73:1; 89:18; 115:1
anticipated 139:15;
140:17
anymore 77:5
anywise 171:16
apparently 20:4; 40:13;
54:14
appear 31:17; 32:8
appearance 22:14
applied 11:2; 68:17
apply 130:16
appointed 71:8
appreciable 110:7
appreciate 82:7
approach 22:14
approached 70:9
appropriate 78:22;
85:25; 90:3
Approximate 149:14
approximately 58:7
April 151:17
aquatic 31:16
archive 44:7
area 23:9, 16; 60:5;
65:13; 79:20; 82:18; 83:8;
88:2; 91:9; 136:3; 144:7, 8
areas 16:7; 77:24; 82:16;
9
Aue 72:10; 134:17
arguing 134:18
argument 33:25
argumentative 17:25;
35:4
Aroclor 16:25; 57:23;
58:3, 19; 62:9, 16, 17, 21;
63:19, 20, 20, 21; 64:5, 15;
65:13; 66:4, 9; 68:6; 110:7;
12:115:15; 133:2, 5, 11,
18; 134:11; 140:11, 24;
142:20, 24; 143:2, 13, 23;
144:6, 8; 145:11; 146:5;
18; 147:2; 148:2; 149:13;
158:22
Aroclors 58:24; 59:5, 22;
61:3, 18; 64:3, 7, 11;
65:19; 68:11; 128:23;
130:4; 132:17; 134:5;
135:3; 147:1
around 35:14; 36:5;
69:11, 23; 73:4; 77:24;
92:16; 128:7; 133:18;
138:14; 152:21; 153:10;
161:1
arranged 41:22; 75:14,
15
arrive 140:6, 20, 25;
141:5
article 94:3, 10, 21, 25
7:5
aside 93:17; 158:20
aspect 109:12

assign 71:5; 108:15
assigned 9:24
assignments 70:19
Assistance 109:15
associate 52:20
associated 50:11; 59:17;
71:25; 135:19
assume 8:6; 9:6; 12:2;
16:15; 20:5; 24:19; 28:4;
47:10; 49:16; 50:19;
79:12; 83:5; 104:13;
120:17; 150:8
assumed 104:17
assuming 42:6; 53:10;
123:18; 124:1
assumption 53:23
assured 105:7; 168:7
Atlanta 6:11; 126:17, 22
atmosphere 161:8, 9
ATSDR 72:17, 22
attachment 38:22
attachments 38:9
attempt 59:1; 77:20
attempts 156:16; 157:6
attention 131:13; 157:15
attorneys 107:14
attributing 93:6
audit 49:8; 101:19, 25;
133:2
Audits 48:23; 49:6
August 110:2, 12, 23;
111:13, 14; 138:10
author 16:10; 130:6, 8
authorities 90:9
authority 28:15
Automobile 36:3
autopsy 34:25
available 7:18; 64:25;
65:2, 12; 66:20
average 78:5; 86:19
avoid 70:5
avoided 50:9
aware 7:7, 22; 11:21;
34:14; 35:18; 43:1; 56:15;
59:19; 60:1; 71:11; 73:2;
74:25; 80:9; 82:24; 88:5;
106:7; 110:2; 115:16;
119:5, 8; 121:5, 9, 19;
122:22; 123:12, 14, 20;
126:4; 148:5; 152:7;
158:14; 159:8
away 143:19
awful 119:19; 160:19
AWIC 110:5, 22; 112:22
Axe 154:14, 15

B

B 3:1; 10:21; 80:16
B-a-s-s 17:9
baby 34:17, 24; 35:19;
119:16; 121:8
back 7:21; 23:22; 28:4;

29:11, 16; 31:12; 32:15;
33:21; 40:23; 44:6, 21, 21,
25; 45:2; 47:14, 23; 48:9;
55:7; 56:12; 77:13, 14;
84:12; 96:12; 105:20;
112:6; 115:13; 134:25;
143:23; 155:5, 15; 156:2;
159:13; 166:4
bad 40:19; 154:14, 15
balancing 13:25; 14:3
ball 105:9
bank 78:13; 83:12
banks 78:20; 83:9
base 5:16, 21
based 4:16; 50:18; 51:6;
53:23; 58:16; 72:11; 73:1;
90:9; 109:18; 119:13;
147:4; 167:14
basin 144:19
basis 78:5; 87:2
Bass 17:19; 18:2; 26:17,
25; 27:6; 113:8, 13; 115:4
Bay 34:12, 19, 23; 35:2,
13
beagle 127:23
became 34:2; 74:24
become 16:22; 101:12
beg 113:22
began 113:15
begin 108:11
beginning 44:22; 101:20
begun 29:25
behalf 124:7; 128:6;
165:7
behavior 19:24
behind 46:9
beings 94:12; 118:22;
119:6, 15; 121:7; 123:8;
151:24
bell 140:7; 146:22; 164:7
below 30:12; 36:21; 37:7;
38:4; 41:16; 132:18
Bergen 16:6; 23:18;
109:9; 163:15
besides 37:16; 150:14
best 8:17; 17:11; 23:17;
35:11; 41:12; 47:8; 68:13;
74:12; 81:12; 96:10; 97:3;
99:17; 102:6; 105:25;
106:6, 20, 23, 25; 122:10;
136:15; 137:21, 23;
143:11; 153:21
better 36:5; 44:4; 78:23;
128:18; 129:9; 134:2, 24;
140:6, 20, 25; 141:5
big 98:22
bigger 4:22
Bill 16:22; 102:11; 114:7;
128:4; 135:17, 17, 18, 20;
136:1, 2, 11, 17
billion 87:23, 24, 25;
89:1, 4, 7, 25; 90:8, 14, 16;
96:15, 22
billions 88:23
Bio 124:18; 125:25;

126:3; 139:9, 13; 140:12
bioaccumulate 122:3,
12
bioaccumulating
122:19
biological 31:19; 32:10;
33:2; 34:7; 52:21; 53:4;
54:5, 6
biphenyl 62:21
biphenyls 121:13
birds 95:6
bit 4:14; 18:8; 58:13; 60:2;
66:1; 74:2; 75:24; 96:21;
161:16; 162:6
biweekly 86:16, 20
blew 161:14, 15
blows 97:18
bludgeoned 167:17
blue 18:5
bluegills 41:9
bodies 67:25; 68:22;
118:22
body 117:8, 11
both 41:3; 42:22; 43:6;
102:7; 105:4
bottom 31:13; 46:11;
59:17, 23; 68:8; 83:10;
84:4; 133:12, 18
bought 75:20
boxes 85:21
Boy 140:7
break 42:17; 77:11;
109:3; 115:11
breast 119:16, 24; 121:8
breathe 63:19; 116:1, 5, 8
bridge 40:15
briefly 77:14
bring 29:16
broad 24:4
brought 157:14
building 142:20
bunch 153:16, 17
Bunky 70:20, 21; 136:15
burn 85:19; 86:12
business 4:8; 12:4, 19;
56:17; 135:5; 137:14, 16
busy 41:15
butter 46:18, 20, 24; 47:6
buy 50:7; 51:6; 70:2, 9;
75:14
buying 56:25
by-product 57:23

C

caged 31:18; 32:9; 36:21
calculated 49:2; 155:22
calculation 57:3
calculations 56:22
California 92:20
call 10:23; 27:9; 47:19;
56:21; 64:14, 17; 74:19,

20, 23; 75:3, 10, 11; 77:2;
90:23; 117:5; 133:17, 23;
143:9; 144:10, 11; 145:6;
168:5
called 47:15; 48:8; 76:22;
145:7, 10; 146:5, 12
calls 120:22; 123:17
came 70:21; 97:2, 7;
100:18; 106:18; 162:7;
164:24
can 4:6; 6:1, 3, 4; 8:3, 17,
20, 25; 9:22; 11:16, 18, 19;
12:25; 14:22; 15:22, 24;
16:8; 17:11, 24; 18:1, 19,
21, 25; 19:12; 21:8; 22:8;
23:10; 26:20; 34:4; 35:5,
12; 36:5, 6; 37:15; 44:5, 6;
48:1; 49:1, 1; 57:10; 62:23;
72:24; 74:12; 77:11;
81:12; 87:18; 90:14; 96:4,
7, 11; 97:3; 100:10;
102:11; 104:3; 108:4, 6,
13, 15, 24; 109:3; 110:9;
112:5, 10; 114:3, 24;
115:20, 25; 116:1; 117:3,
13, 14; 120:16, 23; 121:11;
122:5, 14; 123:19; 126:13;
127:17; 131:16; 136:15;
137:20; 138:25; 139:23;
140:2; 147:18; 152:2, 18;
153:18, 22; 154:12; 156:6;
160:7; 167:13
cancer 165:1; 166:5
cap 67:3
capabilities 4:10, 23
capable 41:3; 103:7
capital 15:21, 24, 25;
16:8, 13; 20:16
caption 44:17; 171:7
capture 88:15
car 51:7; 103:4
carcinogenic 165:12
carcinogenicity 130:4
care 18:8; 89:6, 13;
117:23; 165:24
careful 60:3
carefully 52:7
Carolina 154:22, 23, 24
carp 41:10
carried 144:11
carry 60:7; 143:14
carrying 157:21
cars 50:8
Carter 56:4
carton 159:6
case 17:7; 24:25; 25:22,
25; 26:3, 4; 119:1; 150:8;
154:14, 15, 17, 22, 24;
164:16; 171:14, 17
cases 153:11, 16, 19;
154:4, 5, 11
catch 88:11, 13; 142:23;
143:1, 18; 147:1
categories 45:17
cattle 40:1, 16
cause 51:4; 89:4; 118:3;

161:3; 162:1 caused 77:19; 89:14; 165:1; 166:5 causes 58:17 causing 94:15 caustic 29:20; 46:9, 9, 14, 15; 47:5; 50:10; 55:22; 56:10, 14, 20, 24; 57:7 CCR-A-172 171:21 censured 20:11 Centers 166:21 certain 87:11; 118:14 Certainly 63:9; 79:15; 88:13; 130:1 CERTIFICATE 171:2 certify 171:5, 12 cessation 3:17 cetera 76:13 chairman 80:17; 81:10 chance 29:12 change 78:24; 88:18, 18, 20; 130:3; 135:20; 136:18; 164:13 changed 78:22 changes 83:7 channel 145:17; 159:16 channels 144:6 charge 27:9 chart 21:17, 25 chasm 121:1, 22 checking 87:15 chemical 13:8; 21:3; 38:7, 15; 39:5; 41:9; 116:2 chemicals 37:8, 10; 54:1, 8, 10; 68:17; 70:4; 79:25; 87:16; 115:25; 116:4, 13; 117:15 Chemist 151:14 chemists 41:13 chest 160:12; 161:3; 162:5, 16 chicken 127:23 chickens 140:19 chief 157:21 child 119:24 chlorinated 16:3; 20:19; 21:1, 7, 10; 62:21; 121:13 chlorinators 144:1 chlorine 29:19; 45:19, 21, 25; 46:7, 8; 49:7, 8, 18, 22, 50:7, 24; 51:6, 24; 55:22; 56:10, 14, 20, 24, 25; 57:7 Choccolocco 30:3; 98:6 Choccolocco-Coosa 110:6 cholinesterase 41:16 chose 64:25 chronic 127:13; 140:14 Chronicle 94:3, 21; 95:3 church 25:23 circular 166:16 circumstances 129:18	city 145:9 claimed 25:20 class 109:18, 25 clean 11:16, 19; 46:10; 47:4; 134:25 cleaned 59:18; 62:20 clear 18:5; 33:25; 38:1 cleared 121:14 client 130:10 close 26:20; 122:14; 126:13; 137:19; 167:16 closer 23:13; 86:19, 20, 20 Closest 137:24, 25 closing 26:11 closure 22:17; 74:2 clothes 64:5 clothing 67:7, 10, 11, 13 cloud 160:24; 161:20, 23 clouds 161:6, 6 Clydesdale 89:24 coach 8:13 coaching 8:14 coat 65:24 cold 160:12; 161:3; 162:5, 16 Coley 28:25; 29:1, 3, 17; 35:25; 70:13, 16; 76:18 collect 37:1; 38:13; 39:6; 144:20; 149:13 collected 87:21 coma 117:5, 10, 12 comfortable 90:12 coming 67:12; 68:10, 22, 22; 88:14; 89:23; 100:6, 20; 101:14 comment 120:23; 122:21; 163:4 comments 92:24; 93:1; 119:8; 152:15, 19; 157:6 Commercial 34:16 Commission 110:3; 112:16; 124:20; 125:8, 11, 15, 19, 23; 126:2; 135:21; 136:18; 137:1, 2, 5, 8; 171:21 committee 83:3, 20; 135:22 common 60:10; 133:20; 134:1 communicate 150:19 communicated 119:9; 124:13 communicating 107:8; 111:2; 150:11, 14 communication 167:6 communications 13:13; 163:6; 166:25 community 120:22, 23; 131:4, 14 compacted 84:5, 6 Company 121:18 compare 120:4	compared 4:25; 51:5; 139:19 Comparing 96:5 competent 41:13 competitive 51:8 complaining 131:1 complaints 130:21; 131:5, 20; 132:6, 12 complete 67:21; 171:10 completion 133:5 complex 107:6 complies 80:23 components 48:24 compounds 31:19; 32:10; 62:22; 63:1 compromise 135:18 conceived 17:14 concentrate 4:21 concentration 89:3 concentrations 30:2 concern 18:3; 27:13, 25; 30:10; 34:22; 35:1, 8, 10, 12, 17, 18, 19; 37:7; 50:23; 62:21; 82:16; 90:6; 93:24; 109:23; 168:2, 6, 9 concerned 4:18; 17:11; 32:24; 33:1; 51:15, 20; 52:3; 94:4; 96:14, 21, 25; 111:21; 128:22; 129:19; 152:23 concerns 15:12 conclude 98:8 concluded 119:13; 130:7; 147:24; 168:11 conclusion 31:13; 32:1; 35:6, 7; 122:7; 130:3, 9; 145:8; 165:18 conclusions 20:15, 16; 31:12, 24; 32:4; 48:5; 130:16; 140:6, 21, 25; 141:5 concrete 143:7, 10, 25; 144:6, 10; 159:15, 21 condition 160:17; 162:6, 8 conduct 113:14 conducted 115:24 Confidential 110:13 confirm 100:3 confirmation 119:20; 151:13 confirmed 119:23; 121:17; 122:8, 11 confluence 30:3 confuse 99:21 confused 88:3 connected 113:25; 114:1 connection 21:5, 6, 9, 11 consider 32:17; 148:22 consideration 15:22; 43:9 considerations 14:14, 15; 16:19; 21:22; 50:19; 51:23; 52:8	considered 163:17 consistent 20:17 constraints 8:18 consultant 107:13 consultants 51:15 consulting 155:7 consuming 151:25 contact 64:11, 15; 67:9, 12; 68:10, 22, 23; 136:16 contacted 76:12 contacts 6:7; 123:22 contain 117:19 contained 59:5; 159:10; 161:7 containing 119:19 contaminated 151:25 content 29:23 context 32:2 continue 40:7; 97:22; 104:14 continued 32:20; 97:10; 168:5 continues 69:16 continuing 87:14; 105:7 contour 87:3 contract 155:7 contracting 142:1 control 15:21; 16:1, 21; 20:19; 52:7; 135:15; 143:19; 149:21; 159:21; 166:22 controlled 4:13 controls 143:20 convictions 152:22 coordinator 104:19; 107:20 copied 30:6; 36:16; 39:17 copy 11:17, 19; 31:5; 83:5 Corder 80:16 Corporate 160:1, 2 corrected 78:19; 79:14 correctly 24:21; 58:4; 63:5; 82:21; 163:24 correspond 150:1 cost 149:15 counsel 80:24; 171:13, 15 COUNTY 171:3 couple 42:16; 81:4; 163:1, 2 course 10:7; 12:4, 19; 23:1; 42:2; 56:16; 81:10; 105:6 cousin 37:21 cover 36:6; 38:12, 16; 39:5; 66:22, 23; 67:24; 77:25; 79:3; 84:17 covered 17:9; 75:17; 157:14 covering 79:22; 87:1 covers 64:9 create 13:15; 52:5; 82:18	created 88:7; 161:6 creates 46:10, 17 creature 28:13 creatures 34:20; 89:16 Creek 16:2; 30:2, 3; 31:15, 17; 32:8, 18; 40:1, 16, 17, 19; 59:25; 60:2, 6, 9, 14, 20, 23; 98:6, 6; 133:4; 134:10, 14, 16, 22 Crestview 156:11 Crockett 137:10 Crockett's 110:25 cross 163:1 CROSS-EXAMINATION 3:4; 8:19 crushed 59:15 curiosity 72:16; 75:18 current 72:19; 142:12 customer 162:12 customers 3:21; 4:20; 5:15; 71:18, 24 cut 155:15; 156:2
--	--	--	--	--

D

D 140:11
daily 86:16, 20
damage 51:5; 117:15
data 41:16; 49:1; 90:11;
91:4, 7; 97:23
date 28:23; 39:11; 43:19;
46:24; 122:13; 131:25
dated 29:9; 31:4; 38:7;
39:16; 48:17; 76:3; 80:15;
109:7; 110:12; 138:10;
149:2, 25; 151:1; 156:24
dates 8:5; 150:1, 4
David 44:6; 155:2
day 58:9, 16; 61:14;
69:16; 72:4, 10; 77:21, 22,
25; 119:18, 21, 22, 23, 25;
144:9; 171:18, 22
days 29:4; 47:14, 23;
55:7; 77:14; 78:1, 7; 149:6,
19
DDD 37:18; 38:5
DDE 37:18, 24, 25; 38:3,
5, 54:2
DDT 37:18, 24, 25; 38:3,
5; 54:2; 94:15; 112:23;
113:1, 16
dead 34:24; 36:8, 21;
37:2; 38:13; 39:6; 41:14;
70:16; 74:14
deal 66:16
dealings 137:7
Dealt 138:1
death 34:11, 13, 14;
118:4, 16
deaths 34:21
decades 44:25; 45:3
December 76:4, 4; 83:12;
86:3; 111:14; 122:17
decide 49:21; 107:22

decided 90:3 siding 10:21 ision 4:16, 21; 5:9, 22; 9:17, 18, 21, 21; 10:5; 11:21, 23; 12:5, 14, 21; 13:1, 3, 4, 7, 18, 20, 22, 23; 14:16; 15:12; 16:7, 8, 24; 21:12; 22:3, 23; 23:8, 24; 24:2, 10; 49:17; 50:24; 51:6, 24; 55:21, 24; 56:1, 9, 13, 19; 57:6, 13 decisions 51:10 deduce 134:3 Deductions 134:2 deeper 84:17 defense 154:20 deferred 141:13 define 7:16; 9:8; 57:11 defining 106:9, 11 Definitely 5:11; 160:8; 163:13 definition 6:5 defunct 17:19, 22 degree 64:22 delayed 142:2 delete 13:14 delighted 48:12 delineates 72:18 delivered 79:1 delta 15:23 ennial 160:3 ying 160:2 Denzel 30:22; 38:17 Department 5:7; 6:13; 17:5, 20; 18:5, 9; 27:10; 43:15, 17, 21; 48:17; 49:7, 8; 57:20; 58:1, 2, 7; 61:11, 13; 62:15, 16, 17, 20; 66:20; 68:6; 100:25; 131:11; 133:3; 135:6; 141:22; 145:17; 149:13, 14; 151:11; 162:18 Department's 17:16; 42:25; 131:3 Departmental 48:23; 49:6 Departments 16:24; 17:18; 19:15, 23; 48:25 depending 67:25; 86:17 depends 6:6; 28:12; 99:1; 118:10; 130:5 deposed 4:2 deposited 48:7, 9 deposition 3:11, 14; 24:20, 24; 66:19; 87:19; 168:11 depositions 4:1; 24:18, 23; 65:7; 153:24; 157:13; 160:10; 163:5; 164:6 deposits 133:5; 134:10 depth 79:4 scribe 13:21; 60:4; 24; 68:3; 145:14; 156:6 described 5:16; 83:15, 15; 108:9; 130:7; 143:22;	144:4, 5; 145:20; 148:19; 157:25 describing 15:1 description 130:9 designates 22:19 desire 159:14, 21 Destroy 110:13 detail 148:8 details 76:12 determine 32:18; 56:23; 88:21; 91:14; 99:9, 14; 100:6; 102:22; 103:14; 104:15, 22; 107:25; 125:20 determined 63:4; 72:4, 5; 115:22; 122:1; 158:6 developed 60:12; 91:16, 19; 139:17 developing 160:12 developments 72:15 device 143:18; 147:8 dibenzofurans 158:7 dictate 16:19; 21:22 die 117:10; 127:18 died 40:16 differ 130:17; 155:24 differences 16:13 different 21:3; 22:14, 14; 37:23, 24; 45:17, 17; 84:1; 117:3, 3; 129:16, 21; 135:24; 142:13; 157:16; 158:25; 162:12 differently 67:1 difficult 13:21; 22:5 difficulties 142:2, 4 difficulty 9:2; 112:14; 142:11 dig 163:21; 164:6, 17, 22 digging 87:3; 142:5; 152:23 dioxide 132:10 directed 59:14 directing 79:24 direction 171:9 directly 117:1 Director 151:11 directs 144:7 dirt 69:9; 79:23; 84:3, 21 disagreed 167:1 disagrees 167:8 disappointed 157:15 disciplined 20:12 discuss 19:12; 120:17; 137:13 discussed 22:4; 57:15; 62:15; 87:20; 92:22; 116:16; 140:5 discusses 15:19 discussing 14:14 Discussion 15:7; 20:21, 23; 21:12; 31:1; 111:9; 124:24; 129:5; 136:22; 137:16; 139:8, 12, 16;	141:4; 155:4; 157:3; 167:20 discussions 25:11; 70:25; 100:23; 101:3, 8; 136:5, 14 Disease 166:21 dismantle 22:13 dismantling 23:3, 5 dispersion 131:22 disposal 168:7 dispose 75:15 disposed 69:23 distribution 158:15 ditch 59:24; 60:1, 13, 20; 61:5, 6; 62:1, 12; 87:21; 90:17; 98:21; 134:20; 143:9, 10, 10; 144:4 ditches 98:17; 144:10 division 62:14; 138:11, 14 division's 56:3 Doctors 166:7 document 12:1, 13; 16:10; 28:11; 29:8, 9, 12; 31:5, 21; 39:18; 40:11; 48:22; 49:4, 24; 55:9; 59:7, 11, 12; 80:15, 19; 81:23; 82:1, 11; 87:18; 101:17; 102:7, 12; 109:7; 117:1; 119:17; 138:8, 10; 140:11; 149:2; 151:1; 153:6; 166:13, 19 documented 14:4; 28:9; 55:20; 149:18 documenting 51:16 documents 10:19; 12:2, 6, 8, 9; 13:16; 29:22; 51:13, 19; 52:25; 54:15, 24; 55:3, 4, 18, 20; 59:20; 101:18, 25; 109:3; 138:17; 151:2; 153:9 dogs 127:23 dollar 13:19 dollars 13:9 done 4:5; 17:13; 68:5; 80:5, 6; 83:18; 127:5, 25; 128:4, 7; 147:25; 156:14; 167:4 Donnovan 165:5; 166:7; 167:5 dot 163:1 doubt 41:10 down 4:4, 17; 9:18; 10:10, 11, 17, 20, 22; 11:22, 24; 12:14, 15; 13:2, 19; 15:13; 16:25; 22:3; 23:8, 25; 24:1; 36:5; 38:3; 49:9, 17, 18, 21; 50:24; 51:24; 52:5; 55:21; 56:10, 14, 19, 24; 57:7; 79:25; 88:14; 89:23, 25; 97:21; 111:10, 17, 22, 23; 133:10; 134:6, 8, 22; 135:14; 144:8; 146:6; 148:3; 171:6 downhill 91:8; 97:11, 22; 105:21; 106:2, 21; 107:5,	22, 24; 108:22 downstream 5:8; 18:10; 27:15; 30:19; 31:18; 32:9; 36:7; 41:14; 50:13; 51:16, 17; 60:16; 62:2; 98:5, 11; 111:5; 113:16; 147:14 Dr 39:24; 41:3; 42:4; 52:17; 54:1; 92:19, 21; 93:10, 19, 22; 94:14, 14; 95:13, 13; 119:12, 19; 120:15, 15, 17; 121:6; 123:24; 152:15, 19; 164:24; 165:5, 5, 6, 11, 15, 17; 166:8, 9, 12, 14, 17, 20, 23; 167:2, 4, 5, 5, 8 drain 60:5 drainage 59:24; 60:1, 13, 19; 61:5, 6; 62:1, 12; 79:16, 17, 18; 83:6; 134:20 drains 144:11 dream 114:14 drew 161:11 Drinker 127:9 drinking 40:1, 16 drop 121:2; 132:22 dropped 17:12; 105:8 dropping 120:25 drum 80:4 drumming 103:4 drums 47:9; 78:12, 17, 19, 25; 79:23; 80:2; 83:8, 11, 25; 84:1, 4 Dry 40:1, 16; 97:17; 98:17; 99:5 DSW 29:9; 131:13 due 38:6; 41:25; 52:23; 54:5, 9; 61:10; 62:20; 120:24; 165:19 duly 3:2 dump 47:15, 16, 19, 23; 48:3, 5; 78:10; 80:18, 20; 81:2, 6; 82:15, 17, 18; 83:3, 6, 8, 9, 19; 85:2; 90:22; 91:8; 97:8; 108:23; 168:4 dumps 48:8; 83:14 during 10:13; 26:25; 55:14; 65:13; 69:1; 85:6; 100:16; 102:21; 103:1; 104:18, 21; 105:23; 113:12; 124:10; 131:20; 133:3; 137:8; 161:17 Durland 148:12 dying 35:25; 40:1	148:1; 155:16, 16; 156:25; 160:10, 15; 162:14 easier 16:5 east 49:10; 58:18 eat 116:1 economic 51:6 economics 4:14 Eddie 124:23 effect 5:9; 25:17; 30:1; 115:22; 140:18 effective 88:14; 99:13, 20 effectively 99:8 effects 24:25; 25:3; 26:2, 7; 33:2; 34:7, 8, 10; 52:21; 53:4; 54:5, 6; 63:1; 72:3, 8; 90:13; 91:13, 14, 23; 92:2, 7, 7, 9, 18; 93:2, 3; 94:11; 95:3; 118:4; 124:25; 125:9, 12, 13, 16, 20 effluent 62:1; 89:22, 22; 90:3, 7; 98:4; 102:17; 147:15; 148:17; 149:14 effluents 149:21 effort 55:11; 68:21; 79:17, 21; 102:21; 103:14, 17, 22, 24, 25; 104:14 efforts 105:8 egging 71:4 eggshells 140:19 either 4:10; 10:20; 11:21; 42:14; 54:22; 58:12; 93:22, 25; 94:23; 95:16; 117:7; 125:2, 20; 126:18; 133:16, 22; 136:6 Electric 139:3 eliminate 83:4 else 7:1; 12:20; 20:20; 23:9, 24; 24:1, 7, 9; 28:12; 124:6; 126:3; 127:5, 7; 128:10; 135:3; 154:8; 166:20 eminently 8:13 emission 147:2 emissions 147:9 Emmet 151:10 employ 171:15 employee 66:9; 157:19; 166:10 employees 65:3, 18; 66:3, 4, 12, 21; 67:4 empty 13:23, 24 enclosing 38:21; 39:9 end 5:4; 22:13; 26:22; 66:4, 5; 107:2; 108:17; 117:7; 123:10; 142:19; 144:9; 149:12 ended 61:20, 24; 62:9, 11; 98:4; 117:10 ending 100:7; 101:13; 130:14 endocrine 124:25; 125:8, 12, 13 endocrinological 124:21 ends 103:8
---	---	---	--	--

decided - ends (4)

Min-U-Script® BROWN REPORTING, INC. (404) 876-8979

engineers 27:10
England 121:18
enough 4:2; 13:15;
96:25; 98:21; 107:2
enriched 103:9
ensued 15:7; 31:1;
124:24; 155:4; 157:3;
167:20
entire 31:11; 82:1; 133:14
entirely 130:5
entities 128:5
entitled 15:22; 16:15;
80:19; 82:14; 109:8;
110:12; 20; 138:10;
163:15
entrapper 97:12
environment 31:16;
50:13; 54:19; 69:4, 7, 8,
11; 81:18
environmental 33:7, 10;
50:19; 51:23; 71:25;
101:11
EPA 6:11; 7:13; 166:21
equal 4:9
equipment 116:14;
146:10
Escambia 34:12, 19, 23;
35:2, 13
escape 148:7
escaped 59:23; 61:4;
133:23; 134:6; 142:23
escapes 81:15
escaping 143:1; 147:1,
13
especially 41:15
essence 140:13
essentially 46:21; 142:7
establish 127:17
estimate 78:6
estimates 15:25
et 76:13
evaluate 14:13; 42:4;
100:14
evaluating 10:20; 14:5
evaluation 116:3; 129:3;
133:14; 167:15
even 33:19; 60:22; 69:16;
72:20; 84:20; 118:16
event 61:1; 65:11; 118:7;
162:11
eventually 33:19, 24;
34:2; 41:4; 48:8; 59:24;
60:13; 61:25; 128:8;
148:21
everybody 38:20; 163:6
everywhere 163:7
evidence 88:16, 19;
117:14; 140:17; 171:11
evidently 112:18
exactly 53:20
examined 3:2
example 14:6; 18:4; 64:1;
116:5; 117:12; 158:21
except 37:11

Excluding 38:9
excuse 3:13
Exhibit 14:25; 15:2;
24:12; 28:18; 31:3, 8;
35:21; 39:21; 43:12, 14;
48:13, 16; 55:10; 57:19;
75:25; 76:1; 80:11, 12, 14;
87:19; 109:7; 111:11;
122:17; 131:8, 11; 135:12;
138:6; 140:8; 148:9, 24;
149:8; 150:21, 23; 152:10,
12
exhibits 52:19; 109:4
existence 43:23, 25
exists 82:15; 83:21
expect 14:4; 56:17;
91:13, 15; 107:4, 4
expected 14:13; 100:4;
104:13; 141:25
experience 13:3; 59:21;
90:10; 162:16
experiencing 91:5
expires 171:21
expose 46:11
exposed 28:13; 89:16;
161:2, 7
exposure 28:13; 64:7;
118:10, 11; 125:9, 13;
127:14; 139:20; 160:11,
16
express 93:24
expression 60:2, 4, 9;
134:14
extended 104:9
extending 103:7
extensive 83:7
extensively 24:17
extent 99:14
extremes 103:9

F

F 48:20
face 18:6
facilities 4:4, 17; 115:15;
159:15, 18, 19
facility 8:1; 9:18; 13:19;
15:13; 17:6; 18:11; 60:4;
132:7, 13; 143:14, 23;
146:18; 147:2
fact 5:22; 15:11; 33:4;
52:4; 56:23; 57:2, 5; 59:23;
61:2, 4, 10; 69:21; 70:16;
71:17; 98:16; 121:7, 17;
122:2; 128:22; 149:6;
166:25
factor 15:12; 50:16
factors 51:22
fair 98:25; 120:6, 7;
163:7; 164:9
fairly 28:9
fairness 38:19; 72:6;
109:10; 164:13
familiar 3:20; 8:10; 72:20;
144:13

family 119:14
fancy 44:7
far 4:18; 17:10; 27:3;
44:21; 91:10; 97:14;
126:9; 127:5; 165:17
fast 147:21
fat 122:3, 23, 24
favor 141:7
favorable 139:14; 140:16
faxes 150:10
FDA 25:11; 110:4, 22, 22,
23; 111:3, 20; 112:9, 15,
20; 113:14, 14; 115:4;
152:8; 166:21
feature 139:19
February 3:14; 31:4;
48:17
Federal 5:23; 17:20;
34:16; 166:6, 20; 167:1, 7,
9
feed 127:17
feeding 127:22, 23
Feel 50:4; 78:3; 82:3;
90:11; 123:14
feeling 160:11; 162:15
feet 64:10; 84:15, 18, 21,
22
felt 41:2; 79:22; 90:12
fence 22:9; 75:23; 103:5
Ferguson 30:22; 35:24;
38:17; 39:24, 24; 40:18;
41:3, 21; 42:4; 50:21, 22;
52:17; 54:1
few 82:12; 83:13; 130:19;
153:9
figure 97:1
file 5:7
filed 7:10, 24; 17:8; 26:17,
18, 25
fill 87:12
filled 163:25
finally 108:21; 141:16,
25; 142:2
find 22:5; 32:24; 37:15;
44:7; 65:6; 91:7, 9, 11;
103:7; 105:11; 106:3;
135:2; 152:21
finding 51:15; 53:6;
74:14; 111:4; 151:2
findings 38:22; 39:10;
76:10; 119:21; 121:5;
122:17; 151:14; 166:8, 14,
23; 167:2, 6
fine 53:24; 73:25; 154:12
finish 52:12; 81:1
finished 6:24
firm 125:24; 152:22;
155:7
first 3:2, 15; 4:3; 7:22;
24:24; 29:15; 31:13, 23;
32:7; 34:10; 36:15, 18;
43:22; 44:3; 55:19; 70:11;
71:23; 75:3; 77:6; 79:5, 8;
82:13, 21, 22; 83:21;
100:3; 101:14, 22; 109:7,

9; 115:1; 119:2; 124:19;
129:20; 133:21; 134:5;
135:25; 138:22, 23; 141:1;
144:13; 149:7
firsthand 57:2, 6, 11
fish 17:9; 28:8; 33:5, 14,
18; 36:7, 8, 21; 37:2;
38:14; 39:7; 40:14, 19;
41:14; 51:16, 17; 53:3;
54:13, 17, 18, 19, 22; 69:9;
110:5, 8; 111:5; 113:16
Fisher 154:17
Fisheries 34:17
fishermen 113:9; 115:5
fishes 31:18; 32:9, 19,
25; 63:2
fit 19:23
fits 122:20
five 48:2; 138:22, 23
flat-out 124:2
flesh 110:5
floor 143:8
flow 21:17, 25; 48:25;
79:24; 161:1
flowed 58:20; 60:13
flows 51:8
flying 9:5
focus 149:10
focused 32:6
folks 51:20; 128:8;
133:10; 160:2
follow 74:8; 104:18, 21,
25
followed 7:10; 70:20;
104:14; 116:19
following 37:14; 127:21
follows 3:3
followup 73:1
food 151:25
force 4:24; 80:17, 17, 18,
20; 81:1, 5, 9, 17; 83:3, 19,
20
foregoing 171:5, 9
forget 3:7; 26:9; 34:16;
56:5
forgotten 42:11
forklift 79:1
form 5:25; 6:15; 7:14; 8:2;
14:17; 15:14; 18:22, 24;
30:13; 33:8; 35:3; 50:15;
51:25; 57:8; 59:6; 68:12;
69:6; 91:1; 94:5; 99:16;
100:9; 102:3; 108:2;
115:19; 116:22; 118:5;
121:10; 122:4; 129:1, 10,
23; 134:7; 142:6, 24;
147:17; 152:1; 160:6;
167:11
former 107:14, 19, 20
forth 24:11; 56:13; 69:13;
72:11
forward 108:20
found 32:23; 34:17, 24;
36:20; 37:17; 54:2; 62:22;
75:12, 14; 93:10, 12, 14,

19; 96:15; 98:10; 105:18
113:5, 15; 119:13; 132:1
133:16; 156:17; 158:12
Francisco 94:3, 21; 95:
Frankly 53:5; 59:20
free 50:4; 132:17; 133:1
163:6
frequency 99:4
Friday 40:17
front 47:20; 102:9
fruition 108:11
frustration 152:16
fugitive 141:17
Fuhrmeister 27:7, 12;
28:22; 29:21; 41:2, 22;
50:21; 81:13
full 99:14
FULTON 171:3
fumes 116:5; 131:23;
132:10; 160:19
funds 160:1
furan-free 159:10
furans 159:10
furnish 158:20
furnished 110:4
furnishing 110:23
further 37:23; 41:1;
134:22; 171:12
future 25:21

G

G 48:19; 76:11
gas 40:14
gather 98:24; 163:24
gave 24:24; 41:8; 67:20;
68:20; 71:24
gee 166:12
Gene 28:25; 29:1, 3, 16;
35:25; 70:13, 16; 136:15
general 9:23; 21:12, 13,
14; 22:12, 15; 63:12;
67:23; 76:7; 110:15; 139:3
generally 124:18; 130:12
generate 50:8
generated 72:3
generating 71:10
generators 161:13, 16
GEORGIA 171:3
gets 98:1
given 24:23; 35:11;
42:12; 46:8; 54:25; 96:1;
159:23; 171:11
gives 15:25
globule 132:22
globules 132:17, 19, 20,
21; 133:16, 22
gloves 64:2; 117:24
goals 87:1
God 29:5
goes 44:25; 109:21;
146:2

good 39:3; 44:10; 51:13;
60:24; 68:3; 69:15; 71:9;
72:21; 78:6; 87:13; 88:11;
93:12; 98:7; 108:25;
113:10, 11, 20; 117:12;
145:19; 152:20; 167:14
Gordon 165:5; 166:7;
167:4
Government 5:23; 6:8;
7:9, 12, 19; 17:20; 92:1;
126:21, 22; 163:11;
165:14; 166:6, 10, 21;
167:1, 7, 10
government's 7:23
governmental 90:9;
131:5, 14; 136:6
Grade 59:2
grammar 125:4
group 4:24; 5:20; 14:8, 9,
11; 81:7, 18
groups 4:15; 14:7
guess 15:1; 29:15; 30:17;
34:22; 35:25; 39:23;
44:20; 66:17; 86:22;
94:24; 98:22; 101:19;
113:10, 25; 114:7, 15;
115:9; 143:16; 146:15;
164:2
guessing 113:24
guidelines 42:11
Gunning 50:23
guy's 158:1
guys 106:18; 143:22;
12

H

half 4:8; 99:5
hand 29:6
handle 87:4
handling 64:2; 116:13
hands 157:13; 164:24
happen 13:15; 18:4;
104:17; 152:17; 161:4
happened 47:6; 71:23;
100:15; 123:18; 158:3
happening 70:6
hard 25:22; 97:21, 23;
133:25; 144:25
hardly 161:18
harm 89:15; 116:12;
152:20
harmful 92:18; 93:25;
94:22; 95:16
hatchability 140:18
hazardous 163:16
hazards 28:7; 82:19
HCL 57:20, 20; 58:1, 7;
59:1; 61:11, 13; 62:4, 5;
133:3; 145:10
head 42:21; 67:5; 100:24
health 24:25; 25:3, 8, 16;
7; 28:15; 34:8; 91:23;
92:6, 7, 9; 93:2, 2;
94:11; 95:17

hear 8:21; 74:16; 77:5;
107:2; 114:25
heard 23:15; 69:22;
74:10; 75:2; 116:23;
126:7; 158:8
hearing 27:3; 77:4;
171:12
heavy 97:13
held 10:24; 11:2, 4; 20:17;
29:22; 139:6
Helms 155:8
help 44:18; 50:1, 5; 75:24;
76:15, 23; 106:9, 11;
115:24; 120:19; 124:22
helped 66:1
helps 82:8; 112:18; 116:3
heptachlorepoide
38:3, 5
Here's 44:9
hereby 171:5
hesitate 48:4; 68:15;
158:18
hesitation 61:9
high 58:14; 98:11, 12;
131:21
higher 42:15
highly 97:19
Highway 40:15; 89:24
Hill 25:25; 26:1, 3; 48:10;
87:19
himself 10:6; 119:14
hint 35:9, 11
hints 126:18
hired 30:18
history 133:21; 134:3
HL 94:16
Hodges 56:5
hog 74:14, 16; 76:10;
77:4; 122:16
hogs 69:9, 20, 22; 70:2, 5,
10; 73:3, 20; 74:10; 75:2,
12, 15, 19, 21
Hold 18:19; 66:25; 150:18
hole 83:10; 84:5
holes 80:2
home 156:13
Homer 56:4
homework 16:7
honest 81:25; 106:12
honestly 30:14
honesty 126:11
hook 51:9
hope 37:1; 38:13; 39:6
hoped 128:24; 129:7;
139:14; 140:16
hot 16:22
hour 99:5
hours 99:6
How's 105:5
Howard 10:2; 16:6;
23:18; 109:9; 163:15
human 24:25; 25:3, 8, 16;
26:1, 7; 93:25; 94:11;

95:16; 116:21; 118:22;
119:6, 15; 121:7; 122:23;
123:5, 8; 151:24
humanly 147:21
humans 33:19; 72:8;
92:9, 10; 93:3, 7; 94:23;
95:5; 124:9; 125:9, 17, 20
humidity 131:22
Hundreds 98:14
hungry 73:21
hydrochloric 57:20;
58:3; 59:2, 15; 62:18;
161:16
hygiene 107:18, 20

I

I's 163:1
ie 51:22; 59:22; 61:2, 18;
129:6; 131:21; 167:7
IBT 127:5, 25; 128:5, 10,
13, 16, 23; 129:8, 15, 21;
130:3; 141:4
idea 65:24; 70:1; 87:13;
88:11; 97:3
identification 15:3;
28:19; 31:9; 35:22; 39:22;
43:13; 48:14; 76:2; 80:13;
109:5; 131:9; 135:13;
138:7; 140:9; 148:10, 25;
150:22; 152:11
identified 54:8
identify 11:19; 44:18;
48:24
ifs 167:12
II 140:12
Illinois 14:10; 16:20
immediate 30:5; 83:2
immediately 30:1; 66:10;
147:15, 19, 20
imminent 17:1, 4, 20
impact 50:23
impermeable 64:2, 10,
18
imply 53:5; 147:20
important 5:16, 20; 26:8;
33:11
impose 152:8
imposed 152:25
impossible 161:4
impression 75:22; 126:8
impressions 41:5
improbable 97:19
improper 96:6; 163:11
improperly 19:20
Improvement 110:3;
112:16; 135:20; 136:18,
25; 137:8
in-depth 92:22
inches 87:3
incident 65:15; 152:4;
157:17, 24
incinerator 84:25; 85:1,
1; 86:13

include 75:4; 87:1;
162:11
included 13:9; 53:25;
86:10; 101:11
includes 39:10; 54:7
Including 50:12; 65:3;
118:4
incompetent 20:7, 12
incomplete 163:11
incorrect 17:23; 53:22,
23
indemnification 3:22
indemnity 24:15
indentation 144:5
Indiana 167:22, 24
indicate 51:14, 19
indicated 6:8; 156:19;
160:9; 165:10, 12
indicates 16:21; 47:1
indicating 45:1; 110:7;
112:17; 166:13; 167:24
indication 7:23
indicator 134:24; 135:2
individual 7:8; 81:12;
86:8, 9; 100:24; 141:11
individuals 70:22; 105:3
industrial 107:17, 19;
116:2, 4, 13; 124:18;
125:24; 126:3; 139:9, 13;
140:12
Industries 135:19
industry 17:9; 135:21;
136:19, 20, 24; 137:2, 4
influence 7:9, 12
informal 25:10
information 7:18; 34:6;
54:12; 69:15, 17; 71:9, 10;
77:9; 96:23; 98:7, 22, 24;
99:10; 103:6; 116:11;
121:9, 13; 139:17; 163:11
informed 73:6; 149:19
informing 110:3; 112:15
ingest 66:13; 116:7
ingested 116:19; 118:8
ingestion 115:18; 151:20
inhalant 116:9
inhalation 115:17
inhale 117:19
inhaled 116:19; 118:8
inhaling 117:23
initially 128:24
injured 25:20, 21
inspection 133:4; 134:9
install 13:7; 149:12
installed 141:16; 142:3
instance 59:13; 64:22;
132:24
instances 64:13
institute 99:12
instituted 99:20; 108:20
instruct 71:13; 100:17;
111:25; 113:18
instructing 120:9, 11

instruction 114:16, 22
instructions 63:15, 18,
25; 68:21; 114:18; 162:11
instrument 157:1
intend 40:10
intended 63:25; 142:25
intending 152:8
intent 103:5
intentional 58:22; 61:16
intentionally 18:16; 19:3;
59:4
interest 110:25; 121:1;
153:1
interested 171:16
interfere 12:23
interference 130:10
interpret 100:1; 119:18;
138:2
interpretation 153:2, 5;
167:8
interpreting 107:8
interval 40:13
into 27:14; 30:1; 41:1;
50:13; 51:8; 58:20; 59:24,
24; 60:13; 61:5; 62:1, 5,
12; 67:12; 68:22, 23; 70:1;
98:20; 117:4, 8, 10, 11;
120:25; 121:2, 23; 131:18;
142:1, 8; 143:14; 144:12;
145:4; 154:6; 161:11, 12,
13; 167:18
introduced 135:20
invariably 105:4
investigate 30:1, 19
investigating 32:17;
112:21; 113:15
investigation 111:4, 20;
112:9; 113:14; 115:4
investigations 12:7
involve 19:21
involved 25:23; 29:18;
49:16; 51:10; 56:9; 68:1;
70:24; 111:3; 123:21;
126:5, 9; 140:23; 141:11;
162:3
involvement 43:1; 57:13;
106:14, 17
Involving 25:1
irresponsible 5:19, 21;
6:5; 129:15, 25; 130:2;
163:12
irritant 117:4
issue 3:22; 5:15; 22:16,
17, 25; 24:15; 76:16;
108:14
issued 8:22; 64:1, 5, 9,
13; 67:8
Item 15:22; 19:13; 45:20;
83:3; 87:8; 149:11
items 26:12; 135:25

J

J 80:16; 148:12

good - J (6)

Min-U-Script®

BROWN REPORTING, INC. (404) 876-8979

James 16:12
January 28:24; 29:9, 22;
30:11; 43:15, 20; 44:8;
45:14; 55:13; 139:1
Japan 150:14
Japanese 148:6, 12, 15;
149:20
jars 158:23, 24
jelly 158:24
Jensen 95:13; 119:8, 12;
120:15; 121:6
Jensen's 119:19
Jere 11:11; 18:18; 44:3;
114:13
job 43:5; 66:10; 67:9, 25;
71:23; 74:7; 76:8; 139:2
Joe 137:10
joined 60:14; 62:8
JRS 16:9, 9
Judge 19:12; 20:9
judgment 5:17; 154:19
July 109:8
jump 3:25; 121:23
jumped 145:8
jumping 48:4
June 45:12, 13; 135:8, 10
Justice 5:7; 6:13; 17:4;
20; 18:9; 42:25
justify 15:20
juvenile 34:15

K

keep 14:8, 9, 10; 20:2, 3;
21:24; 67:4, 11; 75:16, 21;
117:19, 25; 145:25
Kelly 151:10
Kelly's 152:15, 19
kept 72:7, 14; 73:4; 75:19;
153:21
Kettering 127:12
kicked 115:4
killed 135:23
killing 34:23; 35:1, 12
kills 40:15
Kimbrough 164:24;
165:6, 17; 166:9, 12, 17,
18, 20; 167:5
Kimbrough's 165:11,
15; 166:8, 14, 23; 167:2, 8
kin 171:13
kind 18:4; 57:15; 68:2;
71:1; 72:4; 88:2; 90:19;
101:13, 15; 105:19; 108:8;
116:11; 130:17; 137:14;
156:20; 158:17; 161:20;
166:15
kinds 25:10; 93:20;
117:15
knew 5:18; 28:4; 59:5;
69:21; 92:1; 116:17;
117:6; 118:2, 21; 150:25;
168:2

knowing 44:25
knowledge 7:22; 20:14;
22:19, 20, 25; 23:9, 17;
57:2, 6, 11; 72:19; 99:18;
106:1, 6, 19, 20, 23, 25;
109:12; 124:15; 125:14,
22; 128:11, 12; 129:13;
147:4
knowledgeable 23:4;
42:12; 101:12
known 89:3, 24; 116:12
Krummrich 4:22;
109:22; 111:23; 162:24

L

L 80:16
L-a-n-d-w-e-h-r 101:2
Lab 41:9
label 162:11
labels 116:4; 117:18
labor 4:14; 14:7, 8, 9, 11
laboratories 123:22;
125:25; 126:21; 128:16
laboratory 27:10; 34:15,
16, 17; 35:19; 41:22;
99:24; 126:16, 19; 158:24
lack 82:17
lacking 69:16
landfill 47:10, 11, 17;
73:5; 74:14; 77:16, 23;
78:10; 79:17, 18; 80:7;
81:8; 88:2, 6, 12; 89:8;
90:7, 22; 96:16, 22; 97:2,
8; 99:15; 100:7, 19, 19, 20,
22; 102:2, 18, 19, 23, 24;
103:15; 104:9, 10, 16, 24;
105:12; 107:5, 23, 23, 25;
108:1; 167:23; 168:4
landfilled 47:9; 167:25
Landwehr 101:2
large 13:20, 22
larger 14:1; 132:23
Larry 3:10; 8:9, 24; 12:24;
15:16; 18:13; 28:20;
38:19; 73:20; 110:18;
113:20; 125:6; 134:8;
164:12
last 11:6; 21:17; 23:15;
31:14, 23; 32:6, 6; 36:19,
25; 39:9; 40:6; 77:6; 85:4;
119:3; 127:19; 149:2;
155:16, 21; 156:2, 21, 23
Late 26:19, 19; 137:19
later 19:12; 43:4; 50:22;
70:21; 91:20; 94:14;
104:21; 122:9; 149:6;
164:22
launder 64:6
Law 16:23; 19:15; 155:7
lawsuit 7:10, 24; 17:19,
21, 23; 18:3, 3; 25:14;
26:16, 18, 25; 27:6; 113:8,
13; 115:5
lawsuits 25:12, 16, 19

layer 46:11
lead 31:5; 118:15
leading 98:20
leads 82:8; 98:7
leakage 82:17
leaked 80:2
leaking 80:4, 6
leaks 62:19; 149:13
learn 162:14
learned 147:12
learning 87:15; 101:23;
103:2, 11, 20; 107:7
least 5:22; 14:4; 30:10;
52:19; 59:3; 77:22; 83:14;
121:5
leaving 29:24; 30:11;
61:13; 62:11; 98:18
led 53:22; 111:22; 131:18
left 4:9; 13:23; 61:25;
71:12; 73:6; 75:22; 81:3;
82:24; 83:12; 86:3, 5;
99:15; 100:19; 101:5, 6, 7;
102:1; 104:6, 8; 108:1;
166:11
legal 16:18, 25; 17:3, 12,
16, 18, 22; 18:5; 42:24;
111:16, 21; 151:7
Legal/PR 16:15
legal/public 21:21
leggings 67:24
leghorn 140:19
Legislative 135:15, 25
Legislature 135:16, 18
less 108:16; 113:5;
164:16
letter 28:21; 38:7, 12, 16,
20, 23; 39:5; 44:11; 54:11;
148:1; 149:20; 151:10;
166:17
level 42:13; 90:2; 91:6;
115:22; 118:10
levels 30:5; 42:3, 6, 6;
98:11, 13; 110:7; 127:17
Levinkus 165:4
liability 82:20
library 13:15
life 31:16; 93:20, 25
lifetime 127:19, 21
likely 77:1
Likewise 136:17
lime 161:18
limestone 49:10; 58:18;
61:3, 21, 25, 25; 62:6;
89:23; 142:14; 143:3;
145:5; 146:3, 6, 19; 147:7,
22
limit 95:14; 152:8, 25
limited 103:2; 134:16
lindane 37:19, 24; 54:3
line 52:15; 58:9; 68:8;
79:3; 140:22
lined 59:15
liquid 16:25; 133:5, 17;
134:5, 11; 143:1; 148:2

list 48:19; 54:3
listed 21:20; 37:9, 11
Listen 150:19
listener 6:7
listens 10:8
listing 158:11
literally 134:21
literature 72:8; 91:15, 19;
120:22
little 58:14; 66:1; 74:1;
75:24; 96:21; 132:22;
161:16; 162:6
live 40:18; 156:5
lived 156:6
liver 117:14
living 95:4
loading 103:4; 159:15, 18
local 73:4
localities 4:13
located 106:22
location 84:2
lodged 61:3
long 8:7, 22, 23; 9:3;
28:10; 33:4; 54:3; 67:23;
89:16; 107:1; 108:17;
118:15; 125:6
long-range 30:3; 87:1
longer 78:20
look 15:6; 29:8, 12; 31:12;
40:25; 41:23; 44:16;
48:15; 50:4; 77:24; 80:21;
87:8; 91:15; 102:7;
133:10, 15; 138:8; 140:2,
11
looked 39:14; 73:14, 18;
139:24; 161:19
looking 66:16; 102:12;
112:23; 149:7
looks 37:17
Lord 113:20
lose 154:5
loss 88:2
losses 16:3; 49:1; 51:21;
52:3, 5; 58:22; 109:21
lost 52:15; 63:3; 87:12;
154:13, 14; 155:1
lot 4:23; 38:11; 40:11;
89:18; 91:22; 97:21;
99:23; 119:19; 127:10;
146:10; 159:1, 2; 160:19
lotion 65:17, 21
lots 51:7; 56:25
Louis 11:5; 23:16; 56:8,
13, 18, 18; 74:11; 105:4;
139:7
low 42:3, 6, 7, 8, 10;
148:18
lower 42:14; 67:24
lst 171:22
lye 46:8
lying 78:12, 17, 20; 83:8,
12

M

M 58:9; 80:16
machinery 100:1
magnitude 12:5, 21;
13:4, 17; 42:13, 14
main 82:16
maintain 18:7
maintenance 4:24
major 14:15; 48:24
majority 137:4
makes 145:12
making 4:25; 9:21; 12:5;
95:23; 159:25
malathion 37:20; 38:4
mammals 95:6
man 22:18, 19, 22; 30:18;
40:12, 14, 20; 41:1; 123:15
management 4:24
manager 9:23; 26:21;
48:2; 73:3; 77:15; 81:20;
96:14; 101:5, 6; 102:21;
107:17, 19; 108:19;
141:20
manned 21:24
manufacture 37:19, 20
manufacturer 115:24
manufacturing 50:11;
56:4; 57:24; 81:17
many 5:19; 9:12; 13:9,
10; 22:6; 24:16; 33:15;
43:25; 45:4; 68:17; 89:18;
98:4; 115:16; 117:17;
137:1; 145:21; 152:24;
153:11, 13, 18, 20; 154:3,
4; 155:1; 167:12
March 38:8; 39:17; 80:15;
81:3; 83:21; 84:22; 96:20;
148:5; 149:3, 4, 5; 150:7;
151:1; 171:18, 22
MARCIA 171:21
mark 14:22, 24; 19:11;
31:3; 75:25; 80:10
marked 15:2; 28:18;
31:8; 35:21; 39:21; 43:12;
48:13; 76:1; 80:12; 109:5;
131:7, 8; 135:12; 138:6;
140:8; 148:9, 24; 150:21;
152:10
market 51:8
marking 131:10
Mars 25:25; 26:1, 3;
87:19
material 11:13; 28:5;
48:8; 49:11; 51:7; 53:11;
58:3, 23, 24; 59:4, 22;
61:2, 4, 13, 17, 17, 24;
62:18; 63:3; 64:10, 19;
66:24; 87:2, 11; 97:13;
113:4; 151:20
materials 31:17; 32:8,
18, 25; 59:16; 66:21; 67:2;
86:11; 163:16
math 155:20, 24

matters 5:14
may 11:11; 25:20; 53:22;
4; 76:23; 83:4;
17; 107:9; 109:11;
131:12, 20; 132:1, 2, 9;
133:3; 142:13; 146:22, 25;
150:9; 163:16
maybe 29:6; 36:5; 44:6;
56:21; 66:16; 71:20; 81:5;
95:11; 106:14; 128:16;
139:24
mean 8:23; 12:10; 33:2;
10; 42:10; 53:4; 69:7, 8;
73:13; 75:20; 84:22;
88:23; 96:17, 18; 98:12;
106:17; 110:5; 112:20;
116:25; 137:23; 144:16;
25; 164:15; 167:12
means 16:15; 21:23, 23;
30:5; 46:25; 59:14; 83:5;
150:11, 13
meant 25:13
measure 86:24; 107:12
measures 68:9
measuring 108:16
Medical 16:23; 17:18;
19:15; 69:15, 17; 72:7;
111:16, 21; 151:11;
162:17
meet 137:11
meeting 6:19, 21; 10:24;
11:1, 4; 12:16; 20:1; 29:22;
40:25; 43:3; 120:16;
6, 9, 13
meetings 10:15
member 10:25
members 10:24; 81:17;
135:22
memo 8:22; 14:25; 15:18;
17:13; 29:21; 30:6; 43:2, 4;
59:3; 63:8; 76:3; 83:13;
87:20; 88:6; 110:12;
163:14, 17
memoranda 14:4, 14
memorandum 7:4;
152:14
memory 27:2; 44:10, 13;
96:10; 160:5
memos 6:10; 15:10;
47:22; 56:12, 17, 21; 165:9
mention 9:22; 34:21;
84:21, 24
mentioned 3:10; 38:7;
12, 15; 39:5; 69:20; 95:6;
139:20; 157:12
mentions 39:8
mercury 27:14, 17, 20;
28:1, 5, 7, 8, 14; 29:23;
30:2, 4, 5, 11; 37:2, 7;
38:8, 14; 39:7, 8, 13;
41:10, 13, 23; 42:10;
45:20, 21, 25; 46:6, 14, 16;
18, 20; 47:4, 6; 49:11, 17;
150:13, 20, 23; 51:3;
152:21; 52:4, 21; 53:5;
11, 25; 54:5, 13; 55:1, 1,
11, 21; 109:17, 21, 24;

110:8; 111:4; 112:22;
113:1, 15
mercury-acid 46:4, 5
mess 40:18
met 92:21; 137:10; 139:3;
165:5; 167:5
metabolism 125:16
method 30:4
methodology 69:19;
90:10
methods 29:23; 30:4
methyl 38:4
Michigan 154:14
midnight 157:23
might 5:2; 15:20; 50:5;
53:1; 67:9; 71:20; 76:22;
78:1, 22; 93:24; 94:25;
97:4; 113:7; 114:13;
137:18; 152:20, 24;
159:20
Mike 44:6; 81:9
miles 98:5
milk 119:16, 25; 121:9;
151:1, 2, 19, 24; 152:9
million 58:12, 13; 88:22;
98:15; 155:21
mind 17:16; 24:13; 56:3;
151:18; 154:16
mine 113:10, 11
minimize 64:7, 10;
116:12; 148:6
minimizing 16:3; 51:21
minimum 20:17; 87:2, 6,
10
Minkler 10:2, 3; 56:7
Minkler's 10:14, 25;
14:20
minute 29:8; 74:8; 81:23;
104:20; 131:16
minutes 10:23; 11:2, 7;
12:15; 15:4, 10; 42:17;
73:24
mischaracterize 8:16
mischaracterized 108:3
mischaracterizes 6:2
mischaracterizing 8:11
misleading 167:9, 15
misquoting 93:6
miss 78:1
Mississippi 30:19, 24;
40:12; 41:9
misstate 18:17
misstating 19:3
mixed 81:18
mixture 144:20
moment 4:7; 15:1; 80:21;
81:15
money 56:23
monitoring 87:15
Monsanto 4:7; 5:8, 14;
6:12, 14; 7:11, 18, 24, 25;
9:23, 24; 12:5; 17:5, 18;
18:8, 9; 22:18; 26:17;
27:21; 30:18; 37:18, 19;

41:22; 59:4; 63:15, 24;
64:1, 5, 6, 9, 13; 65:17;
66:2, 8, 12; 68:9, 19; 70:2,
8, 12, 22; 71:17, 24; 74:6;
75:13, 16; 82:15; 89:6;
90:2, 9, 12; 91:25; 94:3;
97:6; 98:3, 11; 99:12;
100:17; 106:1; 107:15, 20;
109:18, 24; 115:14, 16;
116:2, 17; 117:1, 6; 118:2,
20, 21; 119:9; 121:5, 9;
123:4; 124:7, 8, 14, 19;
125:7, 11, 15, 19, 23;
126:2, 6, 7, 8; 128:6, 9, 21,
25; 129:7, 7; 130:3; 137:9;
139:14; 148:12; 150:6, 13,
24; 151:22, 23; 152:7;
154:5; 158:6, 14, 19;
160:1, 15; 165:14, 15, 24;
166:3, 5, 6, 12, 13, 17, 22;
167:6, 7; 168:3
Monsanto's 12:19;
56:16; 68:14; 69:10; 71:1,
6, 13; 90:10; 91:9; 97:7;
98:5; 99:15; 100:6; 102:1;
107:13, 25; 123:15;
133:21; 134:3; 136:13;
148:15; 151:14, 18; 152:3;
153:1; 162:17; 165:7
month 13:10; 132:9;
155:13, 14; 156:2
Monthly 43:15, 21, 23;
44:8; 131:3, 11; 135:7
Months 9:4, 8, 9, 11;
81:4; 82:25; 83:13
MOORE 11:15, 18; 44:17;
45:4; 154:19, 25; 155:8
more 4:23; 7:11; 16:14;
17:1, 1, 4, 18; 22:25; 23:4,
9; 28:14; 37:8; 40:4; 73:24;
78:21; 84:18, 21; 87:10;
89:14; 96:23; 100:3;
101:12; 103:6, 7; 108:16;
113:5; 128:24; 129:7;
130:13; 137:14; 140:1;
145:21; 152:20; 153:9;
163:1, 2, 16
morning 11:8; 22:4;
51:13; 52:25; 55:20
mosquito 40:19
most 9:14, 16; 22:19;
72:17, 18; 77:1; 138:1;
163:24; 164:3
mothball 21:23
mother 119:16, 24; 121:8
mound 79:23
mountain 47:11, 13;
77:17; 87:4; 90:22; 156:12
mounting 119:5
mouth 63:22
move 26:14; 48:11;
72:24; 74:6; 97:25
moved 74:11; 83:9
movement 86:10
much 58:13; 69:25;
70:21; 97:23, 24; 99:2, 21;
115:17, 22, 25; 116:1, 19;
117:8, 10; 118:8, 14;

160:11, 16; 162:15;
164:16; 165:24
Mullally 80:16; 81:9
Mullis 155:8
multimillion 13:19
myself 19:22; 53:8

N

name 29:5; 60:7; 81:14;
126:18; 157:20; 158:1
named 17:8; 60:6; 109:25
names 56:5
naming 109:17
natural 135:4
nature 85:20
near 25:23; 156:13
necessarily 14:19; 62:3
necessary 16:1; 63:2;
68:9; 116:14
need 4:9; 10:9; 13:9;
22:18, 20; 40:4; 44:21;
45:2; 49:23; 72:12; 82:3, 5;
106:9, 11; 114:6; 157:24
needed 10:16; 16:8;
88:18, 19
needs 114:18
neighbor 131:1; 161:2
neighborhood 73:12;
90:25; 91:5; 100:8;
107:24; 108:22; 134:21
neighbors 69:3, 10, 14,
18, 18, 21; 70:25; 71:6, 14;
75:16; 124:8, 14; 130:23;
151:22; 152:4; 160:14
neurological 125:20
neutralized 59:16
never-ending 103:24, 25
Nevertheless 68:19
new 55:12; 71:23; 75:21;
76:8; 77:8; 139:2; 142:11;
148:23; 150:17
next 32:21; 37:1; 39:1, 16;
41:7; 58:6; 74:6; 75:1;
77:3; 80:11; 82:8; 84:7;
114:1; 135:6; 142:11;
149:8; 150:23; 157:16
nobody 91:25; 92:1
none 80:1, 2
nonetheless 145:21
nonresponsive 94:19
nonunionized 14:10
nor 171:16
normal 12:19; 56:16;
91:21; 116:13
normally 9:22
north 142:19; 149:12
note 117:18
note-keeper 20:8
note-keeping 20:10, 12
noted 34:10; 90:13
notes 14:25; 20:2, 3
Notice 3:14; 4:3; 8:7;

141:23
noticed 52:6; 54:6, 7
notion 63:7
November 43:2; 119:10;
121:4; 122:2, 6, 8
nowhere 97:9
Number 3:8, 10; 14:25;
19:13; 24:12; 29:13;
35:24; 55:11; 57:19;
80:12, 15; 83:4; 87:8, 19;
89:19; 90:12, 15; 111:11;
122:17; 135:11; 149:12;
159:1; 164:3
numbers 42:2, 9; 159:2

O

oath 154:2
Object 5:25; 6:15; 7:14;
8:2, 9; 14:17; 15:14; 18:22;
30:13; 33:8; 35:3; 47:24;
50:15; 51:25; 57:8; 59:6;
68:12; 69:6; 89:9; 91:1;
94:5, 18; 96:3; 99:16;
100:9; 102:3; 108:2;
111:24; 113:17; 115:19;
116:22; 118:5; 121:10;
122:4; 129:1, 10, 23;
134:7; 147:17; 152:1;
153:13, 17; 160:6; 167:11
objection 108:6, 12;
118:17; 123:17
objections 114:13
Objectives 29:25
observation 33:12
obviously 21:2; 112:21
occasion 68:7
occur 13:5; 116:21;
117:7; 162:5
occurred 8:8; 23:3;
72:15; 160:5; 162:9, 20, 23
occurring 27:18; 129:12
October 87:23, 24, 25
off 15:7; 31:1; 42:21; 46:8,
12, 13, 14; 47:4, 5; 66:10;
67:4; 71:20; 75:16, 19;
79:16, 18; 88:11; 89:7;
97:2, 7; 98:1; 100:6, 18,
20, 21; 102:18, 22, 24;
103:15; 104:10, 15, 23;
105:12; 115:4; 117:20, 25;
120:25; 124:24; 137:15;
142:9; 155:4; 157:3;
167:20
office 9:20; 14:21; 85:19;
93:16
Offices 76:7; 110:15;
155:8
officials 136:6
often 13:15; 59:18; 68:7;
86:12; 87:10
Ohio 151:2; 152:4
old 83:8, 11
old-timers 157:21
once 13:10; 79:3; 87:10;

88:15; 89:18; 147:12
one 3:8, 15; 4:7, 10;
10:10, 11, 16; 11:22; 12:1,
10, 10, 13, 23, 24; 13:2;
14:1; 17:3; 20:15; 23:25;
25:21; 27:18; 31:3, 3, 34:9;
38:17; 43:16; 44:3; 45:15;
51:3, 11; 52:18; 55:10, 10;
58:19; 60:7; 65:6; 66:6;
69:21; 70:14, 19; 71:23;
75:12; 77:22, 23; 78:16;
80:25; 82:7; 87:5; 88:19;
91:7, 10, 17; 93:15; 96:21;
98:2, 22; 99:10, 20; 102:8;
103:6; 109:12; 111:20;
113:4, 7; 117:6, 14;
119:12; 121:6; 123:11;
126:6; 130:13, 16; 133:9,
13; 135:21; 136:20; 140:1;
142:12; 147:25; 149:11;
154:18; 157:12, 20; 159:6;
160:9, 10, 15; 163:4; 164:5
one-third 58:7
ones 44:16
ongoing 139:9
only 12:24; 18:3; 19:21;
25:10; 29:18; 31:16;
35:18; 38:7, 15; 39:5; 43:1;
45:16; 50:18; 72:2; 87:16;
88:14; 90:24; 92:17;
93:13, 15, 19; 98:23; 99:3;
105:17; 120:16; 123:20;
136:22; 162:6
open 25:10; 161:8; 163:6
opening 161:1, 17
operating 5:2; 22:13;
48:25; 52:6; 86:7; 142:21,
23; 144:20
operation 46:4; 55:22;
56:10, 14, 20; 58:17, 23;
85:19; 86:4, 9
operator 157:13, 21;
161:18
opined 16:6
opinion 7:10; 99:19;
164:25; 166:4
opposed 124:3
opposite 13:7; 105:19
options 10:20; 12:7; 14:5
order 91:14; 99:8;
159:16; 161:24
organic 58:3, 23, 24;
59:22; 61:2, 17, 24; 62:18;
138:11
organic-free 59:2
organisms 33:6
organized 104:23
original 23:22; 33:24;
48:9; 72:25; 75:5, 7, 9;
92:24; 96:13; 135:18
originate 62:19
others 16:24; 26:17;
37:14, 16; 91:16; 113:5
ight 135:2
ut 13:10; 18:4; 32:25;
46:11; 72:16; 73:19;
75:18; 76:10; 85:1, 1;

87:16; 89:23; 90:20; 91:9;
11:92:19; 97:1, 17; 98:1,
3; 103:8; 105:11; 106:3;
129:6; 135:2; 142:1, 5;
144:22; 146:11; 147:9;
152:21; 161:14, 15; 162:7;
164:17, 22, 24
outfall 132:18
outfit 67:21
outside 69:4; 71:1, 7;
74:7; 105:18; 142:22;
143:6
over 5:23; 17:5; 45:16;
51:13; 58:9; 62:21; 76:17;
77:24; 79:20, 23, 24; 84:4,
21; 118:15; 145:21, 23;
165:5
overall 63:9
overalls 68:2
overnight 99:22
overtones 151:8
own 50:8; 130:9
owners 69:24

P

P.E 3:1
p.m 168:11
pad 143:25; 144:1
page 21:17; 31:14; 36:7,
15, 18; 37:14, 17, 25; 38:1,
16; 67:19; 84:7; 131:13;
151:13
pages 171:9
paid 155:11; 165:24;
166:3
palatability 63:2
pallets 79:1; 85:20
PAPAGEORGE 3:1, 6,
11, 16, 25; 7:1; 9:1; 15:9;
16:22; 38:6; 40:4; 42:23;
52:24; 54:10; 59:19; 72:6;
106:24
paper 85:19, 21
Paragraph 15:19; 16:14;
21:20; 31:13, 14, 23; 32:6,
7; 36:19; 37:1; 39:24;
40:12; 41:7; 82:8, 22;
109:13; 110:17, 19; 151:6
parathion 37:11, 13, 16,
21; 38:4, 5
parenthesis 48:20
part 5:22; 10:13; 15:15;
19:16; 38:22; 51:13; 56:3;
63:9; 75:5; 77:20; 78:2;
87:14; 103:21; 119:3;
133:13; 145:6
Partially 84:14
participate 3:16
participated 22:23
participating 5:13
particular 15:15; 20:22;
31:4; 132:9
particularly 123:4;
140:17

parties 171:14, 15
parts 67:24; 82:2; 87:22,
23, 24; 88:21, 25; 89:4, 7,
25; 90:8, 13, 16; 96:15, 21;
98:14; 158:20
passed 119:16, 24; 121:8
past 100:20; 102:23;
104:11, 24; 135:3; 155:12;
157:12
pathologist 165:6
pathologist's 164:25;
166:8
Paul 56:4
pay 155:13
paying 130:11
PC 21:5
PCB 4:4, 18; 13:2; 15:20;
16:21; 19:13; 20:16; 21:6,
9, 25:1; 66:20; 71:6; 82:17;
83:5; 93:3; 104:19;
107:20, 25; 108:14;
112:22; 115:17; 117:18;
118:13; 123:15; 125:9, 12;
130:13, 14; 149:14;
153:11, 16, 19; 161:6;
163:15, 15; 164:25; 166:4
PCB-contaminated
151:20
PCB-filled 164:11
PCBs 3:17; 4:8, 9, 13, 19;
5:10, 14, 18; 16:5; 17:10;
24:23; 25:8, 21; 28:14;
33:5, 13, 15, 18; 34:2, 7,
18, 20, 23; 35:1; 53:6;
65:4; 66:1, 13; 67:4, 9, 11;
68:16, 23; 69:4, 11; 72:1,
18; 75:13; 80:6; 87:16;
88:11, 22; 89:7; 91:9, 23;
92:2, 7, 93:10, 14, 19, 24;
94:22; 95:8, 15; 96:22;
97:1, 13, 25; 98:3, 10, 17;
99:9, 14; 100:6, 18, 20;
101:12, 15; 102:1, 18, 22,
23; 103:14; 106:2, 21;
107:22; 108:21; 111:1, 4;
113:1, 15; 116:19; 117:8,
10, 16; 118:3, 14, 21;
119:14, 15, 24; 121:6;
122:2, 11, 18; 123:9;
124:9; 125:16, 21, 24;
139:4; 141:17; 142:23;
143:1; 144:21; 147:13;
148:6; 149:21; 150:25;
151:2, 18, 23; 156:15;
157:14; 158:7, 15, 16;
159:2, 9, 10, 20; 160:11;
163:25; 167:23, 24; 168:3
PCBs's 72:8
PCP 83:4
pelicans 93:12, 19
penetrate 65:25
people 14:12; 23:1;
25:19; 27:11; 41:12;
42:12; 47:18; 56:2, 4, 8;
71:4; 81:16; 99:24; 117:3;
119:10; 137:16; 145:23
per 45:21, 25; 58:9, 16;
87:10, 22, 24, 25; 88:21;

89:1, 4, 7, 25; 90:8, 13, 16;
96:15, 21; 98:14
perceive 18:2
perceived 5:16, 19; 33:6
percent 163:25
percentage 164:10
perception 6:6
perfect 114:15
perhaps 16:5
period 10:13; 45:5;
77:23; 85:12; 87:5; 89:21;
100:11; 105:23; 118:15;
121:15; 122:25
periodic 130:21
persistence 139:18
persisting 147:14
person 9:21; 71:8; 77:1
personal 7:22; 13:3;
120:18
personally 18:2; 19:21;
27:16; 34:5; 70:23; 79:22;
81:8; 98:19; 119:4; 136:8,
12
personnel 52:3; 60:8, 19;
111:1; 163:16
phase 134:5; 149:11
phaseout 20:18
phases 103:2
phenomena 162:20, 22
phenomenon 133:1
phone 76:23; 77:2
physically 23:2; 103:18
picked 46:16
pickup 86:10
picture 88:9; 161:20
piece 99:10
pipes 161:10
pit 49:10; 58:18; 59:14,
18, 24; 61:3, 5, 21, 25, 25;
62:6, 9, 11; 78:13, 20;
89:23; 105:19; 142:7, 15;
143:3; 145:5; 146:6, 19;
147:7, 22
pits 146:3
place 13:13; 14:20; 29:5;
52:9; 56:6; 79:10; 90:7;
106:23; 126:12
placed 78:25; 79:2; 84:4;
88:6; 146:18, 21
places 48:7; 51:4; 78:2
Plaintiffs 15:2; 28:18;
31:8; 35:21; 39:21; 43:12;
48:13; 76:1; 80:12; 109:4;
131:8; 135:12; 138:6;
140:8; 148:9, 24; 150:21;
152:10
plan 30:1; 49:14; 141:7
plant 3:18; 4:10, 22, 23,
25; 5:1, 9; 6:12; 10:11, 21,
21; 11:23; 12:14, 15; 14:1;
17:10, 12; 23:2; 25:23, 24;
26:12, 21; 27:1, 5, 14, 15,
21; 28:2; 29:19, 24; 30:11,
12, 20; 43:24; 45:7, 18, 19;
48:2, 6, 23; 49:18, 22;

50:9, 14, 24; 51:8, 16, 1,
20, 21; 52:1, 3; 55:5;
56:24; 57:7; 59:21; 60:4,
16, 19; 62:2; 63:13, 16;
65:3; 68:18; 69:1, 2, 3, 5,
10, 12, 14; 70:22, 25; 71,
6, 7; 73:3, 5, 7; 74:6;
77:14, 21; 78:2; 79:6;
80:18, 20; 81:2, 4, 6, 11,
20; 82:25; 89:22; 90:4;
96:13; 98:4, 5, 11, 18;
101:5, 6, 12; 102:17, 17,
21; 103:3, 9, 13, 21; 104:6,
8; 108:19; 109:16, 22;
110:4; 111:1, 5, 10;
113:16; 124:8, 14; 130:20,
24; 132:18; 133:24; 134:6,
137:12, 15, 22; 141:17, 20;
146:6; 147:3, 5; 148:2, 6,
7, 15, 20; 150:17; 156:15,
25; 161:8, 14
plant's 87:5
plants 9:25; 10:16; 11:22;
23:25
plastic 64:20
played 112:15
Please 40:7
plus 131:21
pockets 133:4, 11, 16,
22; 134:10
point 9:5; 50:7; 73:22;
78:14, 15, 19; 95:4; 97:25;
109:1; 112:25; 123:15;
147:3, 15, 23; 152:9; 158:6
points 75:17
poison 115:18
poisoning 28:7; 116:21,
24; 117:5; 118:16
poisons 95:8
poking 152:21
politically 16:22
polluting 30:12
pollution 5:8, 24; 7:25;
15:11, 21, 24, 25; 16:1;
17:5; 18:10; 19:14; 20:16;
21:6, 9; 37:7; 71:1, 7;
82:19; 109:17, 24; 130:21;
131:19; 132:6, 12; 135:15,
17, 25; 136:2, 10; 138:11,
13; 159:17
polyphenols 21:10
pond 142:6; 148:16;
149:21
popular 95:9
portions 66:21
posed 19:5, 7
position 18:7, 20; 109:20
positioned 144:1
possibilities 113:24
possibility 113:13;
114:3, 4, 6
possible 8:6, 21; 33:1;
97:18; 109:16, 20; 115:3;
147:21
postpone 16:4
potential 27:17; 92:7;

93:2; 117:24
potentially 95:16; 118:16
nds 45:21; 58:8, 16;
4
pouring 161:18
ppb 16:2
PPM 152:9
practice 67:23; 168:8
precautions 63:24, 25;
68:20; 115:14; 116:18
prefer 111:22; 112:4;
114:23
preferring 111:16
preliminary 121:12
prepare 116:3
preparing 55:16; 109:16
Presence 33:2, 5, 11, 15,
18; 34:20; 52:18; 69:4, 11;
72:2; 92:18; 123:9;
156:17, 20
present 6:18, 21; 9:20;
10:15; 23:2; 51:3; 52:22;
69:13; 82:15; 83:6, 8;
102:24; 110:8
presentation 19:17
Presently 58:6; 135:17
preserved 158:14, 17, 19
press 95:9; 109:16, 23
pressure 16:4
presumably 85:15; 98:4
prevailed 55:4
ent 65:18; 68:10, 21;
16
prevented 131:22
preventing 147:8
previous 65:7; 67:20
previously 163:17
primarily 4:16; 46:15
primary 58:2; 62:17
primates 126:5
principle 107:21
print 120:20
prior 18:16; 24:20; 44:1,
8; 103:15; 108:3; 123:9, 10
probably 44:13, 25;
135:23; 164:16
problem 33:7, 10, 20;
34:2; 55:2; 82:14, 14; 83:5,
20, 23, 24; 89:5; 107:21;
108:8; 115:21; 117:23, 24;
123:16; 151:7
problems 17:1; 33:3;
50:10; 58:17; 71:25;
82:20; 89:4; 138:14
procedure 79:9
procedures 147:6
process 46:16; 47:7;
48:9; 50:11; 55:21; 57:24;
104:5, 9
processes 27:19; 90:4
ice 4:13, 19; 59:2
produced 11:13; 29:19;
68:17
producing 4:15; 5:10;

27:5; 143:6
product 46:21
production 3:17; 4:10,
18; 13:14, 19; 15:13; 46:6;
58:8, 16; 103:3; 115:15,
15; 134:4; 140:18; 143:13;
146:18; 159:15, 19; 162:3
products 4:15; 5:20;
58:2; 117:18
professional 19:22
Professor 32:21
profile 72:17
program 9:7; 32:20; 75:6;
87:15; 99:8, 13, 19;
101:10; 108:19
Progress 48:16; 141:24
project 142:2
prolonged 139:18
promised 41:12
pronounce 125:2
proper 79:4; 88:16;
99:25; 103:3; 159:6
properly 88:15; 125:3
properties 31:19; 32:10
property 75:13, 17, 19,
21; 97:6, 9; 98:1
proposal 149:19
proposed 149:7
protect 64:14; 68:16
protection 64:23; 65:5,
16
protective 116:14
protest 141:8, 10
provable 72:3
provide 5:2; 48:25;
65:24; 116:13
provided 109:15; 117:22,
24; 159:9, 11
providing 3:21; 112:22;
163:10
public 16:15, 18; 90:20,
24, 25; 109:8
publications 47:22
publicity 151:7
pump 62:19; 144:22, 22
pumped 146:11
purchase 51:5
purchased 70:5
pure 51:7
purge 58:23; 61:17
purpose 48:23; 49:4;
69:19; 79:24
purposes 38:20
pursue 6:9; 32:21
pursued 141:22
put 12:20; 13:5; 19:11;
30:1; 32:1; 42:19; 44:17;
66:21; 67:23; 75:23;
116:4; 120:20; 141:19;
146:25; 147:15, 22; 159:6
putting 55:12; 84:20;
142:11
Pydrauls 16:4

Q

qualified 20:9
quality 4:19
quantified 54:13, 14, 16,
21
quantitative 41:11
quantities 51:4; 63:3
Quarter 138:12
quarterly 138:13
queries 109:16, 24
quick 43:16
quickly 150:11
quit 85:15; 168:10
quite 4:14; 16:20; 60:9;
99:1; 113:11; 144:14;
151:6
quote 164:5
quoted 19:18, 20
quoting 53:7, 8; 94:13

R

R 148:12
Rags 85:22, 23
railcar 56:25
rain 79:19
rains 97:20
rainstorm 161:20
rainy 87:11
ran 142:1, 8; 143:13
range 164:11
ranks 157:22
rare 13:2
rash 117:9
rate 52:8
rather 111:23; 134:16
rats 127:22; 165:1; 166:5
raw 86:10
reach 90:14; 159:6
read 3:9; 31:25; 32:3;
36:5, 10; 40:3; 41:8; 52:19;
58:4; 62:22, 23; 63:5;
81:23; 82:3, 5, 6, 21;
109:14; 110:13; 112:5, 7,
17; 131:16, 18; 140:13;
141:1; 152:14
reading 40:5; 110:10, 18
ready 5:23; 119:1
real 40:17
really 5:18; 13:22; 60:22;
74:24; 97:20, 20; 98:22;
103:2, 24; 107:9; 126:23;
128:20; 134:14; 138:4;
156:24; 157:6; 161:19
reason 18:6; 19:19;
71:15; 81:2; 116:18;
138:9; 155:23
reasonable 20:18; 153:5
reasonably 146:12
reasons 3:16; 4:6

recall 6:17; 7:4; 9:12;
10:23; 11:25; 12:13; 17:8,
11; 20:20; 21:1, 5, 15;
24:21; 26:23; 27:2, 16, 23,
25; 35:16; 52:18; 55:8, 23;
59:8; 64:21; 65:15; 73:9;
74:12; 81:7; 87:13; 88:1;
100:23; 105:17; 130:25;
131:2; 132:23; 136:15;
138:24; 139:8, 12; 141:6;
144:15, 18; 157:20;
159:13, 14; 163:14; 165:1,
9
recalled 7:2
recalling 112:14
recalls 12:23
receipt 48:19
received 121:12; 131:19;
149:23
recent 16:20; 38:21;
39:10; 62:21; 72:17;
109:18
recess 29:10; 42:18;
77:12; 115:12
recipient 109:10, 11;
110:14
recollection 15:11;
19:24, 25; 20:13; 22:2;
29:7; 30:10; 37:6; 50:18;
55:6; 76:15, 24; 82:9;
86:15; 105:10; 111:12, 19;
128:18; 132:5; 137:17;
141:3; 144:16; 150:24
recollections 22:16;
26:11; 29:16
recommend 6:13
recommendation
149:11
recommendations 12:7;
66:7; 80:19, 20
recommended 66:3, 8;
83:3, 7; 88:17; 141:21
recommends 84:3
record 15:7, 8; 29:12;
31:1; 42:20; 112:7;
124:24; 131:19; 155:4, 6;
157:3; 167:20
recovered 48:10
reduce 45:20; 46:1;
55:11
reduced 156:3; 171:8
reducing 29:23; 30:4, 5
refer 49:23; 60:19; 87:18;
132:8, 9; 135:7
reference 7:4; 27:16;
37:18, 20, 23; 65:6, 9;
95:2; 101:25; 132:21, 25
referenced 110:11;
111:10
references 43:3; 135:8;
141:23
referred 37:25; 47:12;
48:3; 95:8; 121:13
referring 15:15; 17:7;
21:3; 47:22; 53:1, 11;
101:18; 112:19; 131:14;
135:24; 139:25

refers 12:10; 148:15
reflects 52:4
refresh 15:11; 30:9;
111:11, 19; 132:5; 141:3;
150:24
refuse 19:4; 109:19, 25
regard 9:17; 24:15; 55:1;
57:19; 67:7
regarding 11:23; 14:15;
24:23; 56:19; 72:8; 76:12;
109:17, 24; 139:4
regards 140:19
regular 67:12; 79:13;
87:2; 138:13; 171:14
regulatory 16:20; 110:20
relate 11:21
related 12:13; 35:19;
51:11; 101:9
relating 5:14; 12:6; 77:6
relations 16:16, 18;
21:21; 109:4; 131:5, 15
relationship 137:21, 24;
152:3
release 27:17; 50:12, 20
released 27:21; 28:1, 2
releases 27:14
reliable 48:25
relinquishing 167:18
remaining 4:20; 46:9;
113:2
remains 39:13, 13
remark 7:8
remember 8:5; 22:11;
24:24; 25:8, 15, 19; 26:9,
18; 30:14; 35:6, 8; 36:1, 2;
42:2, 5, 8, 9, 15; 45:9, 24;
47:8, 13; 50:6; 54:2, 24;
55:2; 64:24; 65:12; 73:10,
11; 74:13, 15, 19, 20, 22;
77:4; 83:11, 15; 84:25;
85:4, 16, 18; 86:2, 14;
88:8; 92:17, 19; 94:2, 13,
25; 95:2, 8, 11, 12, 12, 22;
97:3; 98:10, 16, 18;
102:11; 105:6; 109:23;
110:21, 22, 25; 111:1, 3, 8;
122:13; 123:7; 126:20, 23,
24; 127:1; 128:21; 129:2,
3, 5, 11; 131:6; 132:14, 16,
21; 136:1, 3, 20; 137:3, 6,
13; 138:17; 139:1, 21, 23;
140:4; 142:5, 9, 10; 143:5;
144:19, 24; 148:8; 154:18;
156:8, 9, 11; 157:17;
158:1, 2, 3, 9, 13; 159:20,
23, 25; 160:3; 163:17, 22,
23; 164:20, 21, 24; 165:3,
4, 13, 17; 166:10; 167:21
remembering 25:22;
102:15; 144:25
repairing 84:25
repeated 140:5, 20, 25
replaced 81:13
replies 109:16
report 31:5, 11, 14;
32:15; 35:24; 36:13; 37:9,

11:38:10;39:16;43:15;
21:23:44:18;48:16;
54:11;81:2;105:19;
109:9;119:19;121:19;
130:4,6,9;131:12;135:7;
138:11
reported 50:21,22;
52:17;56:6;140:14
reporting 27:8;141:11
reports 27:23;28:11;
31:3;39:25;43:17;44:8;
130:15;131:4;138:13;
141:23;150:5
represent 171:10
representation 135:21;
136:19
representative 70:12;
148:13
representatives 6:8,12;
70:8;136:6,13,19,20,25;
137:1
reproduce 90:11
reproduced 141:5
reproducibility 140:15
request 8:13,15;13:8;
41:20;80:23;129:15;
130:3;159:25;160:2
requested 83:18;158:21
requesting 54:12
require 5:3;69:15
required 4:19;64:22
requiring 65:5,15
rerun 129:8,13,15,21
research 139:10
researcher 126:19
researchers 92:1;
158:15,20;159:9,11
researching 158:15
reserve 3:9
residential 90:25;91:5;
9;100:7;107:24;108:22
residents 73:4;124:7
respect 38:6;41:25;
52:23;54:10;120:24;
165:19
respectfully 8:15
respectively 8:12
respirator 160:25;
161:24
respirators 117:23
respond 24:5
response 3:12;41:19;
161:22
responsibility 9:25;
78:3;163:8
responsible 27:5;86:6;
163:5
rest 38:10;120:3
restate 125:3
restrict 79:17,22
result 7:25;18:10;40:16;
108:17;151:19,25;
1:116
resulted 65:4

results 42:1;87:22;
100:1;105:14;107:8,9;
110:23;112:22;126:24;
128:23;129:4,9,16,20;
22:130:6,15;139:13;
140:13;154:11;156:18;
19:22;157:5,10;158:10
retire 107:14
retired 107:16
retracted 94:14
review 120:23;163:15
reviewed 165:6
Riceboro 92:19,21;93:6;
10,19,22;94:14,14;
95:13
Richards 23:20
Richardson 121:18
rid 13:25
right 3:9,24,25;9:15;
11:1;15:9;19:10,19;
20:11,15;21:16;23:7;
24:14;26:10;27:12;
29:15;30:9,16;32:22,24;
36:14,25;38:24;39:3,12;
15:44:12;46:3,17,20;
47:3,14;48:11;49:6;
53:20;54:17,21,22;
60:11,24;61:12,15,19;
63:11;65:10,17;68:24;
70:24;71:17,22;72:16;
73:8;75:1,18;76:9,14;
77:10;78:18;82:12;
83:19;84:8,9,16,24;
86:6,25;87:17;88:5;
89:20;93:17;95:7,21,25;
96:12;97:6;99:4;101:21,
24;102:4;103:5,10,23;
104:4,13;105:18;107:3,
11;113:3;116:10,17;
117:21;118:19;120:2;
121:22,24;122:10,22;
126:16;127:4,20;130:18;
132:4,15,25;133:15;
134:12;135:1;136:17;
137:4;139:2;140:3;
143:8,12,20,24;146:7,
10,16,20;149:10;152:18;
154:14,14;155:8,23;
156:25;157:8;158:23;
159:4;160:12,23;164:6;
165:20;168:1
ring 140:7;146:22;164:7
risks 71:25
Rizen 119:9
road 22:10
roaming 75:12
rock 59:15
role 112:15;123:15
rolling 43:11
room 57:14
roughly 130:15
rounded 69:23
route 6:9
routed 145:4;146:5
routing 143:20
row 79:23;84:1
rub 65:18

rubber 64:14,16,18,19;
65:8,12;66:15
rubber-coated 67:3,11
rubberized 66:23,24;
68:2
run 22:10;99:25;103:20
running 69:22
Runoff 87:9;96:15,22;
98:20;159:16,22

S

S-a-u-g-e-t 4:11
safety 63:16
sake 15:16;36:12
same 4:15;30:17,17;
37:2;38:14;51:14;66:18;
83:20,23,24,25;84:11;
89:21;102:8;108:12;
114:20,21;118:17;
122:24;130:15,15;133:1
sample 37:24;103:18;
107:22;108:21;159:5
sampled 87:10
samples 33:16;34:7;
41:23;42:13;49:9;76:13;
87:21;88:20;98:24;
99:25;100:2;110:6;
122:23,24;123:5;156:17;
158:19,21;159:8
sampling 99:8,13,25;
157:5
San 94:3,21;95:3
Saturday 36:20
Sauget 4:11
Savage 16:11,12;20:3,
7;23:14;111:15
save 42:22;43:6;56:23
saw 11:6;40:18;57:1;
80:4;83:14,16;84:1;
113:2;119:17;156:19;
157:5,6;158:11;163:4
Sawdust 85:24,25
saying 33:23;60:18;
83:20;98:10
scanned 36:13;82:11;
149:9
scheduled 120:16;
135:22
school 154:15
scientific 72:7;91:15,18;
92:1;120:21,22
scientist 95:14,15,20,
23;121:6
scientists 92:16
score 153:21
Scott 66:19;76:5;151:15
seal 142:9
second 3:18;15:6;36:18;
63:12;138:11;141:21;
142:14;147:22;151:13
secrets 67:17
section 49:7;82:14;
131:4,5,14;135:15;
140:11

sections 45:17
security 82:17
seeing 73:9;83:11;158:9
seemed 41:10
seems 16:19
segment 60:7
select 130:16
selling 4:8;13:22
seminal 93:11
send 159:7;166:17,19,
25
sending 145:1
sense 133:20;134:1;
145:12;152:15,18
sent 48:9;166:13;167:6
sentence 31:23;32:7;
36:19,25;39:9;40:6;58:6;
82:13
separate 51:1
serious 82:14;137:13;
151:7
serve 79:23;147:8
served 48:6
serves 27:2;69:19
Services 27:10;43:15,
17,21;48:17;81:14,18;
100:25;131:3,11;135:6;
141:22
set 24:11;29:25;81:1,5,
8,11;99:24;100:2,3;
101:10;115:25;129:17;
158:19
sets 76:10
setting 81:7;93:17
settle 59:17,22
Seventies 26:19;122:14,
20;126:13;156:25
Several 31:17;32:8;
37:13;40:15;56:2;75:11;
78:1;87:20;122:9;138:24
sewer 143:14,21;144:7,
12;145:1,4,6,7,11,11;
146:5
sewerage 58:7;59:4,10,
14;61:11,16
shame 114:9
share 69:17;164:3
sharing 69:18
shelf 158:24
Shell 121:18
shift 66:5;144:9;157:23
shoes 64:9
short 121:15;140:13
short-term 139:19
shortly 152:7
shot 80:2
shoulder 79:2,2
show 42:14;80:10;
120:15;140:10;148:11;
160:18;161:17
showed 41:24;158:10
shower 65:4;66:3,4

showing 128:23;13:
shrimp 34:11,14,14,
17,23,25;35:1,13,20
shut 4:17;9:17;10:11
17,21;11:22,23;12:1
15;15:13;16:25;22:3;
23:8,25,25;49:9,17,
21;50:24;51:24;52:5;
56:10,14,19,24;57:7;
111:17,22,23;148:3
shutdown 24:8;55:14,
15
shutting 4:3;10:10,20;
13:1,18;55:21;111:10
side 78:13,17
sift 130:18
sign 3:9
signals 150:12
signed 38:17
significant 33:6,10,20;
34:2
signs 160:10,16;162:15
similar 55:18;90:6
simple 99:6
simply 94:17,21;121:3
sincerely 147:7
sit 106:7
site 79:1;83:6;133:14
situation 34:19;41:4;
65:4;74:17;77:4,7;107:6
six 135:21;136:19,24
sixth 138:12
Sixties 26:19,20;137:19
size 87:4;141:24
skin 63:21;65:18,19;
66:9,22;116:6,20;117:4,
20,25;118:9
skipped 140:22
skipping 153:9
skull 67:3
slides 165:7,12,16
sludge 46:10
sludge-mercury 46:11
slurry 46:10
small 164:9
smaller 5:1
Smith 155:7
smoke 116:6;150:12
sneaking 67:18
Snow 16:2;30:2;31:15,
17;32:8,18;59:25;60:2,
6,9,14,20,23;98:6;
133:4;134:10,14,16,22
so-called 69:24;127:16
SO2 131:22
social 137:14
soda 29:20;46:9,9;47:5,
5;50:10
soil 79:4;97:12,16,24,
25
solid 87:5
somebody 81:10;
104:14;123:20

someone 39:25
someone's 160:12
etime 88:6, 7
sometimes 60:18; 82:7
somewhere 78:9; 164:17
soon 71:22
sorry 6:20; 25:5; 29:1;
30:24; 32:6; 40:5; 41:21;
43:18; 49:18; 52:13; 75:7;
101:4; 118:20; 137:9;
139:21; 149:1
sort 37:21; 46:12
sound 144:13
source 76:12; 91:17
south 47:11, 12; 154:21,
23, 24
speak 79:2; 103:5
speaking 70:22
speaks 59:7
species 37:24; 95:4
specific 8:5; 17:10;
19:25; 27:4; 42:9; 66:1;
82:12; 86:1; 98:21;
103:12; 105:6, 10, 14;
122:13
specifically 22:12;
23:25; 39:6, 8; 54:4; 63:18;
95:5; 102:20; 146:24
specifics 21:2; 42:15;
88:8
sify 84:14
spectrum 117:7
speculation 119:20;
123:18
speculative 120:20;
122:6
spell 99:5
spend 40:11
spending 15:20
spent 51:12
spillage 143:18
spilled 159:20
spills 62:19; 149:13
spokesman 19:22
sponsored 135:19
sports 113:8; 115:5
spots 48:6
St 11:5; 23:16; 56:8, 13,
18, 18; 74:11; 105:4; 139:7
staff 10:7, 8, 13, 14, 16
Staley 59:2
stand 24:19
standards 115:25
stands 15:23; 73:19
start 56:24; 106:10;
152:21, 23
started 3:11; 26:16;
61:10; 104:5; 133:3, 5;
10; 165:23; 166:3
ts 103:8
state 18:19; 30:24; 40:12;
41:9; 108:6; 135:16;
167:22, 23; 171:3

stated 16:23; 20:1; 171:6
statement 7:5; 19:14, 16;
96:8; 109:20; 116:3;
153:6; 163:7; 164:19
States 34:3; 35:14; 82:14;
148:16
station 40:14
stations 103:4
Status 140:11
stay 61:3
stayed 108:18
steel 47:9
step 32:21; 74:7
steps 68:15; 101:22
stick 160:4
still 4:18; 10:3; 17:15;
23:14, 18, 20; 66:16; 71:9;
86:4; 90:19; 91:12; 96:13,
17; 103:1, 11; 117:5;
132:2; 158:4; 163:7, 10;
166:4
stimulate 29:7; 37:6;
152:24
stimulated 74:13; 113:13
stimulates 76:25
stop 5:10; 13:22; 106:10
stopped 4:8
stopping 73:22; 85:16;
86:2; 109:1
storm 79:19; 99:4;
159:16, 22
straight 53:17
Strand 119:10
strangers 120:18
stream 90:19
streams 29:24; 30:12
street 156:11, 12
struck 132:22
structure 7:9
student 36:20
studied 50:20; 130:14
studies 41:6; 72:11;
89:14; 105:17; 115:23, 23;
119:13; 124:17, 17, 20;
125:8, 11, 15, 19, 24;
126:2; 127:9, 11, 13, 14,
16, 22, 23, 24; 128:4, 7,
10, 13, 23; 129:6, 8, 15;
139:20; 140:5, 12, 15, 20,
23, 24; 141:4
study 63:10; 81:7; 103:7;
104:23; 105:5, 11, 15;
106:8, 10, 21, 22, 25;
107:7; 113:5; 124:20;
125:8, 12, 16; 126:4, 6, 12,
15, 22; 130:5, 11, 13, 13;
139:18
studying 103:21; 127:2
subacute 127:16
subject 4:3; 20:23; 22:20;
23:13; 24:20; 72:19; 77:8;
101:9; 107:18
subjective 6:6
subordinates 81:19
suctioning 161:10

suddenly 35:25
sue 5:23; 17:5; 18:9
suffer 117:14
sufficient 87:4
suggest 7:17; 41:14;
78:21; 81:9
suggested 10:10; 78:25;
90:8
suggestions 41:5
suit 5:7; 6:13; 65:8; 66:15
suits 64:14, 16, 18, 25;
65:2, 12
sulphur 132:10
summarize 78:2
summarizing 138:13
summary 38:21; 39:10;
138:11; 149:9; 154:19;
156:20
sump 87:22; 88:4, 6, 10;
90:16, 18; 105:19, 21;
106:3, 22; 107:5, 23;
134:25; 141:16, 19, 21;
142:7, 11, 19, 24; 143:6, 7;
146:13, 17, 25; 147:16;
148:6, 16, 22; 149:6, 12,
20
superintendent 27:8;
81:14
supervised 86:9
support 5:2, 17; 7:20;
16:8; 120:1
supposed 79:10
Sure 14:23; 26:10, 15;
93:5; 95:25; 96:8; 98:9;
120:2, 13; 152:20; 157:4;
164:15
surface 97:24; 98:20
surprise 166:1
surprised 47:21, 25; 48:2
suspended 149:14
suspenders 67:24
Sutkass 50:22
swear 39:1
Sweden 120:14
swimming 54:20
sworn 3:2
symptom 160:18; 162:5
symptoms 162:2
syndrome 161:4
system 59:1; 143:21;
144:12; 145:4, 9; 162:12
systemic 115:18;
116:20, 24; 117:5; 118:3,
16

T

T's 163:2
Table 140:12
Taffee 48:20
talk 4:1; 12:9; 13:17;
23:11; 24:22; 57:19;
63:11; 89:20; 109:21;
119:7; 126:10; 165:21

talked 12:11, 16; 14:6;
24:3, 11; 35:25; 47:2;
54:11; 61:12; 67:3; 77:3;
92:25; 93:15, 17, 23, 23;
111:16; 117:25; 120:15;
146:3, 9
talking 23:7; 25:12;
33:15, 21; 36:20; 37:12;
41:1; 54:22; 60:8; 61:10;
73:20; 75:8; 77:22; 79:18;
99:3, 3; 100:11; 102:16,
18; 103:17; 105:24;
124:10; 127:13; 133:2;
134:19; 142:13, 14, 16, 17,
19, 22; 143:9, 15; 146:17;
152:13; 164:14
talks 16:1, 2; 29:24;
31:15; 36:4, 6, 7; 38:11;
39:25; 40:13; 46:3; 55:11;
62:16; 87:1
tank 46:4, 5, 24; 50:7;
51:7; 103:4; 105:18;
146:9; 161:2; 162:7
tanks 13:23, 24; 22:10;
143:8
target 16:2; 90:2
task 80:17, 17, 18, 20;
81:1, 5, 9, 16; 83:3, 19, 19
team 10:25; 56:4; 101:11;
123:21, 24
Technical 27:9, 11;
43:14, 17, 20; 48:17;
69:15; 81:13, 17; 100:24;
131:3, 11; 135:6; 141:22;
167:14
technically 147:21
techniques 88:16
technology 55:12
teepee 85:1; 86:12
telephone 56:21; 74:19,
23; 75:3, 10, 11
telephones 150:7, 10
teletypes 150:9, 11
telling 105:11; 123:22
tells 89:5
ten 16:2; 73:23; 78:7;
89:25; 90:8, 13
tenure 27:1; 44:22; 74:4,
5; 102:21; 103:1; 124:11
term 143:11
termination 85:18
terms 4:23; 42:4, 12;
89:14; 107:7; 141:25;
150:4; 152:16
terphenyl 16:3; 20:19;
21:4, 7
test 100:18; 106:2;
124:18; 125:25; 126:3;
139:9, 13; 140:12
tested 39:11; 91:8; 123:9
testified 3:3; 57:9; 104:5;
153:11, 15, 19; 155:3;
161:21
testify 18:14, 18
testimony 5:6; 6:3; 8:11,
16; 17:17; 18:16; 19:3;

24:20; 50:18; 51:22;
72:12; 78:18; 80:1; 84:13;
89:12; 93:18; 94:9; 96:1, 5,
9; 108:3; 119:22; 120:3, 5;
162:8
testing 99:8, 13; 101:25;
156:14
tests 140:15
theme 33:11
theory 58:17
therefore 148:17
thereto 171:8
thin 140:18
thinking 43:7; 54:7;
102:8
thinning 94:16
third 39:23; 40:12; 58:15;
109:13; 151:6
Thirties 118:3
thirty 58:10
though 60:22; 114:23;
121:25
thought 17:15; 22:7;
34:9; 52:16; 53:19, 19, 21;
55:4; 67:1; 75:8; 145:20;
147:10, 23; 155:14;
159:23; 161:21
thousand 89:4
thousands 88:21, 25;
90:15
threat 5:7; 16:21; 17:4;
18:8
threats 17:1, 3; 42:24
three 58:8; 82:25; 128:16;
130:14; 144:8; 149:6, 19;
155:21
throughout 15:17; 55:5;
82:18
tie 98:19
ties 34:6
timeframe 55:3; 101:19
times 144:9; 145:22;
153:19, 22
timing 20:18
tissue 122:3
Tissues 62:24, 25; 75:14
title 48:22; 104:20;
107:15, 17; 157:21
today 92:4; 96:2, 17;
106:7; 164:15
told 6:11; 8:10; 12:12;
40:14; 70:3, 7; 75:11;
84:11; 157:15
tolerable 168:8
ton 45:21, 25
took 62:5; 68:9, 19;
76:17; 99:21, 23; 100:3;
107:10, 21; 115:14;
126:12; 139:2
top 48:18; 58:9; 84:4;
97:24; 156:13; 157:22;
161:14
topic 3:19
topics 3:12, 15
touch 77:21; 105:3

touched 26:1
toxic 28:5, 14; 128:24;
129:7, 20
toxicity 49:11; 140:14;
158:16
toxicological 72:17
toxicology 124:17;
125:23; 141:12
trained 99:24
transcript 171:6, 11
transfer 62:4, 5
transformers 163:25;
164:11
transmitted 151:24
trap 141:17
trash 86:10
travel 97:14
treated 88:15
trench 87:3
trenches 87:9; 98:17
trial 153:25; 154:1, 5
trials 154:11
tributary 60:23, 24
tried 45:25; 154:25
trigger 113:4
triggered 113:1, 8
trip 77:22; 165:9
tripped 145:21, 23
trips 78:16; 79:13
trough 144:24
trucks 79:2
true 52:2; 61:23; 67:8, 17;
71:3; 80:8; 119:25; 122:1;
150:16; 171:10
truthful 96:11
try 63:19, 20, 21; 88:18;
97:1; 119:1; 129:8, 16, 21;
130:18; 135:2; 142:25
trying 12:22; 22:16; 29:5;
33:25; 42:21; 43:5, 6;
53:16; 58:23; 61:17; 74:3;
88:20; 89:21; 141:24;
150:16; 167:22
Tucker 76:5; 123:24;
151:15
tumors 165:12
tuned 69:24; 70:1
turn 36:4; 77:14; 131:12;
144:21
turning 129:6
turns 147:9
two 3:10, 12, 15; 4:6, 13,
14, 17; 9:14; 13:2; 14:7;
41:9; 51:1, 9; 78:8; 82:16;
18; 84:14, 18, 21, 22;
109:2; 113:2; 121:14, 16;
129:20; 130:17; 131:19;
132:8; 135:24; 145:15
two-phase 133:17, 22;
142:24
vo-year 127:22
type 4:19; 9:22; 13:2;
27:24; 65:21; 66:23, 24;
67:25; 83:23, 24; 118:13,

14; 130:14; 133:1
types 51:9; 162:2
typewriting 171:8
typical 14:19; 116:2;
127:16

U

U 145:21
unacceptable 51:5
unanswered 91:23
unaware 126:11
uncontrolled 147:8
under 52:7; 126:8;
129:17; 154:2; 155:6;
160:17; 162:6; 171:8
underground 142:8
underneath 142:21;
143:7, 8; 144:19; 146:10
understandings 41:5
understood 90:21;
93:12; 156:3
undertaking 3:20
underway 105:8; 107:1;
140:15
unethical 129:14
unfit 31:16
uniform 52:8
union 14:9; 157:22
unique 68:16; 108:14
unit 4:11; 5:2; 9:24; 13:8,
14; 22:13; 29:18; 52:5, 6;
103:4; 142:21, 23, 24;
143:2, 7; 144:20
United 34:3; 35:14
units 4:25; 10:10; 13:2
universities 7:19
University 30:18, 24
unknown 31:20; 32:11;
53:11
unless 161:19
unneeding 8:14
unusual 134:24
unwilling 33:17
up 22:9, 13; 34:1; 41:4;
42:3; 46:16; 47:11, 13;
48:10, 18; 51:9; 59:18;
61:20, 24; 62:9, 11, 20;
67:18; 69:23; 70:9; 72:7;
74:3, 4, 5, 8; 75:14, 20, 23;
77:8, 16, 19; 78:4, 9;
79:10, 13; 80:4; 81:1, 5, 7,
8, 11, 12; 98:4; 99:24;
100:7; 101:10, 13; 104:18,
21, 25; 114:14; 117:10;
118:4; 120:15; 121:14;
130:8, 14; 134:25; 156:12,
12; 159:6; 160:18; 161:11,
17; 163:21; 164:6; 166:11
up-to-date 72:14; 147:5
upon 50:18; 72:11; 73:1;
119:13; 171:12
upside 36:5
upstream 36:8, 22;

87:21; 90:17, 23
usage 45:20; 55:12
use 9:2; 16:4; 43:9; 48:5;
51:9; 59:10; 60:2, 3, 9;
64:2; 67:4; 88:3; 134:13;
147:20
used 27:18; 46:6; 47:16;
49:18, 22; 60:4; 70:18;
72:21; 85:19; 105:1; 117:3
useful 104:3
user 115:24
uses 10:7
using 47:2; 55:22; 92:13;
125:4
usual 12:4
Usually 113:4

V

V 145:20
V-shaped 144:24
vacuum 161:13
vapor 160:11, 16, 19;
161:3; 162:15
vapors 63:20; 160:24;
161:6, 7
varied 86:17
various 10:24; 72:10
vent 162:7
verge 120:25
videoing 114:10
view 41:15
visible 17:2; 133:4, 11;
134:10; 161:19
visits 128:16, 19
visual 92:18; 133:3;
134:9

W

W 48:20; 171:21
waders 68:4
Wait 131:16
walk 77:24; 160:25;
161:23, 24
wants 81:22; 140:2
warehousing 86:9
warn 69:2, 10; 160:14
Warning 69:14; 71:16;
116:3; 160:10, 15; 162:15
warnings 3:21; 71:13,
18, 24
wash 46:4, 5, 12, 24;
47:7; 66:10; 79:20; 97:22
washed 88:11; 97:8;
98:3; 102:22; 104:10, 15;
144:8
washing 46:13, 14, 16;
89:7; 102:18, 24
waste 29:24; 46:21; 47:6;
48:7, 23, 24; 49:1; 58:2;
87:5; 104:10, 15, 23;
105:18; 107:25; 133:2;

144:12
wastes 58:19; 62:9, 17,
19; 105:12; 110:13
water 34:20; 60:5; 69:9;
79:19, 19, 24; 82:16, 19;
87:9; 88:17; 97:21; 98:20;
110:3; 112:16; 135:20;
136:18, 25; 137:8; 142:8;
144:6, 12, 20; 147:11;
159:16, 22
waters 88:13, 14; 90:20,
24, 25; 143:14
watershed 110:7
waterway 35:13; 132:18;
133:18; 134:6, 8, 16;
147:14
waterways 27:15; 30:19;
35:2
way 7:17; 19:14; 21:24;
44:24; 46:10; 68:3; 91:7,
11; 98:23; 99:25; 102:6;
108:16; 123:11; 124:2;
130:12; 135:5; 138:3;
144:4; 150:6; 160:19
ways 117:3; 124:3;
150:19
wear 64:6; 65:1; 67:10
wearing 65:5
weather 87:11; 131:21
week 78:6, 8; 87:10;
121:19; 156:23
weekly 78:5; 86:16, 20
weeks 78:8; 121:14, 16
WELCH 171:21
welcome 16:24
well-designed 99:7
weren't 70:24; 84:20;
129:13
Westinghouse 167:23
WGK 16:22
what's 20:21; 22:15;
28:23
what-have-you 147:6
Wheeler 140:14; 141:14
Whenever 159:5; 164:14
whereabouts 156:10
wherever 61:5
WHITE 3:7; 5:25; 6:2, 11,
15, 24; 7:12, 14; 8:2, 9, 15,
23; 11:12, 16; 12:22;
14:17, 23; 15:4, 14; 17:22,
25; 18:12, 15, 19, 23;
20:22, 25; 21:11; 22:22;
25:1, 4, 6, 14; 28:20, 23;
30:13; 31:25; 33:8, 21;
34:4; 35:3, 9, 15; 38:9, 19,
25; 39:3, 19; 40:3; 42:16;
19; 43:18; 44:9, 15; 47:24;
49:23; 50:4, 15; 51:25;
52:12; 53:14, 18, 24; 57:8;
58:14; 59:6; 61:7; 62:24;
64:16; 65:8, 21; 67:14;
68:4, 12; 69:6; 73:13, 20,
25; 74:4; 81:22; 86:21;
88:23; 89:9; 91:1; 92:9;
93:5; 94:5, 24; 95:18, 20;

96:3, 5; 98:12; 99:16;
100:9; 102:3, 6, 11;
105:23; 106:13; 108:2, 6;
12, 25; 110:9, 17; 111:2
112:2, 5, 11, 17; 113:17
20, 23; 114:4, 7, 11, 15,
21, 25; 115:6, 8, 19;
116:22; 118:5, 17, 24;
119:2; 120:4, 7, 11;
121:10; 122:4; 123:2, 17;
124:3, 22; 125:5; 127:6,
10; 128:3; 129:1, 10, 17,
23; 130:22; 131:16; 134:7
12, 18; 135:10; 136:9;
137:23; 138:1; 139:24;
140:3, 19, 22; 141:9;
145:14, 25; 147:17;
149:22; 150:1, 4, 8, 12, 18;
152:1; 153:2, 13, 17, 24;
154:6, 10; 155:3, 25;
156:7; 160:6, 21; 162:1,
22; 163:19; 164:1, 12, 21;
165:21; 166:1, 15; 167:11,
16
White's 7:23; 18:8;
161:22
whole 32:1; 82:4, 5, 6;
153:16, 17
whose 155:8
Widmark 120:15, 17
WILLIAM 3:1
wind 97:18; 131:21
wish 50:1; 114:11
withdraw 165:18
withdrew 92:24; 93:1
within 7:9; 8:18; 9:22, 24;
79:7, 7; 103:5; 121:14, 19;
145:16
without 102:12; 130:10;
147:5
WITNESS 6:16; 7:16;
8:14; 21:1, 14; 25:3, 5, 7,
15; 30:14; 32:3; 33:9; 34:5;
40:5, 8; 44:24; 45:8, 11;
50:6, 16; 52:15; 53:25;
61:9; 64:21; 65:23; 80:23;
81:24; 86:23; 93:9; 94:6;
95:2; 98:16; 102:14;
108:7; 110:16; 112:13;
114:8, 16; 115:10; 116:23;
118:18; 119:4; 124:15;
127:15; 130:25; 131:24;
132:3; 134:13, 23; 138:4;
141:10; 145:16; 146:2;
150:3; 153:7; 154:1;
160:23; 167:19
wondered 145:23
wondering 7:3; 76:24;
81:5
wood 85:20, 21
wooden 79:1
word 9:3; 47:16; 48:5;
59:10, 12, 12; 60:24;
70:18; 78:22; 84:6; 88:3;
92:13; 125:2; 133:25;
134:2; 145:19; 147:20
words 7:11; 14:5; 57:14;
105:1, 7; 115:21; 116:5,

23; 117:2, 9, 19
v 29:25; 85:6; 93:11;
167:9
worked 85:4, 12; 143:22;
157:23
worker 68:16; 139:19
workers 63:15, 19; 64:1.
2, 5, 10, 14; 68:10, 20, 21;
115:14; 117:22
working 85:9, 10, 15, 17;
86:2; 101:10; 135:16;
147:13; 163:16
workplace 115:25
works 21:25
world 92:16; 128:8
worn 65:13
worry 55:1
worse 44:14; 78:23
wrap 74:3, 4, 5
WRIGHT 3:5, 23, 24; 6:1,
4, 18; 7:2, 21; 8:3, 12, 17,
20, 25; 11:10, 14, 20;
12:25; 14:18, 22, 24; 15:5,
8, 17, 19; 17:24; 18:1, 14,
18, 21, 25; 19:2, 4, 11, 13;
20:24; 21:8, 13, 16; 22:24;
25:2, 9, 18; 28:21, 24, 25;
29:11; 30:16; 31:2, 10;
32:5; 33:13, 23; 34:9; 35:5,
11, 16, 23; 38:10, 24; 39:1,
4, 20, 23; 40:7, 10; 43:10,
20, 22; 44:2, 12,
2, 6, 9, 13, 15; 48:1,
15, 19; 49:25; 50:12, 17;
52:1, 13, 23; 53:16, 20;
54:9; 57:10; 58:15; 59:8;
61:8, 12; 62:25; 64:17, 24;
65:10, 11; 66:2; 67:16;
68:5, 13; 69:8; 70:20;
73:15, 17, 23; 74:1, 5, 10;
76:3, 11, 17, 22; 77:11, 13;
80:14; 81:25; 86:25;
88:25; 89:11; 91:2; 92:10,
11; 93:8; 94:7, 18, 20;
95:7, 19, 21, 22; 96:4, 7;
98:14, 23; 99:17; 100:10;
101:11; 102:4, 9, 16;
105:25; 106:16; 108:4, 10,
13; 109:2, 6; 110:11, 19,
21; 111:25; 112:4, 8, 20;
113:18, 21; 114:2, 5, 9, 12,
17, 23; 115:3, 7, 11, 13,
20; 116:25; 118:7, 19, 25;
119:7; 120:6, 9, 13;
121:11; 122:5; 123:3, 19;
124:4, 6, 10, 12, 16, 23,
25; 125:7; 127:8, 12, 20;
128:6, 9; 129:2, 11, 19, 24;
130:23; 131:2, 7, 10, 18;
132:1, 4; 134:9, 15, 19;
135:1, 11, 14; 136:10, 16;
137:25; 138:2, 5, 8; 140:1,
4, 10, 23; 141:13; 145:18;
147:18; 148:11;
24; 150:6, 9, 13, 23;
152:2, 12; 153:4, 8, 15, 18;
154:3, 7, 13, 21; 155:1, 5;
156:1, 9; 157:4; 160:7;
161:5; 162:4, 23; 163:20;

164:2, 18, 22, 23; 165:23;
166:2, 19; 167:13, 17, 21;
168:10
write 6:1; 44:11, 12
writing 12:20; 13:5;
150:14; 166:22
writings 10:22; 11:20
written 10:19; 12:6, 8, 9;
14:14; 20:21; 156:18, 22
wrong 66:25; 70:4;
101:24; 102:4
wrote 163:14

X

X 13:8

Y

y'all 102:7; 139:3; 145:15;
154:9, 13; 155:1; 160:14
year 39:2; 43:4; 71:20;
79:5, 8; 87:5; 155:11, 16,
18, 21, 24; 156:2
years 9:13, 14; 44:1;
48:2; 60:12; 85:6; 100:5,
11, 17; 104:19, 21; 106:5;
107:4, 9, 22; 108:10, 15,
21; 115:16; 122:9; 142:10;
153:22; 155:12, 24

Z

zero 156:19; 164:16

Lawyer's Notes
