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Dr. Kaley
Doc #523107

Also, Judge, with respect to those who are claiming personal injury, what we're going to do is get a medical authorization to Donald to have his clients sign so we could get all the medical records to expedite that process, and we thought it would be more meaningful and productive if we could have those--if we had those records before those particular plaintiffs are deposed so we don't have to go back and ask them questions after we've had an opportunity to review the medical records.

MR. STEWART: Judge, we're getting medical authorizations from all of your clients and we'll provide them to them today, those that we have. Now, three of those people, they already have medical records for, I think. Of course, we had medical

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authorizations that we had all of our clients sign, I think, some time in '98 or '99.

MR. WHITE: I think they've expired, though, Donald, but we can certainly take a look at those.

MR. STEWART: I understand, but they were getting medical records at some point in time.

THE COURT: Anything else?

MR. STEWART: No, sir.

THE COURT: Let's bring the jury in.

(9:25 a.m. Jury present.)

THE COURT: Everyone please be seated. Let the record reflect that everyone is back in the courtroom. Good morning, ladies and gentlemen. I hope you all had a good weekend. Mr. Stewart, are you ready to pick up where we left off last week?

MR. STEWART: Yes, sir.

ROBERT GEORGE KALEY, II
testified further as follows:
DIRECT EXAMINATION (continued)

BY MR. STEWART:

Q. Dr. Kaley, we were asking you some questions when

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we left on Thursday about what Monsanto was checking for early on in the manufacturing process of PCB's. Do you recall that line of questions?

A. Yes, sir.

Q. And we showed you two exhibits. One was Exhibit 8.

May I approach Judge?

THE COURT: Certainly.

MR. STEWART (resumed):

Q. I'll ask you to take a look at page 8 of that exhibit. Pull that up, please, ma'am. Pull out that third paragraph, please, ma'am.

THE WITNESS: What's that date?

MR. STEWART: I think it's 10/1/44.

MR. STEWART (resumed):
Q. Early on in the manufacturing process, you were checking for you -- You had an emphasis on gastrointestinal disturbances and dermatitis or skin disease?
A. That's what the document relates, yes.
Q. And they were checking for a history of liver disease, jaundice, if that happened with a worker who was there, then they should be excluded from working in the Aroclor Department; is that correct?
A. That's what the document relates, yes.

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Q. And then pregnant women should not be employed in that area; is that correct?
A. That's what it says, but that was a common exclusion in the chemical industry in that time frame.
Q. Dr. Kaley, you have heard the testimony or you're aware of the testimony of Dr. Nisbet and Dr. Clapp about what PCB's cause?
A. I'm vaguely aware of it. I didn't hear their specific testimony in this case.
Q. And weren't you all testing for the same kinds of diseases back in 1944 that these gentleman indicated in the trial of this case were caused by PCB's?
A. Again, I'm not specifically sure what specific illnesses they claimed were caused by PCBs.
Q. Gastrointestinal cancer is what they've indicated might be caused, liver cancer or liver diseases is what they--
A. This document says nothing about cancer, and I don't believe there was medical information at that time that would have suggested that, nor is there today. My understanding of the physicals given the workers excluding this document was that those physicals were what were given to all workers in all plants and all departments. Now, I understand what this document says, but I don't have any knowledge that there was anything

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specific.
Q. Well, the document itself is talking about Aroclor production, is it not?
A. I understand that, yes, sir.
Q. Now, did you all at that time or did Monsanto at that time, to your knowledge as the steward of PCB's in this company, make any information that was similar to what you were making available to your own workers available to those people in the neighborhood around that plant?
A. Not that I'm aware of, but these physicals were given to workers who were supposed to the pure material on a daily basis at potentially high levels.
Q. But you now, Dr. Kaley, make the people near that plant aware of the fact that they perhaps would be checked for this same kind of thing?
A. I don't believe there was any reason for them to be checked, sir.
Q. And you don't believe that today. That's what you've told us in your deposition, haven't you?
A. I believe that's correct.

Q. There is no real reason for you, Dr. Kaley, as the spokesman for Solutia and the previous spokesperson person for Monsanto to ever say anything to those neighbors about the dangers and harm that PCB's have?

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A. The medical information reflects that at the environmental levels of exposure that there's no cause for concern, yes, sir, that's what I believe.
Q. Now, we were talking about the health problems that you raised -- A person by the name of Renate Kimbrough -- Dr. Renate Kimbrough, we talked a little bit about her on Thursdy, I believe, and I went back to your transcript of your testimony on Thursday, and I'll refer you to pages 3462 and 3463 of the transcript. I asked you at that time if you had asked Dr. Kimbrough to talk to state officials?
A. Yes.
Q. And you said, "I don't recall that specifically."
A. Yes.
Q. And you didn't recall whether or not you talked to any people at ADEM or at the Department of Health?
A. I haven't reviewed this. I think I said I didn't recall. She may have talked to somebody. I don't know that she talked to anybody at ADEM. She may have talked to somebody at the Department of Health. I don't know. I'd have to look and see exactly what I said.
Q. Let me ask you to take a look at Plaintiff's Exhibit 457. Maybe this will refresh your recollection, Dr. Kaley. I will give you a moment to take a look at that.

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(Witness read.)
MR. STEWART (resumed):
Q. Do you know a Dr. Bryan Hughes?
A. Yes, I do.
Q. Do know a John Poole?
A. John--
Q. Poole. P-o-o-l-e? Yes, I do.
Q. That appears to be a little note from John Poole to Brian Hughes. Do you remember setting up the call that's referred to in that document?
A. I don't recall that specifically, no.
Q. You don't recall setting up a call between Jack Mayausky, who was the plant manager at Anniston?
A. No, I don't.
Q. And was he the plant manager in Anniston in 1995?
A. At some point I'm sure he was.
Q. Did you have Dr. Kimbrough down to the plant in 1995?
A. Yes, I did.
Q. Did you tell Jack Mayausky to call John Poole at ADEM and tell them that y'all had reviewed the situation in Anniston, you and Dr. Kimbrough?
A. I very well may have.
Q. And did you tell him this or this in substance that you consulted with her and both you and Dr.

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Kimbrough said that PCB's weren't a particular risk to the people in the community surrounding the plant? Did

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you tell him that?
A. I'm sure I did, yes, sir.
Q. And did you tell him that Dr. Kimbrough would be available to the people at the Health Department, Dr. Kaley?
A. Yes. We also told the community that Dr. Kimbrough would be available to them.
Q. Well, tell me how long had Dr. Kimbrough been at the site when she made the determination that PCBs weren't posing a risk to the people who lived there?
A. She spent a day there.
Q. She spent a day there. Did she know anything about the blood levels of the people who lived around that plant, the body burns they had?
A. Not at that time. None of us did, no, sir.
Q. Did she have any idea about the air levels that were leaving your plant site at that time, Dr. Kaley?
A. Not at that time. None of us did, no, sir.
Q. Did she have any idea about the soil levels that were on the property, Dr. Kaley?
A. I believe she had some information about soil levels, yes.
Q. On the properties--

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A. I'm not sure what time we had been sampling -- I don't for sure about that, Mr. Stewart.
Q. And yet on a day's notice she made the determination that there was no risk to the people in the community?
A. That was her opinion at the time based on the knowledge she had available to her, yes.
Q. Now, didn't you all participate fairly closely , Dr. Kaley, with the Health Department and ADEM at that time and help them make decisions about what they ought to do?
A. We were providing them information.
Q. Sir?
A. We were providing them information as we got it, yes.
Q. And what was the basis of your meeting with them? Didn't you meet with them some time in June of 1995?
A. We may have. We had several meetings with the regulatory officials.
MR. STEWART: May I approach, Judge?
THE COURT: Certainly.
MR. STEWART (resumed):
Q. Let me show you Plaintiffs' Exhibit 458 and maybe that'll refresh our recollection, Dr. Kaley. That refers to a joint health consultation that you all were

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involved in supposedly with ADEM and the Alabama Department of Public Health. That little note is dated June 23, 1995 to Donald E. Williamson to a fellow named Charles H. Woernle, M.D. It's from Brian Hughes, Environmental Toxicologist.
A. All that is correct.
Q. And how is it, Dr. Kaley--
A. That's correct.
Q. And how is it, Dr. Kaley, that the company that had polluted or poisoned this community got a seat at

the table--
MR. PRATER: Objection, Your Honor.
MR. FORD: Objection, Your Honor, to the characterization of poisoning the community.
THE COURT: Overruled.
MR. STEWART (resumed):
Q. How is it that y'all got a seat at the table where these people were making decisions about assessing the risks that the people in Anniston were facing?
A. I don't know exactly why we were invited, but at the time we were providing as much information as we were gathering to the state officials, and I'm sure it had to do with the provision of that information.
Q. Well, you had Dr. Hughes there and Neil Daniell

from the Alabama Department of Environmental Management. They shared some of their preliminary data with you, didn't they, Dr. Kaley?
A. That's what the document says. I don't specifically recall this meeting or whether I was even there. I may very ell have been, but I don't recall the specific meeting, but the document says that they shared preliminary data, yes.
Q. And are you saying that y'all didn't jointly agree to make some kind of announcement?
A. That's what the documents says. I don't have a specific recollection of that.
Q. Who represented the people around that plant, Dr. Kaley, at that meeting?
A. I would assume that the state agencies were representing those people.
Q. And y'all were there and having input. Did you all know anything at all about PCB's before y'all got Dr. Kimbrough to go down there and talk with him?
A. Well, number one, Dr. Kimbrough never went down there to talk to him, and yes, he did have knowledge about PCB's.
Q. What y'all really chose to do, Dr. Kaley, when that problem hit, y'all chose to take -- Rather than a tack where you solved the problem, what you chose to do

was to put a public relations spin on it, didn't you?
A. That's incorrect, sir. There were sampling programs. We got permission from the people in the community to sample the property. We did that sampling and reported the results to the agencies, to the people in the community, and we have moved forward since then to deal with those issues that we've discovered.
Q. You chose to work at the public relations level, try to make sure that your voice was heard in the press?
A. Well, certainly. We feel that the press needs to and wants to present both sides of an issue when there are two sides to an issue, and we felt that we had--part of our story needed to be told as well as the other part.
Q. And you attempted to influence public officials at that time to see your position?
A. I would not -- I don't know what influence. We certainly made our position known to public officials,

yes.
Q. Let me show you Plaintiffs' Exhibit 519 and ask you to take a look at that, please, sir. Let me ask you to identify that, if you would.
A. It appears to be some minutes or a summary of a meeting that was held in St. Louis.
Q. Now, Dr. Kaley, this is from a gentleman named

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Glenn S. Ruskin.
A. Yes.
Q. Is that correct?
A. Yes, it is.
Q. And what was his position with Solutia?
A. He is our Vice-president of Corporate Relations in Washington.
Q. He handles public relations for you, too?
A. At some point, yes.
Q. And you got a copy of this, did you not?
A. Yes, I did.
Q. This meeting took place in 1999, didn't it?
A. Yes, apparently. The memo is dated '99. I don't know whether the meeting was in '99 or not.

MR. STEWART: Judge, we would offer Plaintiffs' Exhibit 519 into evidence at this time.

THE COURT: It's admitted.

(Plaintiffs' Exhibit Number 519 was admitted in evidence.)

MR. STEWART (resumed):
Q. Now, one of the ideas that y'all had at this meeting was to get a meeting with the Acting Deputy Administrator of EPA, Mr. Peter Robertson; is that correct, Dr. Kaley.

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A. Which point are you referring to?
Q. On the first page. Pull that up, please, ma'am.
A. Yes, that's what it says.
Q. Pull that first paragraph up. "Brainstorming with M. Pierle, I'm pursuing a meeting with Peter Robertson and Dr. David Satcher, the Attorney General." [sic]
A. Surgeon General, but yes.
Q. Surgeon General, rather. Who was Mr. Pierle?
A. At some point he was Vice-president for Environmental Safety and Health at Solutia--or Monsanto and then Solutia.
Q. Are you aware that he took Peter Robertson's place as Deputy Administrator?
A. No, I'm not. I'm not aware of who Peter Robertson is. That's the first time I've seen that name.
Q. Do you know a Linda Fisher?
A. I do.
Q. And where did she used to work before she took a job with Christy, Todd, Whitman?
Q. She worked at EPA for a while and then she worked for Monsanto for a while in their Washington office, and she's now back with EPA.
Q. Well, isn't she the Deputy Administrator of EPA at this time?
A. Well, there are dozens--tens if not dozens of

deputy administrators. I believe that may be her title, but I don't know that she necessarily took his place. There are lots of deputy administrators.
Q. Let's go down to the last two paragraphs. "Group agreed that an approach with 'multiple impact' or a continuing 'drum roll' was preferable to a 'big bang' approach. Is this talking about cleanup?
A. No, sir.
Q. Okay. "Group reached consensus that our areas for philanthropic emphasis will be: healthcare (hospital/clinic) and education initiatives which align with the governor's focus." Was that for cleanup?
A. I don't believe so, no.
Q. Let's go to the next page, please, ma'am. "The 'multiple impact' strategy calls for significantly increasing Solutia's Alabama community outreach, contributions, and political involvement," and then you were going to "aggressively seeking inclusion of our position in the media." That's what you've talked about previously.
Then there's another one there. "Trying to contain media issues regionally." What do you mean by that, Dr. Kaley?
A. I don't know what he meant by that.
Q. Were you not at the meeting?

A. I was.
Q. You don't remember that being discussed?
A. Not specifically, no.
Q. "We'll supplement this with communication targeted to our employees and retirees in the area." Is that right?
A. Yes, sir.
Q. Now, what of that has anything to do with cleanup, Dr. Kaley?
A. We were doing cleanup throughout that entire period. The focus of this meeting obviously was not on cleanup, it was on other things, but the cleanup was going on, and by 1999 the cleanup was well going on. A great deal was being done.
Q. We'll get to that in a minute, but what about that has anything to do with cleanup?
A. I don't know of anything specifically other than all that cleanup was going on at the same time.
Q. Now, let's go to another subject, Dr. Kaley. You can take that down.
Monsanto had the ability to test for PCB's in the air in the seventies, didn't it?
A. They had some weak ability to do that, like everyone else. I think I said Thursday that's a very difficult analysis and the ability to do that improved

significantly over the time frame, but in the seventies there was some attempt or ability to do that.
MR. STEWART: Could I approach, Judge.
THE COURT: Certainly.
MR. STEWART (resumed):
Q. Let me have you take a look at Plaintiffs' Exhibit

130. Let's look at the third page of that document. Now, you all had the capability to do that, and yet you chose not to do it, didn't you, because it was just expensive?

"It was agreed that a comprehensive air sampling and testing program would be very expensive and probably not justified at this stage of the problem." Now that was the minutes -- It didn't say what this was, but of the Aroclor Ad Hoc Committee dated September 5th, 1969. That's what you decided, wasn't it?

A. Well, at that point and largely based on some of the information I already said, it was expensive and it wasn't particularly reliable. I would also note, though, that the document does talk about reduction of air discharges at tank car and drum loading which was at the time the area where any air emissions would have been expected to occur.

Q. Well, according to Mr. Cheever, y'all didn't do any air testing around the dump site, or have you seen

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his testimony? His testimony indicated that that was not done in the eighties?

A. I haven't seen that, but I don't have any reason to believe that that's not true.

Q. And in some testimony that has been given in this trial by Mr. Papageorge, who was your predecessor in the role that you now play, he indicated that y'all didn't do any through the nineties, no air testing at all through the nineties.

A. Well, certainly, we have done air testing in the nineties.

Q. Well, at the time Mr. Papageorge gave his testimony, you had not done it. I think his deposition testimony, if I recall, was given January some time in 1998. You hadn't done any as of 1998?

A. That was about the time we started, I believe.

Q. Well, you, in fact, started because the lawsuit was filed and some lawyers were taking some air tests, didn't you?

A. That certainly was an input into our decision to implement air testing, yes, because we didn't believe that the air levels would be a significant exposure, and we still don't believe that.

Q. And that's despite the fact that experts in this case have testified that those air levels were thirty

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times the EPA's level of concern?

A. Well, the EPA level of concern is established as a screening level to determine whether work is necessary, and we and have been and currently engaged in further work on air sampling.

Q. Well, the screening levels are done to protect the health of the people who might be exposed to those air levels in the environment, are they not?

A. No. The screening levels are set to determine a level in which the regulatory agencies have the ability or can require persons to conduct additional air sampling and make that determination, and we are still

involved in that process.
Q. You are continuing to refuse to clean up the sites so that it pollute the air around this neighborhood, aren't you?
A. We have done extensive cleanup in the neighborhood and on our site.
Q. You are also continuing to misrepresent the facts to the regulatory agencies about air tests, aren't you, Dr. Kaley?
A. We are not.
Q. Let me show you what we'll mark as Plaintiffs' Exhibit 558 and ask you to take a look at this. Can you tell the ladies and gentlemen of the jury what that is?

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A. It's a Work Plan for Estimating PCB Vapor Flux From Solutia Landfills. It was transmitted to Mr. Hardy at ADEM in March of 2000.
Q. And what y'all were looking for with this study -- We'd offer that into evidence, Judge, at this time.
THE COURT: It's admitted.
(Plaintiffs' Exhibit Number 558 was admitted in evidence.)
MR. STEWART (resumed):
Q. What y'all were looking for in this study appears on page 2 of that thing, does it not? That's the work plan that y'all submitted, Work Plan for Estimating PCB Vapor Flux From Two Landfills."
A. Yes, it is.
Q. Let's go to page 2 of that document pull up the second paragraph. This language says that y'all were evaluating the potential for releases of gaseous and particulate PCBs into the air from the South and West End Landfills.
A. Well, you're paraphrasing ADEM's language in a request that they made to us, yes.
Q. Well, that was a request that y'all made, wasn't it. Y'all wanted to do this vapor flux study, didn't you, on that landfill?
A. No. They asked us to do that.

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Q. They asked you to do that?
A. Yes, sir.
Q. Let me ask you to look at Plaintiffs' Exhibit 542. May I approach?
THE COURT: Certainly.
MR. STEWART (resumed):
Q. Take a look at that document, please, sir. Tell the ladies and gentlemen of the jury what that is. Is that a letter from a Mr. Kumar to Mr. Hardy with reference to this vapor flux study?
A. Yes, it is. Mr. Kumar works for the EPA in Atlanta, and it's a letter to Mr. Hardy, yes.
MR. STEWART: We would offer that into evidence at this time, Judge.
THE COURT: It's admitted.
(Plaintiffs' Exhibit Number 542 was admitted in evidence.)
MR. STEWART (resumed):
Q. There's a fourth page to this document. Review of

Work Plan for Estimating PCB Vapor Flux From Two Landfills. And that's from Tim Slagle, is it not?
A. I have the third page -- In my document it's the third page.
Q. The third page; I'm sorry. Would you pull that up, please, ma'am. Doesn't Mr. Slagle say this proposal

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that y'all have made is an experimental proposal?
A. Yes, sir. That's the whole point of the discussion. We were asked to make a proposal by ADEM. We made a proposal to ADEM in line with what we understood ADEM's request to be. ADEM reviewed that request. They sent it to EPA to review that request. EPA reviewed the request and some of the statements highlighted on here said they would discourage the use of flux chamber measurements and to use EPA established and acceptable methods.
All that is true. We have not done that study for that very reason, and we are still in discussions with both agencies on the appropriate manner to conduct an air study. That is an ongoing discussion.
Q. Well, you had air monitors out there that were testing the air in a fairly conventional way, didn't you?
A. Yes. We were testing ambient air levels in a fairly conventional way, although what they were requiring us to do was not conventional in any sense of the term, and neither agency believed it was going to provide useful information.
Q. And they told y'all that they didn't necessarily want you to use it, but let's take a look at another page, page 2-6, Dr. Kaley. That's Plaintiffs' Exhibit

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558. What does that show in that document?
A. It's a schematic presentation of the south landfill.
Q. Well, now, that's what you all had proposed in this report that you had prepared by ENSR. Is that the company that did that that y'all paid to put this study together?
A. Yes, sir.
Q. Proposed study?
A. Yes, sir.
Q. And is that the western section of the south landfill?
A. Yes, it is.
Q. Now, where are the PCBs buried? Aren't they buried on the eastern section of the south landfill?
A. Yes, they are.
A. Yes.
Q. So, you got a company, paid them money to put a study together to talk about testing air samples, and the date of this letter, I believe, was April 4th, 2000, to find out whether or not PCBs were leaving a landfill that had what in it, Parathion, wasn't it?
A. The question we were answering from ADEM was -- The request was--
Q. Dr. Kaley--

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A. To put a flux chamber study on the areas that we

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had remediated.
Q. Dr. Kaley, you were looking in this study for PCBs, weren't you?
A. Yes, sir.
Q. And you were looking for PCBs in a landfill that had Parathion in it?
A. That was the primary constituent in that part of the landfill, yes, but that is the area that had PCBs on surface soils, the area that we remediated, and were addressing that request.
Q. Well, wouldn't it be a self-fulfilling prophesy that if I was going to go out there and I didn't want to find PCBs in my air samples, I'd put a vapor flux experimental test on a piece of property that didn't even have PCBs in it?
A. As I said, we were responding to the request of the agencies to monitor the sufficiencies of the remedies that we had put on those landfills.
Q. Is there not a responsibility, Dr. Kaley, for y'all to tell the EPA and for y'all to tell ADEM why in the world would y'all want to do a vapor flux study on a landfill out there that didn't even have PCBs in it?
A. Well, largely because of what has become the outcome of the entire discussion is that we didn't

believe the vapor flux study was going to provide useful information, anyway, because it was a non-standard procedure and no one would know how to interpret the results, so we were meeting the request that they met and we have now moved on from that and are having discussions with the agencies to address the overall air
Q. Now, let's take a look at the creek. Y'all chose not to clean up the creek when it was discovered high levels in the creek back in the seventies. That's what Monsanto chose to do, didn't it? They didn't clean it up, did they?
A. I'm not aware of anything done in Snow Creek itself, no.
Q. The jury has seen testimony from a Dr. Suttkus and a Dr. Gunning, and you're familiar with the work that they did where they found high levels of PCB's all the way down in the Choccolocco Creek in the seventies?
Q. They found PCB levels in some area. I'm not necessarily agreeing with your characterization as high, but some of them were higher than others.
Q. And in 1983 y'all also hid information from the public, didn't you?
A. We have not hidden information from the public, no.
Q. Let me show you Plaintiff's Exhibit Number 385 and

ask you to identify it. By information from the public, Dr. Kaley, I mean information from the public about the contamination that existed in Snow Creek and Choccolocco Creek.
Let me show you what's been marked as Plaintiffs' Exhibit 385 and ask you if you can identify that. Is that not an internal Monsanto document?
A. It has a Monsanto number on it. Yes, it does say

an attached position statement, yes.
Q. Dated March 16th, 1983?
A. Yes.
Q. And it says, "Preparedness statement, Anniston Plant PCB Incident."
A. Yes.
Q. This was y'all's response, Monsanto's response, when the Soil Conservation Service had found Polychlorinated Biphenyls in 8 of 22 core samples of sediment taken from Choccolocco Creek in the Anniston area.
A. Relatively low levels of PCBs, yes.
MR. STEWART: We would offer that into evidence at this time.
THE COURT: It's admitted.
(Plaintiffs' Exhibit Number 385 was admitted in evidence.)

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MR. STEWART (resumed):
Q. Bring it up and let's take a look at the last paragraph on the first and the next paragraph on the second page. "It is now known that PCBs are ubiquitous in the environment commonly found in small trace amounts in many rivers and streams." That's what y'all publicly said?
A. Yes.
Q. Then on the next page y'all made this statement. "For these reasons, it would be unproductive to try to identify the source of the PCBs in Choccolocco Creek." Dr. Kaley, y'all made that statement, too, didn't you?
A. Well, the piece of paper says that. I don't know if anybody actually made that statement, but this piece of paper says that, yes. There were low levels as there were in many streams in the country.
Q. Didn't you know at that time, Dr. Kaley, from all the studies and things that you all had done that, in fact, the PCBs that were in Choccolocco Creek were yours?
A. I don't know who knew that or who didn't. In light of what has come down, some of them certainly were, but I think the point of the overall memo was that the levels were low and that there was really no advantage of making an extensive investigation at that

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time.
Q. Let me just for the record ask you to look at Plaintiffs' Exhibit 278 and identify and tell us if that is not, in fact, a report from these biologists from Tulane which indicates that you all knew that some time on June 9th, 1972?
A. I'm sorry. What's the specific question? I mean, this is a 1972 memo which reports levels of PCBs in Choccolocco Creek. I haven't read it specifically, but it is a report to Monsanto, but these are not the levels that were found in 1983 when preparedness statement was made.
Q. So, you didn't clean up the creek in 1972, did you?
A. I don't believe there were any efforts to make that effort, no.

Q. You didn't warn the neighbors in 1972, did you, about the creek?
A. On Choccolocco Creek? I'm not aware of any efforts to do that, although there had been newspaper stories about PCBs in Choccolocco Creek throughout that time frame.
Q. You didn't clean up the creek in 1980, did you?
A. In 1980 specifically or in the eighties?
Q. In the eighties.

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A. Choccolocco Creek, no. We did do some efforts in creeks and some parts of Snow Creek in the mid-eighties
Q. A hundred feet?
A. I believe that's what the plan called for, yes.
Q. And you didn't do anything at all in the nineties and, frankly, you haven't done anything to date, have you?
A. In the creeks? We have studied extensively trying to get to the point where we could determine what is the appropriate thing to do both in Snow Creek and Choccolocco Creek. We are well into that program.
Q. Dr. Kaley, you have not cleaned up any portion of Choccolocco Creek or Snow Creek as we sit here today, have you?
A. Not specifically. We have made some efforts along Snow Creek as with a couple of specific projects, but we are still in the phase working with the agencies to determine what is the appropriate remedy for those creeks.
Q. And the only time y'all did anything about that creek at all was when you got sued by these plaintiffs in this case?
A. That's not true. Some of the areas that we've worked on have nothing to do with the plaintiffs in these cases.

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Q. But you didn't make any effort to do anything about the creek before you got sued, did you?
A. Well, certainly. We were involved in a process which is the Rickler Process. It's an act that requires us to evaluate and measure discharge from our property. That process began before the lawsuits were filed. We are still in that process, and we would have reached the same phase that we are now at the same time had the lawsuits not been filed. We are operating independently of the lawsuits and doing what is necessary and required of us and what have determined the right thing to do along our plant site and those waterways.
Q. Dr. Kaley, you took the same route that we have talked about with the air and cleaning up the sediment in the creek and everything with your plant. Let's take a look again at Plaintiffs' Exhibit 130. Let's look at page 2. Let's look at the first paragraph. Have you had time to read that, Kaley?
A. No, but I will.
Q. This document, 130, is a document that goes back as far as -- What's the date of that document?
A. I believe it's minutes of a meeting that was held in September of 1969.
Q. Is that the Aroclor Ad Hoc Committee?

A. I believe it was the first meeting of that

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committee, yes.
Q. "It was agreed that, until the problems of gross environmental contamination by our customers have been alleviated, there is little object in going to expensive extremes in limiting discharges from the plants."
Y'all didn't do anything of a significant nature to clean up the plants, did you?
A. The whole first part of the paragraph talks about the things we were doing basically do deal with the issue as they understood it early on in this process. As I said, this was the first meeting that led to other meetings, but clearly we were already considering things to do to limit discharges at our plants.
Q. You didn't take any large amount of soil off the plant site then, did you?
A. I'm not aware of whether we did that or not.
Q. Monsanto didn't clean up those sewers that were rusting out and PCBs were coming out into the effluent?
A. I don't know of any evidence or any indication that the PCB sewers were rusting out, but at some point some of the sewer issues were addressed, and we've done some of that since.
Q. And that same attitude was true on the company's part in the eighties, wasn't it?
A. I don't know what attitude you're talking about,

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Mr. Stewart.
Q. Well, the attitude that you just wouldn't spend any money to clean up this Anniston plant.
A. We have spent significant amounts of money to clean up the Anniston plant.
Q. Is it your testimony here, Dr. Kaley, that Monsanto Chemical Company spent extensive amounts of money in the sixties to clean up the plant? Is that your testimony here today?
A. I don't know what "extensive" is. I think we did the things that we believed were appropriate to do at that time frame. I don't know what dollars were spent. I don't know.
Q. A lot?
A. I don't know what the costs associated with those efforts were.
Q. Well, how did it compare with what you all did for expansion of PCBs, production of PCBs?
A. I don't know.
Q. Let me show you Plaintiffs' Exhibit Number 403 and ask you to identify that. Can you identify that document for us?
A. Yes. It's a Monsanto memo from Mr. Pierle to Mr. Potter.
Q. And who is Mr. Potter?

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A. At the time I don't know. I think he was a business leader of one of our groups at that time.
Q. And that date is what, February 26, 1987?
A. That's correct.
MR. STEWART: We would offer that into evidence, Plaintiffs' Exhibit 403, at this

time, Judge.
THE COURT: It's admitted.
(Plaintiffs Exhibit Number 403 was admitted in evidence.)
MR. STEWART (resumed):
Q. Let's take a look and see what Mr. Pierle was supposed to be doing in the eighties at this plant site. Pull up the first paragraph, please, ma'am.
"You requested that we estimate the potential site environmental costs at the Anniston Plant." Is that right?
A. That's what the document says, yes.
Q. And then pull up paragraph 4, please, ma'am.
The same decision was made in '87 that was made early on, that y'all wouldn't spend any major money to clean up this plant site. Is that not correct?
A. It says that monies have not been reserved based on the assumption that management in place is the proper way to manage those issues.

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Q. Management in place?
A. Yes.
Q. That means y'all held onto that site, doesn't it?
A. Well, it means that the landfills will be maintained and improved if necessary to maintain the materials in there in their current location, yes.
Q. Now, what was really happening at this point in time, Dr. Kaley, was y'all had this plant on the block, didn't you?
A. Well, I learned that in my deposition, yes. I didn't know that prior to then.
Q. I understand, Dr. Kaley, and I know that you're coming into the game late. I'm not trying to get on to you. I'm just asking you what the company did. You understand that?
A. Yes. I understand there's a piece of paper that talks about an attempt to sell the Anniston plant, yes.
Q. And that's what Mr. Pierle was doing. He was trying to make the decision then as to what y'all should do about this plant site?
A. I don't know that those are linked.
Q. Let mow show you the history, if I can, and I think this is already in evidence. It's been previously admitted, Plaintiffs' Exhibit 401, and I'll ask you to take a look at it, Dr. Kaley. I think it's the last

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page of that document, page 7 of the document. Is that the history that y'all provided us previously that's already in evidence?
A. I'm sorry?
Q. That's the history--
A. It's a history of the plant that someone put together for some reason, yes.
Q. Pull up page 7, please, ma'am.
What it says is that you had the Anniston plant on the sale block; is that correct?
A. In 1985, yes.
Q. And since that time several attempts to sell the plant have been unsuccessful; is that correct?
A. That's what it says, yes, but I want to go back to

the previous document.
It also says that they have new demand for the products of the plant and that the efforts to sell the plant have ceased, so by 1987 what Mr. Pierle is doing is not doing an evaluation in an attempt to sell the plant. It's two years after those efforts had ceased, so Mr. Pierle was basically looking at what would be involved in maintaining the environmental integrity of that plant in the ongoing operations.
Q. Let's take a look at Plaintiffs' Exhibit 404 and let's see what Mr. Pierle was really trying to do. Can

you identify that for us?
A. It's a memo from Mr. Redington to Mr. Potter and Mr. Reding.
Q. Well, wasn't Mr. Pierle on that, too?
A. Yes. He is one of the signees at the bottom.
Q. And didn't they take a look at the environmental status of the Anniston plant and make the determination as to what to do about the contamination problem there?
A. I haven't read the document. Basically, it is looking at the environmental status.
Q. This is pretty important, so I want you to take a look at that.
A. The first page, primarily?
Q. I'm going to be asking some questions about a few more items on there.
A. I'll take the time to read it. I have reviewed it.
Q. Sir?
A. I have reviewed it.
Q. Now, there are a couple of problems that are mentioned in this particular document. Let's turn to page 4 and highlight 5, PCB removal on Snow Creek?
A. Yes.
Q. And let's go to page 6 and pull up paragraph 4. Tell the ladies and gentlemen of the jury what Mr.

Pierle meant when he said "potential future mobilization of soil contaminants and PCBs." What does mobilization mean?
A. Movement.
Q. Leaving the reservation?
A. It or on the site or moving away from the site, yes.
Q. Leaving your plant site?
A. Potentially, yes.
Q. Getting on perhaps the plaintiffs' properties or in Snow Creek?
A. I don't know specifically what areas they were addressing, but that's the potential, I suppose.
Q. And because of the policy that y'all had adopted earlier, y'all chose to keep that plant, didn't you?
A. I don't know what the policy was, but we did choose to adopt that plan, as it said. There was demand for the products that we were manufacturing there.
Q. Let me show you Plaintiffs' Exhibit 370, which has previously been introduced. I'll ask you some questions about it. Bring that up, please, ma'am. The first sentence in the next paragraph. Now, this was the

corporate policy that was adopted May 8, 1980, and it had to do with the sale Monsanto land, didn't it?
A. Yes, sir.

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Q. So, y'all chose at that time, or Monsanto did, to "retain ownership of all company land known to contain wastes of such composition and quantity which have the potential of injury to health or the environment except where otherwise approved by the Environmental Policy Committee." That was a containment policy, wasn't it?
A. It was a retention of property policy.
Q. Well, it was a retention of property policy so that you could cut down the costs, wasn't it, Dr. Kaley?
A. No. It was so we could maintain management and control of wastes that we knew to be at various landfills on various sites.
Q. And you knew if you sold this plant in 1980 to somebody who came on that plant site and they looked and found these PCBs, like Alabama Power Company did in 1993, that there might be some tremendous costs to Monsanto. Is that not correct?
A. It doesn't say that, Mr. Stewart. It addresses exactly the issues that we were concerned about. When we transferred the property to Alabama Power in 1960, we told them it was on a former landfill, and they had that knowledge. Part of the whole issue of such a policy is to maintain and manage wastes that are contained on plant sites in such a way that situations like that are at least minimized if not prevented.

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Q. And that's what you have done with these businesses out there and the houses out there near your plant. You have bought them so that you can contain the damage; isn't that right?
A. Many of the properties have been purchased so that they could be maintained under the cover of management control, yes.
Q. And you fenced them in. I think this was introduced the other day. This is 577. You fenced them in, many of them, and you covered them over with this material right here, haven't you?
A. That material has been used on some of the properties.
Q. No, that's a fairly porous material, isn't it. Dr. Kaley?
A. It's meant to be a fairly porous material.
Q. And it's not designed to protect those properties at all, is it?
A. The designed -- It was not used on all of the properties. Some of the properties were covered with a lawyer which does prevent migration of water. The areas where this was used were areas where the levels of PCBs were fairly low and it was basically placed as a marker layer before we put on at least eighteen inches of soil cover to maintain those properties and manage the PCBs

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that are onsite there.
It is meant to allow water to percolate through so that water doesn't build up on top of those properties, the areas where we used the other layer and

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an additional layer which channels storm water away from those properties, for instance, the landfills.
Q. Dr. Kaley, isn't it a fact that what you all have done there is the cheapest and crudest method of remedying the problem on your plant site that one could do?
A. No, sir. This is an appropriate method to managing and control PCBs at the level in the soil where we used those methods.
Q. And we will hear from you later on today about how proud you all are of the money that you've spent at that Anniston plant site in trying to clean up those properties and remediating those problems?
A. We're going to describe our efforts to accomplish that, yes.
Q. Now, you heard the PCB experts in this case or at least read their testimony, Dr. Nisbet and Dr. Clapp, say that this is the most contaminated site in the world. I assume you would disagree with that, wouldn't you?
A. I would disagree with that, yes.

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Q. Are you aware that General Electric, one of Monsanto's customers, polluted the Hudson River in New York with PCBs?
MR. FORD: Objection, Your Honor.
THE COURT: Sustained.
MR. STEWART: Judge, could I approach?
THE COURT: Sure.
(Sidebar discussion, off record.)
(Sidebar discussion concluded.)
MR. STEWART (resumed):
Q. Would be fair to say, based on the documents that we have introduced through your testimony here today, from the seventies and eighties and nineties that the driving motivation that your company has had from the time you learned that PCBs were a problem back in the forties and on through the fifties and the sixties and the seventies and eighties and nineties was just a sheer lack of responsibility to the neighbors that you had living around that plant site, Dr. Kaley?
A. I totally disagree with that characterization. I think throughout that time frame the company was, like the rest of the world, learning about PCBs and making decisions that were appropriate for the time and the state of the science and the state of remedial activities throughout that time frame.

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Q. And wouldn't it be fair to say that you concealed from those people who lived around your plant site who were eating animals that they grew and fish that they took out of the creeks and letting the children play in the streams and things, concealed the very information that they needed to have in order to protect themselves and to protect the value of their properties?
A. I believe we were consistently reporting our information as it became available to the regulatory agencies, both state and federal, and those agencies could make of that information what they will, plus the information was readily available in the newspapers

throughout the time frame and as it continues to be.
Q. Now, let me see if I understand your answer. You're saying that all y'all had a responsibility to do in that time frame was just to report to the regulatory agencies as opposed to letting your neighbors know?
A. I believe that at the time the people were making those decisions of carrying out those activities, they believed they were doing the proper thing by reporting to the regulatory agencies, yes.
Q. Well, what happened to the Monsanto Pledge, Dr. Kaley, during that time frame?
A. The Monsanto Pledge is what it is, and I believe that they were operating at that time as we are today.

We're trying to operate in accordance with whatever statements were available at the time for them to guide their activities.
Q. And that's the statement that you've made publicly, isn't it, Dr. Kaley, since this trial got underway, that you're really -- To put things in proper context, that y'all have nothing to be ashamed of?
A. I believe I said something very similar to that, yes.

MR. STEWART: Your witness.
THE COURT: Ladies and gentlemen, let's go ahead and take about a twelve-minute recess.
(Recessed at 10:32 a.m.)

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Dr. Kaley
Doc # 523109

(10:48 a.m.)
(Jury present.)
THE COURT: Let the record reflect that everyone is back in the room.

CROSS-EXAMINATION

BY MR. FORD:
Q. Dr. Kaley, earlier I think we had a brief omission about some of your background and history.
Would you tell the jury, please, sir, where you were born and raised.
A. Yes. I was actually born in Illinois. I was raised in South Bend, Indiana.
Q. And what is your educational background?
A. I went to Purdue for undergraduate school and got my doctorate at the University of Illinois.
Q. Did you get a master's in between there somewhere?
A. Yes. It was just kind of along the way.

Q. What was your degree in at Purdue, please?
A. Analytical chemistry, which is really the science of measuring things in a variety of -- measuring things in soil, measuring things in the water.
Q. Chemicals?
A. Yes. I'm sorry. Yes.
Q. And your master's, was that also in analytical --
A. Yes, it was.
Q. And from where did you get that?
A. That was at Illinois also.
Q. And then your Ph.D. is from Illinois?
A. Yes.
Q. Is that also in analytical chemistry?
A. Yes, it is.
Q. When did you get your doctorate degree, please, sir?
A. It was actually granted in 1974, early 1974. But I began work at Monsanto shortly before that, in late 1973.
Q. All right. When you went to work for

Monsanto in 1973, where did you work, and what was your position?
A. I worked in St. Louis, Missouri, in the labs there. And basically my job was to measure PCBs, using the techniques that were available at the time.
Q. Now, the techniques that were available at that time, are they different than what is available now?

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A. They are basically the same, but they are a lot move sophisticated today than they were then.

We were still in the learning phase when I joined the company in 1973 on the different ways to measure PCBs and how to do it accurately and how low or what levels you could measure.

Q. I assume you progressed since you're now the director of environmental affairs, I believe it is.

A. Yes.

Q. What was your next position with Monsanto? And tell the jury briefly

what you did.

A. Well, I basically stayed in the analytical area, the chemistry area, the laboratory for about the first, I guess, eleven years of my career. And I -- for a time I led a group. I was a group leader in a group that did a variety of chemical measurement techniques. And then I became a specialist in a technique that's used in the laboratory before I moved on to the corporate responsibilities.

Q. Did you hold the position with Monsanto, the same position you now hold with Solutia?

A. Yes. At the time, as I said, Monsanto spun off Solutia, I was director of environmental affairs for Monsanto Company.

Q. What does being the director of environmental affairs encompass?

A. Well, it's a number of things. Part of our responsibility was to maintain

products -- maintain stewardship for products like PCBs that the company had manufactured at one point but no longer manufactured.

I was also responsible for staying up to speed on emerging scientific issues that affected our businesses and provided those kinds of resources to the company.

Q. I believe Monsanto has some other plants in Alabama besides the Anniston plant, don't they, or Solutia?

A. Yeah, Solutia does, yes.

Q. Where are those plants?

A. There's a plant in Decatur, and there is also a plant down south in Foley.

Q. Did they have anything to do with the manufacture of PCBs?

A. No, they didn't. They actually -- I

think certainly Decatur had some PCB-containing electrical equipment, as did most industrial facilities at that time frame. But other than that, they

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did not manufacture them, no.
Q. Are those Solutia plants now also?
A. Yes, they are.
Q. So there are three here in Alabama in all?
A. Yes, that's correct.
Q. So as I understand it, then, from 1973, when you first went to Monsanto, until today, you have been actively involved in PCB matters?
A. That's correct.
Q. All right. Has it been a part of your job with Monsanto to review scientific articles and journals such as those that have been introduced into evidence here about the pros and cons of PCBs?
A. Yes, it has. I have been reviewing PCB literature since the 1970s and then obviously have gone back into the times before that to gain an understanding of the issues.
Q. And there are a number of such articles, are there not?

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A. Yes. There are tens of thousands of articles about PCBs. And that's just in the scientific literature.
Q. Is it not true also that there are many conflicting opinions within those articles about PCBs and their effects?
A. I hate to use the word "conflicting" when it comes to science. I think different people have observed different things. And there are discussions about what the meanings of those things are; like for instance, with regard to animal tests, whether those relate to human beings or not. But there are differences of opinion and differences -- inconsistencies in some of the science, yes.
Q. And as part of your job as director of environmental affairs and as the representative here at trial, have you been required to become familiar with Monsanto's history regarding PCBs?
A. Yes. I did that as soon as I got to

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Monsanto to help understand that when you're doing a job you want to understand what the background of that

job is and why you're doing it.
So as early as the early '70s I began to look into what Monsanto's history was and what we were doing.
As I continued in my career and assumed additional responsibilities, I have continued to become more knowledgeable about both the scientific issues and the internal issues on PCBs.

Q. Have you also become familiar, Dr. Kaley, with the various governmental agencies that have been created since the '70s or so that deal with environmental issues?

A. Yes, I have.

Q. Some of those have been stated here today or during the week as EPA. Have you dealt with the EPA?

A. Yes, I have.

Q. And with the Alabama Department of

Environmental Management, ADEM?

A. Yes, I have.

Q. Have you dealt with the Alabama Department of Public Health?

A. Yes, I have.

Q. Were you around and did you have any dealings at the time when -- I believe it may have been ADEM that was known as the Alabama Water Improvement Commission. Did you ever deal with them?

A. No. Well, I have heard of them, but I didn't have any specific dealings with them.

Q. Have you dealt with them with respect to matters involving the Anniston facility and PCBs?

A. Yes. All of those agencies we have been involved with.

Q. Have you ever been a resident employee at Anniston?

A. No, I haven't.

Q. Tell the jury, if you will, what the

first dealings you had with the Anniston facility involved.

A. My first direct dealings with Anniston were in the mid 1980s, when I became involved in an investigation of PCB levels, PCB sediments in ditches leading away from our plant, leading to Snow Creek.

Q. Was anything done with respect to that?

A. Well, both the State and Monsanto did sampling in those ditches. And after the results of that sampling, Monsanto did propose a clean-up action for the

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sediments in those ditches. That was ultimately taken -- undertaken in the late 1980s.
Q. What did that consist of?
A. It consisted of removing sediments from primarily the ditches leading away from our plant. And those sediments were transported to a chemical waste landfill in Alabama. And then we also undertook to cover portions of those ditches that

ran behind a church and a few residential properties.
Q. All right, sir. What sort of cover would have been used?
A. Basically we put the ditch in a concrete culvert and then landscaped over that culvert.
Q. Do you know about what length of ditch or culvert that might have involved?
A. I don't really recall.
Q. But it was from the plant --
A. Well, it was actually from our fence line on the east side of the plant across the -- basically the back yard of a church and some residential properties there up to Tenth Street, for those who know the area.
Q. So we have seen that on the maps, I believe.
A. Yes.
Q. Dr. Ellis, one of the Plaintiffs' experts, said last Wednesday -- made the statement that Monsanto hadn't done

anything to address environmental issues in Anniston since 1985. Do you consider that a true statement?
A. No. I disagree with that statement.
Q. Other than the cleanup you have mentioned about the ditches, where the PCBs were found, what else did Monsanto do during the '80s to try to either reduce its loss of PCBs or to remedy the situations where PCBs already existed?
A. Well, the 1980s was a very active time for the chemical industry. And in the late 1970s and early 1980s a number of environmental laws were passed at the federal level, and some of those were adopted at the state level, which required industry to investigate the handling of chemicals on their site, the handling of wastes on their site, and to undertake activities, basically, to secure those sites to be sure, to the extent they could at the time, the

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materials weren't leaving the sites.

So during the 1980s, Monsanto upgraded landfills, undertook efforts to install systems to measure chemicals in groundwater leaving those landfills to be sure that the groundwater was being protected. In fact, Monsanto actually installed collection wells to actually collect some of the groundwater on our site.

That wasn't specifically done for PCBs, but the groundwater was being monitored.

Q. Were other chemical companies in the U.S. going through similar processes?

A. Yes, they were.

Q. About chemicals and so forth?

A. Yes, they were. They were all involved in understanding more about the movement of chemicals and how to prevent the movement of chemicals and complying with the regulations.

Q. All right, sir. Do you recall when the EPA was formed?

A. It was about 1970.

Q. Prior to that was there any U.S. governmental agency designated to deal with issues such as the EPA deals with now?

A. Well, not specifically.

Q. Not specifically?

A. Although some of the areas that EPA now deals with were addressed by portions -- for instance, the Food and Drug Administration, the FDA, U.S. Department of Agriculture had some responsibilities.

But there was really no agency that addressed the environment as a whole and the chemical industry as a whole.

Q. After your 1985 visit, where there was some -- Would you call that remediation, what was done to those ditches?

A. Yes, sir.

Q. After that was done, what was your next occasion to be called upon to do

something with regards to the Anniston location?

A. Okay. I might go back a little bit and mention that one of my responsibilities is to make sure that all our plants -- not just Anniston but all of the plants at Monsanto at the time and Solutia now

-- comply with PCB regulations.
So really from about 1985 on I also had responsibility to be sure that the plants were -- if they had PCB-containing electrical equipment, they were keeping records. So I had forgotten that when you were talking about other involvement.
My next really direct involvement was in 1993, when we learned from the Alabama Power Company that they had found some PCB-containing materials on a site that they had obtained from us in 1960.

Q. Did you involve yourself in the investigation of that incident?

A. Well, I wasn't directly involved in the investigation. But I was involved in discussions about what was being done and what was to be done. So I'm certainly knowledgeable about it.

Q. Was a determination made as to how this material had come to the surface or been found?

A. Yeah. As I think we -- has been discussed before here, that site was a former landfill for Swann Chemical and then Monsanto Company. It was closed in 1960. A secure cover was put on it before it was transferred to the power company.
At some point during construction of a substation on that site, apparently the power company had cut into what we call the toe, the front edge of that landfill, and exposed some of the material that had previously been under the cover.

Q. And how was that addressed by Monsanto when that discovery was made?

A. Well, the power company notified both Monsanto and ADEM, the regulatory agency. And over the period of the next few months Monsanto had discussions with both agencies. And it was determined that the most efficient way to re-establish the cover of that landfill and deal with the issues was for Monsanto to reacquire that property.

Q. And was that done?

A. Yes, it was. Monsanto did reacquire that property.

Q. After that was done, tell the jury what if anything was done to resecure the west end landfill.

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A. Well, there were extensive investigations to determine the extent of materials that may have escaped through and been opened up or exposed by the construction activities.

Those materials were then -- or that investigation then led to a

proposal to basically upgrade or recap the portion -- Well, part of the landfill had been exposed, and then the decision was made to fix the cap on the whole landfill.

Q. Okay. And was that done?

A. Yes, it was.

Q. What goes into, quote, fixing the cap?

A. Well, in this particular case, one of the regulations that we were dealing with does have specific requirements for landfills.

And although this landfill wasn't really under that regulation because it was so old, we put on a cover on that landfill which would meet all of those requirements. And basically that cover was about sixteen inches of clay. And then we put an impermeable layer of plastic or polyethylene.

I think there -- I was looking -- is a trash bag down here in front of the jury box. It's basically the same kind

of material. It's a black plastic. But instead of the thin material, it's about a sixteenth of an inch thick.

So it's entirely impermeable to water to prevent water from percolating, what we call percolating, like a coffee percolator, draining down through the landfill.

And then on top of that was put a channelization layer to channel away storm water. On top of that was put this permeable material, this material that water can flow through. And then an additional eighteen inches of clay was put on top of that so that the rain water falling on top of that landfill goes to the channelization area where it's channeled away into the storm water discharge but doesn't get down into the landfill itself.

Q. Has the landfill then -- The west end landfill in your judgment, is it secure now?

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MR. STEWART: Judge, could we approach at this time?
THE COURT: Come on up.
(Whereupon a side-bar conference was had outside the hearing of the jury, during which the following occurred.)
MR. STEWART: I have let it go forward with this. If he is going to go through that, I'm going to ask the Court to give us an opportunity to make some kind of comparison, or I'm going to object to this line of questioning on what they have done out there to remediate the site.
I mean, we ought to be able at some point in time to make a comparison as to how expensive that is or beneficial it is to our

folks.
THE COURT: Why?
MR. STEWART: Well, I think it goes to whether or not it is an improvement or not. I would assume we would be able to ask specific questions about what it is going through now.
THE COURT: Well, I would think so.
MR. STEWART: If we can do that, I'm fine with it. I would like to also make a comparison with this site and the Hudson River site, to give the jury some idea of what true cleanup would cost.
MR. FORD: Without knowing the relative scope of the two projects, Your Honor, it would be difficult to just throw out some figure that

somebody else has devised without knowing some extent of what is being done --
THE COURT: That is true.
MR. FORD: -- without some testimony from somebody who knows that.
THE COURT: Beyond that, I don't even know why it is important for this jury to know what

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cleanup costs are.
MR. STEWART: That is what he is going through now.
MR. FORD: Pardon me?
THE COURT: I don't even know why is it important for this jury to know what the cleanup costs are at all.
MR. FORD: I wasn't planning to go into what it costs.
THE COURT: If you are not going to talk about comparison, I don't know why it is

relevant.
MR. FORD: I wasn't going to go to Monsanto's expense.
MR. STEWART: I think they are going to talk about how much money they have spent, Judge, for this particular project. If they start talking about the --
MR. FORD: I'm not going to talk about how much they spent, don't plan to ask that. I'm going to show the jury what has been done factually.
THE COURT: Okay. Anything else?
MR. STEWART: No.
MR. FORD: Was that an objection?
MR. STEWART: I would object to you going into this if we are not able to make a comparison as to what kind of cleanup is being done elsewhere, I mean, for instance, on the creek.

And we may not get into the cost, but I would like to point out the fact they are in fact cleaning up the Hudson River. It may be a moot point, Judge.
THE COURT: It may be, but let's move along. If you feel like you need to object, come back up here.
(Whereupon side-bar concluded, after which the following occurred.)

Q. Dr. Kaley, let me get back to something. The ditch cleanup that was done after the '85 discovery was made --
A. Yes.
Q. -- was that under the auspices or oversight, or did it have to be approved by any of these governmental agencies?

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A. Yes. It was approved by ADEM.
Q. And was that completed as submitted to ADEM?

A. Yes. I believe it was, yes.
Q. And what about that same question with respect to the west end landfill?
A. Yes. We had to submit extensive detailed plans to ADEM. They were also reviewed by the EPA prior to our, you know, fixing the cap on that landfill.
Q. Are most projects that are undertaken that have the design to remediate a property or secure an incident such as the ditch problem and the west end landfill situation overseen by those agencies?
A. Yes, they are. We have to work closely with them to submit plans, to address comments they have on those plans or criticisms of those plans, and refile our plans and then make progress reports along the way. And when it is done we have to file a final report so that they understand exactly that we did do exactly what we said we were going to do.

Q. Once a decision has been made that something has to be done about a location --
A. Yes.
Q. -- who makes the initial proposal or recommendation as to what is to be done? Is that the agencies or the chemical company?
A. It can by either. In most of the instances that we have been involved in, because we desired to move ahead fairly quickly on the plans that we wanted to get in place, we made most of the initial proposals. We hired contractors, consultants that were experienced in designing landfill covers or things like this to prepare plans, and we submitted those to the agency.
Q. And the west end landfill, I assume there is a bottom to that somewhere. What is the bottom composed of?
A. Well, as most of Alabama, the bottom of that is clay, which is -- In areas where

you don't have clay bottoms to landfills, that is what is required to be put in prior to using the land as a landfill. Clay holds on to materials

very tightly such as PCBs or other chemicals. When the PCBs reach that soil, they hold on very tightly and don't let go very easily.

Q. So you have a clay bottom and then whatever material may be placed in the landfill?

A. Yes.

Q. And then these other various layers you have described?

A. That's correct.

Q. Since that '93 discovery about the west end landfill have there been other steps undertaken in and around the Monsanto plant and the area to address the PCB question?

A. Yes, based on a determination that there was trace levels of PCBs in the storm water leaving the west end landfill,

Monsanto at the time undertook other storm water monitoring measurements to determine if PCBs were leaving in storm water from other areas of the plant.

I must say we were surprised to find out there were trace levels of PCBs in storm water. That triggered extensive investigations of the pathways that that storm water takes leaving our site and led to, eventually, further remediation around the site.

Q. Let me show you what has been marked as Defendants' Exhibit 1288, which is a series of documents, and ask you if you can identify that.

A. Yes. These are basically site overviews that were prepared to help explain the various activities that Solutia -- Monsanto and now Solutia have undertaken around our Anniston plant.

Q. All right. And have you reviewed those?

A. Yes, I have.

Q. Do they accurately reflect what has been

done over a period of years around the Monsanto plant?

A. Yes, they do.

Q. All right. Now, this is a -- This doesn't show any remediation here, but as I understand it, the Monsanto plant is in this area here.

A. Yes. That's the operating facility.

Q. And the west end landfill is somewhere --

A. Well, it is west of where your pointer is.

Q. And the south landfill we would assume would be here?

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A. That's correct.
MR. FORD: Let's bring up the next one, please.
Q. Next page. What does this depict, Dr. Kaley?
A. These two areas depict activities that were undertaken in the 1980s. We talked about the fact that the RCRA law required Monsanto at the time and other

companies to look at their landfills. And landfill sites that were being actively used had to come under these regulations. So the green area is our cells that were being used in the parathion process. We have heard some mention of the manufacture of parathion. When we stopped that process in the mid 1980s, those were then capped in accordance with those RCRA regulations.

The yellow area is the area that had been used for PCBs way back in the '60s. And part of it then was also used as a nonhazardous waste landfill, things like shipping pallets or waste paper. Things that didn't have anything to do with chemicals were put in there. That area was then in the late 1980s and 1990 capped with a six foot clay cap to be sure that that area was secure.
Q. This area 3-E was capped with clay?
A. Yes.
Q. And how was this area treated?

A. I think it is protection layers, but it was capped also.
Q. And these two were done in '89?
A. That is when they were completed.
MR. FORD: Can we have the next one, please?
Q. All right. Tell the jury about this, which says west end landfill on it. Is that the remediation we have discussed earlier?
A. Yes. That's right.
Q. That was completed in '95?
A. That was actually begun in '95. It was completed in '96.
Q. Is the west end landfill now considered secure?
A. Yes it, is. It is considered secure and fenced to prevent access so that the cap is not disturbed. Service water and groundwater are both being monitored for a number of chemicals. And it is visually inspected on a periodic basis to be sure that there is no erosion or

things affecting the cap.
Q. Now, we have heard the word "RCRA" from a lot of people. What is RCRA, Dr. Kaley?
A. Well, it is four letters that stand for the Resource, Recovery, and Conservation Act. It was passed, I believe, in the early 1980s by congress, which then transfers the responsibility to the EPA to come up with regulations to enforce that law. So when we talk about RCRA, we are talking about things done to comply with that law. That law was basically designed to oversee the management of chemical wastes by the chemical industry as well as other industries.
Q. And who is responsible -- Is the EPA responsible for determining if you have met the requirements of RCRA?
A. Yes, it is. Well, it is ultimately. In Alabama some of those responsibilities have been delegated to --

Q. Whichever agency had to approve this, was it approved when it was finally done?
A. Yes. I believe it was ADEM.
MR. FORD: Could we see the next one, please?
Q. It says "lower retention pond"?
A. Yes.
Q. That says it was done in '96, is that correct, to your recollection?
A. Yes. That's correct. I might mention the kind of the code that is used. The yellow brings up the one that we are going to currently talk about, kind of in a sequential basis, and the green basically means they have been completed.
Q. What was done with respect to the lower retention pond? Tell the jury what it does and what its purpose is.
A. As we did our extensive investigations in the area east of the plant and also the north of the plant, beginning in the

mid 1990s and actually continuing on, it became clear that one of the issues was really the fact that there was just too much water coming off -- I think it is Coldwater Mountain, the south landfill. And that area, and being funneled into the ditches leading to Snow Creek and eventually Snow Creek?

So before we could really undertake our plans to manage and control the surface PCB soils, it became necessary -- It was obvious that it was necessary to control the flooding in that area.

So one of the first things done was construct a retention pond on land that we already owned to basically serve as a reservoir for all that storm water. As we move forward, you will see that we directed a lot more storm water into that particular area so it wasn't just rushing across the properties.

Q. I think you have been here some of the days when the pictures of the lower retention pond have been shown; is that --

A. I don't know whether I have or not, but I certainly have seen it.

Q. That is the only pond of that size on Monsanto properties?

A. Yes, it is.

MR. FORD: Could you bring up the next one?

Q. Now, we have a lot of new things here. Let's start with the upper diversion channel. I think that may be something you just discussed?

A. Right. One of the things we wanted to do before we started doing construction on either the landfill or in the east side areas that is shown on this map was to prevent storm water, clean storm water, storm water that hadn't touched any soils on any of our property, from running across that. So we created a berm, a ditch above our landfill so all that storm water -- what we call the run-on water would not reach the landfill area and would be diverted to -- It actually ends up going through some pipes that went to the detention pond for a while. But I believe now it goes directly to a discharge point.

Q. All right. And then there is area here that says south landfill. What was done with respect to the south landfill other than what we have already --

A. Right. On this area of the south landfill, which we discussed earlier today, that was the area of the landfill that had PCB-containing soils on the surface. So that was the area we addressed in our remediation plan. What we were focusing on were PCBs that were

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attached to soil that could get in storm water. On that portion of the south landfill, a cap identical to that used on the west end landfill -- kind of the four-layer cap -- was used, including

the water-impermeable layer.

Q. Now, that is something we need to explain, Dr. Kaley. As I understand what you are saying, there are two layers of material other than clay?

A. Well, there are actually three.

Q. Three? All right. And one of them is something like this (indicating)?

A. Right. That is a top permeable layer that goes -- Basically, if you want to start at the top, there is at least eighteen inches of clay; then there is this permeable -- what we call a geotextile, basically cloth that goes on land. And that then covers a channelization system that allows the storm water to be collected and channeled into our storm water management system.

Under that is this impermeable layer, sixteenth inch -- the engineers get upset when we talk about it being a really thick trash bag, but that is what

it really is. It's a trashbag-like material, about a sixteenth of an inch thick and does not allow water to go through it.

Q. Do I understand the purpose of that layer is to make the water go where you want it to go, so to speak?

A. Yes. Like the diversion channel, it allows us to manage and control the rain water that falls on that property.

Q. I see also there appears there may have been some addition during this time to the retention pond?

A. Yes. Again, I don't know exactly what that little yellow is, but there was management done -- we had acquired some of the property in that area to manage and control the PCBs. That allowed us then to cover the PCB-impacted soils in that area.

Q. What is this that says "east side"?

A. Again, that was basically all land areas where PCBs had been detected in soils at

varying levels and was all part of the project to manage and control those PCBs by placing basically this marker layer

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that we talked about down so that we knew where the cap had been placed and then put on the eighteen inch soil cap.

Now, at some areas, especially in the ditches that previously flowed through what is marked as the east side, we did use that thick polyethylene to prevent soil -- excuse me -- to prevent water from draining down through those areas where there were higher levels of PCBs.

Q. Is there a reason why the plastic layer -- I will call it plastic as opposed to geotextile -- would not have been used on some of the properties you described when Mr. Stewart was examining you?

A. Well, that material is basically used to prevent water from draining through the soils and being carried away in normal drainage pathways. The plastic, the

area where we just used the geotextile have lower levels of PCBs or in many cases no levels of PCBs. So it was appropriate then to let that water drain away in a more natural progression.

Otherwise, if we had covered the whole area, the water would have just built up, and we would have re-introduced a different flooding problem.

Q. Was all this property already owned by Monsanto?

A. Some of it was and some was not. We did purchase some property in those areas.

Q. Is that some of the property that is under fence?

A. Yes, it is.

Q. And that property has been treated, at least to some degree, by capping and covering?

A. Well, it has all been capped with either the caps similar to the landfill or at a minimum, this geotextile marker layer

and eighteen inches of clay, yes.

MR. FORD: Can we have the next one, please.

Q. Now we have, it appears, perhaps some more of either what would be the east side or something referred to as the north side. What was done there, please, sir?

A. Part of our investigations indicated that what is marked north side also had some PCB-impacted soils. We purchased properties in that area and did a covering project to deal with the PCB

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impacts in those soils, and then we did some additional work, extending what we called the east side cover on properties that were also acquired.

I might note also you will see there is a little angular stream or lines leading up to a pink box. Those are the piping that we put in to focus all of the storm water from our plant, from the diversion channel, from the

landfill drainage, and from the east side drainage into a single discharge point by Tenth Street. And that is where we now monitor our storm water discharge. So we go in there at least once a quarter when there is a major storm, which is when you would expect that there is PCBs on the soil. If you get a big storm, you get the water all murky appearing, soil. That is when we do our monitoring. And we are not detecting PCBs in that storm water.

Q. Now, this does not depict the 1985 or so work that was done as far as the drainage --

A. No.

Q. This is all since 1989?

A. Yes. In fact much of that work that was done in '85 has been incorporated and updated during this project.

Q. And all of this work here, the -- And I will call it remediation, whatever has been done, has been done by Monsanto or

Solutia?

A. That's correct.

MR. FORD: Can we have the next one, please.

Q. All right. We now have, it appears, an addition up here on the north side and then something here. Can you tell the jury what that is, please, sir?

A. Yes. The additional on the north side were additional properties, primarily in that case commercial properties that were purchased to allow us to manage the PCBs on those properties.

Then the yellow kind of curving area is what is called -- I don't know if it has been talked about here -- is the Eleventh Street ditch. That is actually the ditch that runs along Eleventh Street, as you might suspect, in Anniston, which carries the storm water from our plant, as well as other storm water to Snow Creek. We still haven't reached Snow Creek. These are

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all ditch-ways. And we currently have plans under discussion to deal with. There are some PCB-impacted soils in that ditch, and we are going to deal with those also.

Q. Is there any particular reason, Dr. Kaley, why you would want to address the issues leading to Snow Creek before you address Snow Creek?

A. Yeah. To the extent that PCBs were leaving our site in trace quantities, we certainly -- there is no use doing a cleanup of Snow Creek while storm water may still be carrying PCBs into that area. So it is basically a phase approach that allows us to step away and do remediation, do cleanup as we go. So we are moving to Snow Creek. We are doing investigations in Snow Creek, and we will deal with those issues appropriately when we get there.

Q. All of the things that we saw on Exhibit 1288, I believe it is, were done by

Monsanto?

A. Yes.

Q. And have been --

A. But under the oversight of ADEM and EPA. Both agencies were deeply involved in reviewing the plans, having input in the plans and over -- under -- excuse me -- overseeing our progress on those plans.

Q. In addition to those that we saw in the surrounding area, were there any measures taken on the plant site itself?

A. Yes. Part of the process throughout this has been to look at the plant site, not only for PCBs, but basically for all of the chemicals that we either manufactured or still manufacture there. To the extent there have been PCB issues identified on the site, we have addressed those. We have eliminated storm water flow through the old sewer system. We have eliminated -- Some of the processes require cooling water, basically just water that is used to

keep reaction vessels cool. It doesn't ever touch chemicals. It used to go out in our storm water, but now it goes to our on-site treatment plant.

So we have done a number of things on the site to deal with PCB issues as well as others. And that is still ongoing. We are in a process with EPA

which will require -- not EPA, with ADEM, which will eventually require us to do other activities on the site.

Q. Why does it take a long period of time to accomplish some of these things, Dr. Kaley?

A. Well, all of this work has to be driven by -- number one, understanding the chemicals themselves. We have to understand where those chemicals are and how they got there. And we have to understand where they might go. Although it may seem like it is taking a while, we are really moving quite quickly to answer all those questions

and to allow us to design cleanups that will do the job right and we won't have to worry about them again.

Q. Were the plans to do the work which we saw on Exhibit 1288 approved by these agencies, controlling agencies?

A. Yes, they were. Yes, they were.

Q. Were the final results approved by --

A. Well, the final results on each of the plans has been approved. But I might mention that these were done under what is called an interim measures program.

They were things that we thought needed to be done to address the issues quickly. At the end of this whole process there will be what is called a final corrective measures study. And at that point all of the things that we have done will be up for review, again, by the agencies, both EPA and ADEM, and by the communities themselves. The community does have input into those final measures.

They will be allowed to make comments basically to the regulatory agencies, which will then decide how to deal with --

Q. Are there public hearings held at that stage?

A. Yes, there are. Yes, there are.

Q. Have the remediation efforts that have been undertaken been successful in reducing any PCB issues in Anniston?

A. Yes. As I mentioned, I think, a couple of times, we continually monitor groundwater, PCBs not detected in groundwater. We are also measuring our storm water, which was the original apparent source of some PCBs leaving our site, and we are not finding PCBs in storm water.

Q. There was some testimony during the trial that have been -- I think perhaps a document even introduced, Dr. Kaley, that indicated that at one point in time, or some unknown period of time,

there were discharges of perhaps as much as -- or losses -- I'm not sure of discharges, but losses of PCB material from the plant to the extent of maybe as much as two hundred fifty pounds a day?

A. I believe that number has been documented as kind of a maximum estimate of what the losses might have been.

Q. With respect to PCBs and whatever they weigh, can you categorize what two hundred fifty pounds of PCBs might look like or fill, if it were put in a box or can?

A. Two hundred fifty pounds -- One gallon of PCBs weighs about ten pounds. So it is heavier -- I think a gallon of water weighs about eight pounds. So it is a little heavier than water.

So if you think of a fifty-five gallon drum that you see around at different places, two hundred fifty pounds of PCBs would be a little less than half of that fifty-five gallon

drum.

Q. So is that fifty-five gallon drum typical of the kind of drums you would see -- used to see, at least, around service stations?

A. Around service stations. When I was a kid, we burned our trash in them, you know, just a normal four foot high, two foot wide --

MR. FORD: If I haven't, Judge, I would introduce 1288, Exhibit 1288. There are hard paper copies. That is what was up here.

THE COURT: Okay. Since I don't have a copy, I wasn't sure what you are talking about, but it is admitted.

(Whereupon Defendants' Exhibit 1288 was offered and admitted into evidence.)

Q. I believe, Dr. Kaley, that Plaintiffs' Exhibit 1087 is already in evidence from

prior testimony and is a summary of activities at the Solutia Anniston facility done by EPA in 2001.

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MR. FORD: Would you pull up the highlighted portion in the middle there? Right there (indicating).

Q. Do you recognize that document?
A. Yes, I do.
Q. Have you seen it before?
A. Yes, I have.
Q. It says in there that based on studies performed and consultation provided by -- I guess that is Alabama Department of Public Health -- it has been determined that although PCB exposures have occurred, the site does not currently pose an imminent threat to human health and the environment. Dr. Nisbet -- I am not sure if Dr. Nisbet did agree with that. Do you agree with that?
A. Yes, I do.
Q. And that was done by the EPA in 2001

with relation to the Solutia plant?
A. It was done by ADEM.
Q. I'm sorry. I have had it wrong all along. ADEM, correct?
A. Yes.
Q. There is also some mention in here --
MR. FORD: Can you go to page -- I believe it is the seventh page, Don. It is shown as page five. But I think it is actually the seventh page in the total.

And if you could highlight this middle section right here, please. (Indicating.)

Q. "None of the individuals tested that were under twenty-eight years of age had elevated PCB blood levels, but sixty-one percent of people fifty years or older had elevated blood levels."

Based on your knowledge of PCBs, is it surprising to you to find that

these young people do not have PCB blood levels --
A. No. I think that would be consistent with our understanding of what has happened and is happening in Anniston.
Q. All right, sir. Thank you.
MR. FORD: Bring back the first page again, please, Don. If you will, let's go down to right here (indicating).
Q. This suggests that some of the measures for remediation of the area around the Solutia plant consists of

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reengineering -- says they have been or will be effected through activities presumably of Solutia or Monsanto?
A. Yes.
Q. One is reengineering the cover structure of the west end landfill and south landfill. Has that been done or is it yet to be done?
A. Those have been done.
Q. Design implementation of several storm

water runoff and sediment control diversion or capture structures, including construction -- for on-site facility property. Has that been done?
A. Yes. Those are the measures we talked about with the diagrams.
Q. And it says for the south, west landfill, and the several adjacent properties. Has that all been done?
A. Yes, those are the east side and north side covers, as well as the landfills that we talked about.
Q. And the design and implementation of on-site composite liners and cover structures to abate contact with the highest level of PCBs and to prevent further downstream migration. Has that been done?
A. Yes, it has.
MR. FORD: We would offer, if it hasn't been offered -- but I believe it is -- 1087.
THE COURT: Admitted.

(Whereupon Defendants' Exhibit 1087 was offered and admitted into evidence.)
Q. Now, if we could bring up 1052, please. These are some -- Let me show you Defendants' Exhibit -- Is this 1252 or 1052? Exhibit 1052A. Let me show you Exhibit 1052 A. Do you recognize that, Dr. Kaley?
A. Yes. It's a photograph taken from the north looking south toward the Monsanto operating facility in some of the areas around the plant, or the Solutia operating facility now.
MR. FORD: Judge, may he come down and give us some narrative pointing instead of me doing it?
THE COURT: Certainly.
MR. FORD: Come on down, Dr. Kaley.
Q. If you will, use the pointer and show

the jurors where certain things are that
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we've already discussed and anything else that may be of interest.
A. This is the operating facility as it exists today. This is Highway 202 going east into Anniston. The west side landfill is this covered area here. It is -- From as close as I am, it's hard to see. But there is actually a slight elevation here, very slight, where the cover was replaced on the landfill. (Indicating.)
This area, cleared area along here, is a diversion channel where storm water is channeled. (Indicating.)
If storm water is flowing off the mountain, it's caught and captured and transmitted across this area here. We will talk about that in a minute. (Indicating.)
This is the area of the south landfill that was covered with the multi-layer cap on the side of Highway 202. (Indicating.)
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The detention basin that we mentioned is here. It contains water. And that water then flows through a channel into the discharge point, which is basically right in this area here. (Indicating.)
All of the storm water from the mountain, from the plant, from the retention basin and from this whole site east side area is caught. That's where our storm water is monitored, where we do the measurements for PCBs. (Indicating.)
The north side area, where the cover was placed, is this area here. And both -- This was the first side of the north. This was the other side. And that storm water then eventually makes its way to the Eleventh Street ditch, which runs along these railroad tracks. (Indicating.)
About an equal distance over here these ditches meet Snow Creek and flows
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out toward Choccolocco Creek. (Indicating.)
Q. And most of the east side properties would probably be a little off the picture, would they not?
A. Well, no. The areas we purchased

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properties and did the remediation is this area here. There are a few properties here. But this is the east side area here. (Indicating.)
Q. And it's relatively obvious. But nothing goes into the south or west landfills now; is that correct?
A. That's correct. We have very little waste from the plant at all.
Q. Go ahead and take your seat, Dr. Kaley.
This area right in here, what is that, please?
A. That's the Alabama Power substation that was constructed in the 1970s.
Q. So they left it there, right?
A. It's still operating.
Q. What is this here (indicating)?

A. It's an operating facility. I'm not sure what that is.
Q. It's not Solutia or Monsanto?
A. No, no.
Q. What about this? Is this another industry of some sort?
A. Yes, it is.
MR. FORD: We would offer 1052 A.
THE COURT: It's admitted.
(Whereupon Defendants' Exhibit 1052 A was offered and admitted into evidence.)
Q. Now, I want to show you, if I may, Defendants' Exhibit 1052 C; not B, but C at this time.
1052 C, which is taken at a little different angle from this and a little closer for the jury's consideration. This area here is what?
A. This area -- this shot is taken more from the west looking east toward downtown Anniston. So the area that you were just pointing out is the west end

landfill, the capped west end landfill.
Q. This is the transfer station?
A. Yes. That's the Alabama Power substation. That's also an Alabama Power facility.
Q. And this is the south landfill area in here (indicating)?
A. Right. The front area, the area you're pointing to right now, is the part of the south landfill that had the re-engineered cap, the new cap put on it. The other area is the area that has the six foot clay cap.
Q. Dr. Ellis referred to this as an open pit. Is there any part of that that is

open?
A. No, sir. It's all covered and managed to be sure there isn't --
Q. And I believe that is what Mr. Worsham described as a tragedy?
A. We believe that the work that we have done there is an effective cover for the landfill area. We've done our best to

make it look attractive as one drives by on the highway.
Q. What is this up in here (indicating)?
A. Well, the diversion channel is up there. And there are also access roads to allow us to get up there so we can monitor the cap and monitor that landfill.
Q. Is this the road (indicating)?
A. Yes.
Q. And is this the diversion system that you can see that brings water away (indicating)?
A. Correct.
Q. Does that run all the way around the back for portion --
A. It runs along the top of the landfill and then it is caught in a collection box and piped to the discharge point.
Q. What is this facility used for at Monsanto (indicating)?
A. That is primarily a storage and warehousing facility.
Q. What is this (indicating)?

A. I don't know. I think -- again, I think it is a warehouse. But I don't know specifically what it is.
Q. Is the Aroclor plant shown on any of these photographs?
A. No. Obviously the Aroclor plant has not been there since 1972, so it is not there.
Q. Do you know how large the Aroclor plant was?
A. Well, if I could go up to the screen.
Q. Sure.
THE WITNESS: Is that all right, Judge?
THE COURT: Yes.
A. I might -- We have talked a little bit. There is a chemical called biphenyl that is still manufactured at that plant. That was one of the raw materials for PCBs, but it is still used and has a wide use. That is the biphenyl manufacturing facility. The PCB manufacturing facility was in this area.

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It is asphalted and covered.
(Indicating.)
Q. What was done with all the materials that came from the Aroclor plant?
A. When that plant was dismantled in 1972, all of the reaction vessels and the whole plant were placed in the south landfill.
Q. All right, sir. So of whatever amount of poundage of materials and so forth are in the landfill, some of that is an entire building?
A. Oh, yes. Significant portions of that are the building, all the reaction vessels, all the piping and materials, and some of the soil that the plant sat on has all been placed in the landfill. That was done, as I said, in 1972.
Q. Among other things, after the discharge was found to be somewhere in the range of two hundred fifty pounds a day at some point, was Monsanto able to reduce that --

A. Yes.
Q. -- based on your records?
A. Yes. One of the things we undertook in the late 1960s and early 1970s was to reduce our plant discharge. That was down to -- by the time we stopped making PCBs, it was down to like half a cup a day.
Q. All right. Thank you. Now, with respect to the things that we saw on the chronological exhibit, Dr. Kaley, the one that showed the south landfill, west landfill, drainage and ditches and so forth, did those efforts that were undertaken there contribute to reducing the area around the plant to the point where ADEM said it was no longer -- or not an imminent threat to human health?
A. Right. The outcome of all those activities was basically the basis for that conclusion, yes.
Q. All right, sir. And with respect to Dr. Nisbet's earlier testimony, he

indicated at one time there were some nine routes of exposure that in the old days perhaps people had with PCBs and that now there are four. I want to ask you about those. One of them he said was breathing air.
A. Yes.
Q. Based on the studies and the monitoring and so forth that has been done at Monsanto, is breathing the air in the

area of that plant any longer a serious threat to human health?
A. No. Based on the information we have right now -- As I said, we are continuing our investigations of air levels around the plant and working with regulatory agencies. But based on the measurements we have made over the past three or four years at our fence line, we believe those levels, although they are somewhat elevated above what you would find in normal or background, do not present a significant route of

exposure to the residents and in fact -- In most cases they are well within what we would call background. So we continue to study that issue, but we do not believe it is a significant source of exposure. The levels are orders of magnitude below what OSHA and other agencies have determined to be okay for workers.

We understand, certainly, the residents aren't workers. But if you change your exposure scenario to account for that, they are still well below the levels that those agencies have said were okay.

Q. Another route Dr. Nisbet mentioned, Dr. Kaley, was contaminated soil. Has the monitoring at Monsanto and the Solutia area indicated to you that contaminated soil is any imminent threat to human health?
A. I would say two things about that. First of all, we have spent a lot of

efforts over the past several years to deal with soil levels in the east side and north side and various places of the community. We continue to do that. But one of the things some of these health studies have shown is there isn't a direct relationship between soil levels on people's property and whatever blood levels they have. So again, we don't believe current soil levels are effecting an exposure in the community at this point.
Q. Would you agree with Dr. Nisbet that over time those levels may tend to go down?
A. Certainly to the extent -- I mean, for two reasons. Number one, they will go down -- Oh, the blood levels, you are talking about?
Q. The soil levels.

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A. To the extent we are doing activities, they are certainly going to go down, but PCBs in the environment will decline

over time, yes.
Q. Another area of exposure Mr. Nisbet says still exists would be inhaling and eating dust. Do you have any response to that?
A. Again, I think the things that have been done in the homes and neighborhoods suggests there is really no direct relationship between dust levels and PCB levels in any particular people. Again, I think we have addressed soil PCB issues extensively around our plant site and continue to do so in the community.
Q. All right, sir. And the last one he mentioned was mother-infant transmission?
A. Yes.
Q. Transmission from mother to child through birth or through breast milk?
A. Again, I think you pointed out that in at least one or two of the studies the younger people don't have measurable levels of PCBs in their blood. And

certainly many of the studies -- most of the studies that have been done on the children -- in fact, all of the studies that have been done on the children don't suggest there are current levels of exposure to children in the Anniston area.
Q. And the EPA study confirmed that persons under twenty-eight were found to generally not have any detectable levels?
A. It was an ADEM report of a study done by ADPH and ATSDR. Yes.
Q. I want to go back now to an earlier time, Dr. Kaley. You I suppose were in school in analytical chemistry when the Risebrough report was first made around 1968, were you not?
A. Yes. That was around the time I was starting my graduate training.
Q. And I'm sure you became familiar with the Jenssen Widmark study in Sweden that was the first incident, I believe we

have heard, where PCBs were discovered in the environment.
A. Yes, I have.
Q. At that point in time were there any concerns expressed about the impact that

PCBs being in the environment might have on human health?
A. Well, I think people were thinking about, but there was really no basis for direct concern.
Q. Were there any studies done in that era that actually indicated --
A. No. The area -- At that time the studies were focused on the presence in the environment. In the Jenssen and Risebrough areas -- Really, Risebrough in '68 was the first one that even proposed that there might be a health effect on wildlife. And that turned out to be erroneous. Further research suggests or has shown that his proposal turned out not to be true. So really the kind of chronology -- The time frame

was that it was found in the environment, studies confirmed over the years that it was in the environment, and then there were some concerns expressed about wildlife, and only later the potential for human health effects was considered.
Q. I'm going to ask you another. What took so long or why take so long? Were there limitations on scientific techniques back in the '60s that prevented any further discovery of PCB in the environment?
A. No. I think one of the things I did talk about was chemistry and analytical chemistry, the ability to measure things in different places at lower and lower levels continues to improve. And certainly in the 1960s the abilities that allowed these scientists to measure PCBs at what at the time were vanishingly small levels -- some of the things we have seen today seem very

large, but at the time they were just trace levels. Those techniques were very new, and very few people had the ability to do it. That was one of the issues that Monsanto had to deal with when the discoveries were reported, was how to get these techniques into our laboratories and get them to the level or get our chemists to the level where we could do the same kind of measurements.
Q. And during some of the prior testimony a study was introduced done by an Interdepartmental Task Force of Government Agencies, I believe it was,

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in 1972. Are you familiar with that report?
A. I'm familiar with that report, yes.
Q. Dr. Nisbet agreed with the statement that was made in that report in 1972 to the effect that PCBs were not currently known to be a health hazard. Based on your study and your interest in PCBs and

the knowledge you now have, would you agree with that statement?
A. Yes. I think that was an accurate reflection of the state of knowledge at that time.
Q. He also agreed with a statement made in an exhibit that is Defendants' Exhibit 1274, a 1979 study, in which he was a participant, in which his committee found there were no well documented cases of health problems associated with such environmental exposures as exist. Would you agree with that?
A. Yes. I would agree that reflected the state of knowledge at the time. And I would go on and say that for all practical purposes that reflects the state of knowledge today.
Q. All right, sir. Now, are you familiar -- when the 1966 and '68 and somewhat later studies became known and were widely publicized, what reaction did Monsanto, as far as a corporate

reaction, make to those particular studies?
A. Well, we undertook several things. When the studies were first released our representatives in Europe went to visit the scientists to confirm that what they were reporting was in fact what they were reporting. When that was confirmed, the company undertook a number of measures. We have talked about the developments of the techniques and developing our ability to do the kind of measurements being reported, providing standards to other scientists that were met and trying to do the same kind of measurements we were trying to do and participating in a variety of activities to be sure that the knowledge that was being developed was widely known.
Q. Did Monsanto provide PCB material to Dr. Risebrough?
A. Yes, they did.

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Q. What was the purpose in that?
A. Well, part of the ability to measure PCBs in wildlife -- and he was looking at birds -- was to be able to have a material you knew to be PCBs so that when you got this curvy line out of your instrument, you could look at the curvy line from the wildlife and be sure they looked the same. That is basically how that technique works. And without the standard, without the known material, it wouldn't be possible to confirm what you were finding was really PCBs or whatever it was you were looking for.
Q. Are you familiar with -- or have you become familiar through your reading of the history of Monsanto with the fact -- I think this has already been testified to and is in evidence too -- an ad hoc committee formed to consider the PCB issue?
A. Yes. That was one of Monsanto's responses when it became confirmed that

PCBs were an issue that the company was going to deal with, they put together a group of managers at the highest level in the company to develop a plan to deal with the PCB issue as it was developing.
Q. And wouldn't it be fair to say, Dr. Kaley, that in fact one of the things that Monsanto wanted to be sure was confirmed was that these reports were in fact correct?
A. Yes. Certainly that was one of the first steps that we or anybody would undertake if a chemical you are involved with is being reported as to, number one, try to understand all the information and be sure it is correct.
Q. And who did the ad hoc committee make its report to?
A. Well, the ad hoc committee were the people actually on the ground dealing with the issue, reported to what was called the corporate development committee, which was kind of the

executive board of Monsanto at the time.
Q. Did the corporate development committee come up with some plan of action?
A. Well, basically the ad hoc committee came up with a plan to deal with the PCB issue, and it was presented to this board and was approved by them for implementation. Yes.
Q. Defendants' Exhibit 874, would you identify that, please?

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A. Yes. It is minutes of the meeting of the corporate development committee from November of 1969.

MR. FORD: Can we see page three of that, please? We would offer that, Your Honor.

THE COURT: It is admitted.

(Whereupon Defendants' Exhibit 874 was offered and admitted into evidence.)

Q. Page three of this document has like twelve numbered items starting with appointing a product manager, notifying

Aroclor customers, reduce -- number three is reduce an effective control of PCB effluents. Were those twelve points that are contained in the minutes of this corporate development committee implemented?

A. Yes, most of them were fully implemented. A couple were partially implemented. Because of limitations in the science at the time, they weren't able to be fully implemented. But almost all of them were implemented --

Q. The ones that were implemented, were they implemented successfully?

A. Yes, they were.

Q. I notice that document --

A. Well, I say that. In fact, if you look at number six, introduce to market replacement products for Aroclor 1254 and 60. We undertook research to try to come up with alternative transformer fluids. That's basically what they were used for. And that wasn't ultimately

successful, but we did undertake efforts to implement that.

Q. And this was -- First page, please. I believe according to the front page this report was made or minutes were taken on November 17th of 1969?

A. Yes.

Q. So Monsanto undertook all of these before there ever was an Environmental Protection Agency?

A. Well, we certainly implemented the plans and initiated the activities that would address those, yes.

Q. Was there any similar plan formulated that dealt just with the Anniston plant?

A. Well, I don't remember. The Anniston plant, as well as our other manufacturing plant, had to deal specifically with these recommendations. So, you know, Anniston did take certain

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steps to document their compliance with this overall corporate plan. Yes.
Q. I want to show you Defendants' Exhibit 020402B

53. I think this may be in evidence also. I'll ask you if you recognize that as an Anniston Aroclor paper.
A. Yes, I do. This is an April of 1971 document which basically summarizes, from an engineering point of view at least, activities that the Anniston plant either had undertaken or was undertaking.
Q. Could we see page two of that, please. Bring it all I guess to where it is legible. These appear to be various steps that are going to be taken around Anniston to reduce Aroclor losses?
A. Yes. These were steps that were initiated very quickly to reduce those losses, correct.
Q. Without going through what was done with each one, were most of those or all of those undertaken?
A. Yes. I think almost all of them were undertaken, or at least research was initiated to see if it could be 020402B

undertaken prior to when the plant was closed in 1971.
Q. So this was only actually a few months before the Aroclor plant actually closed?
A. Yes, that's correct, yes.
MR. FORD: Your Honor, we would offer Defendants' Exhibit 874 and 53 if we haven't already. And I'm not sure about 1052.
THE COURT: Not sure you are offering it?
MR. FORD: I'm not whether it has been offered or not. Yes, I believe it has.
THE COURT: That is the photo?
MR. FORD: Yes, sir.
THE COURT: It is admitted.
(Whereupon Defendants' Exhibits 53 and 1052 C were offered and admitted into evidence.)
THE COURT: Let's go ahead and 020402B

recess for lunch. We'll be in recess until 1:00.
(Jury not present.)
THE COURT: Concerning our gag order, I'm perfectly willing

to leave it in place, but looking at the internet this weekend, this is the first time I've ever pulled up Solutia.com and Monsanto.com.

I notice that Solutia.com, which is the website for Solutia Company, Incorporated, whatever the appropriate complete name of Solutia is -- it is the website for the company. And the company has a specific website simply for the Anniston plant, which includes letters to the editor that have been written by Dr. Kaley as well as a

complete rundown of the PCB case. Let's see, "A Message from the Site Manager, David Cain," which goes into basically Monsanto's view or Solutia's view of this case and its actions and touches on matters that have been reported in the press.

It gives -- "Solutia Addresses Environmental Issues" and gives a list of remediation activities; "Setting the Record Straight," which is a letter to the editor written May 31st of 2000 to Ms. Katrina vanden Heuvel, editor of The Nation; a letter written June 8, 2000, to Mr. Alan Rusbridger of The Guardian in London, England, written again by Dr. Kaley; a letter

on June 23rd of 2000 to the editor of U.S. News and World Report; includes a letter to the editor written to the Washington Post dated January 3rd of 2002; includes a letter to the editor -- and that was written by Dr. Kaley.

But it also includes, and I don't think I printed them out, but includes a letter to the editor written to The Anniston Star, also includes a letter to the

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editor written to the Birmingham News, both of which were dated January 3rd or after of 2002 but before the litigation started in this case, even though they may not have been printed, if printed at all, until after

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this litigation started.

There is also a letter to the editor written to the St. Louis newspaper. I did not print that one out, but they were all the same letter that I have here written to the Washington Post.

It also gives a breakdown, "Abernathy versus Monsanto Company, Circuit Court of Etowah County, Alabama," and goes into the background, goes into Solutia's position. That is a two-page document.

It also goes into "Questions and Answers about our Anniston Plant," which is a five-page document when it is printed out. It goes into Solutia's commitments.

It goes in -- A

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separate click of the mouse goes into the history of PCB manufacture in Anniston.

The Court considers this a daily news conference -- a daily press release, rather, not a news conference, but a daily press release on behalf of Solutia to maintain this on its website.

It is not the same as a news report which is reported one day and then you don't see it again. It is not the same as a newspaper report where you have the newspaper that one day and then the next day it is not there.

Granted, anyone who chooses to do so can go to a library, go to the newspaper, purchase a backdated copy,

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can go to the library wherever these newspapers are kept and can go back and review that article.

However, what Solutia is choosing to do is to continue each day to provide statements to the press, statements to the public, statements to its shareholders, statements to whoever wants to get on this website and look at what Solutia has requested this Court not to allow anyone in this case to do.

I'm telling you this right here at noon so that during lunch you can make a phone call and stop this practice and have it removed.

MR. WHITE: Yes, sir.

THE COURT: At 12:01 a.m. I'm

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going to check it at midnight tonight. 12:01 a.m. if it is still there, I'm removing the gag order that was requested by the parties in this case and anybody can talk about whatever they want to. Okay.

MR. WHITE: Yes, sir.

MR. PRATER: Yes, sir.

THE COURT: You have until midnight to remove it.

While we are at it, I also pulled up Monsanto.com. It is clear to this Court that the present Monsanto Corporation is the Monsanto Corporation that has been in existence for a hundred years and would therefore have possible liability and exposure in this case.

Granted Monsanto in -- Let's see. It goes from the

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beginnings, 1901 on up through 2002. I don't know how many pages this is, because I printed it off in each section. But it gives a history of the Monsanto Corporation.

And yes, back in 1997 it did spin off its chemical

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industry or least a portion of it and named it Solutia, Incorporated. Let's see. Monsanto spins off chemicals businesses as Solutia, Incorporated, to focus on life sciences.

Then, yes, later on Monsanto and Pharmacia and Upjohn completed a merger. But this Monsanto Corporation that began in the year 1901 as Monsanto Chemical Works in St. Louis, Missouri, is

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obviously the same Monsanto Corporation that merged with Pharmacia and Upjohn. And it simply states that Pharmacia owns I believe an eighty-five percent controlling interest of Monsanto. But still Monsanto is a separate entity, according to the documents printed off Monsanto.com, which is maintained by Monsanto Company.

So it looks like we do have Monsanto, Solutia, and Pharmacia all involved in this case. And there should be no question as to whether or not this present day Monsanto is the same Monsanto that operated in Anniston for all these years. Any questions or comments on

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that?

MR. WHITE: Did you see anything in the Monsanto information that caused you concern as far as information or reference to the trial?

THE COURT: No, I did not.

MR. WHITE: All right, sir.

THE COURT: It appears to all be on the Solutia website.

MR. WHITE: All right.

MR. PRATER: Your Honor, with respect to the Solutia website, so we are sure to comply with Your Honor's wishes, may I have --

THE COURT: But I'm simply going along with your wishes. Your wishes were that nobody be

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allowed to talk to the press. So it is not my wishes. It is your wishes.

MR. PRATER: I just want to make

sure we take off what Your Honor wants us to take off. Is this --

THE COURT: I don't know. Let me see it. No, this is not all of it. I would think, from my recollection -- If you take off anything -- DOWN in the bottom right-hand corner there is a little section that says Anniston plant or information on Anniston plant, and you click it. Now, I don't see anything like that for the Sauget, Illinois, plant or any plant in the world. It's just the Anniston plant. I think if you remove anything related to that click, including that click, you ought to be okay. Thank you.

(Recess at 12:15 p.m.)

AFTERNOON SESSION

(Jury present.)

(All parties present.)

(1:10 p.m.)

THE COURT: Everyone can be seated. Let the record reflect that everyone is back in Court.

Pick up you where you left off?

CROSS-EXAMINATION RESUMED

BY MR. FORD:

Q. Dr. Kaley, I -- something I left out earlier. I meant to take this up when we were talking about this subject. Defendants' Exhibit 1038, which we have in a lot better version than that version you have there, do you recognize that?

A. Yes, I do. That's one of the early stages of the remediation on the south

landfill.

Q. And the south landfill is the one across the highway, across 202, from the plant?

A. Highway 202. You can see the -- the

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upper right-hand corner of the screen. The plant itself would be located on the right.

Q. This black material here, which of the two fabrics is that, please, sir?

A. That's the sixteenth-inch water impermeable plastic cover that was put on the top of the clay cap of the landfill.

Q. What are the zig-zaggy lines on here on that?

A. Those are actually seams. It comes in large rolls, and those are actually seams that are welded in a sense, not metal welds but plastic welds to be sure that there is no leakage of water where the material is seamed together.

Q. Above that is more clay and geotextile --

A. Yeah. The water-permeable layer as well as the layer that conducts the water away from the landfill are on top of that. And then again on top of that is another eighteen inches of clay.

Q. What is this right here (indicating)?

A. That is the upper diversion channel. Looks like there may even be water in it.

Q. Somewhere up here, and takes the water around the landfill --

A. That's correct. So it doesn't run across the actual landfill cells. That's correct.

MR. FORD: We offer 1038, Your Honor.

THE COURT: Admitted.

(Whereupon Defendants' Exhibit 1038 was offered and admitted into evidence.)

Q. I want to go back just a little bit and discuss some earlier testimony and try to clarify some things, Dr. Kaley.

First of all, there has been a good bit of testimony about a rotten egg smell, the way most people describe it, some terrible smell in the old days, that came from the Monsanto plant area.

Is that sort of smell characteristic of the smell that PCBs make?

A. No. PCBs have very little smell at all. To the extent they do have a smell, it's been described as medicinal. I think that's as good as any. It's kind of a chemical smell. It's not that rotten egg smell that has been described.

Q. What would that have been?
A. That was probably hydrogen sulphide from the parathion process.
Q. Would the smell from PCBs be likely to spread widely over a neighborhood?
A. No. You can basically open a jar of PCBs and have it right in front of you and barely detect any smell at all.
Q. The next thing, you have read all of the

information about the 1966 investigation into a fish kill that Dr. Ferguson from Mississippi State did, I believe?
A. Yes, I have.
Q. Are you familiar with that?
A. Yes, I am.
Q. The descriptions that Dr. Ferguson gave of certain fish who were losing their skin or something like that, is that characteristic of the way PCBs react in fish?
A. No. PCBs would not have that effect on fish. PCBs are an oily kind of material that wouldn't cause any acute reaction like that on fish.
Q. We have heard a lot about Snow Creek. Have you been up and down Snow Creek in your work with Monsanto?
A. Yes, sir.
Q. Describe for the jury basically what Snow Creek looks like in its course.
A. Well, basically Snow Creek is a municipal -- I would call it a storm

water ditch or creek or something. A lot of it doesn't have water in it part of the time. Much of it through Anniston itself is a concrete liner at the bottom. And so it's not really a flowing waterway in the sense if you think of a creek. It's really primarily there as a drainage for storm water, for not only west Anniston but the rest of Anniston also. It flows through the downtown area through a lot of industrialized areas.
Q. There has also been testimony about the -- I know we touched on this earlier -- about anywhere from five million to ten million pounds of PCBs being in these landfills that we described.
Is it actually PCBs that's in that landfill?
A. No. There are a number of materials in that landfill. Most of the way I think that it's been described is PCB wastes, which are actually the still bottoms

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from the PCB manufacturing process.
Those were very thick, almost tar-like, asphalt-like materials that were placed in drums and placed in the landfill. So that accounts for the bulk of the PCB materials. And also, as I mentioned earlier, I think the PCB plant itself is -- has been put in that landfill, was put in there in 1972. And the weight of that plant itself is included in those numbers.

Q. When we talk about still bottoms, that's s-t-i-l-l?

A. Yes.

Q. And what -- Does that word come from distillation?

A. Yes, exactly. It's basically a process where you put a liquid under -- heat under a liquid, and the more volatile -- the things that evaporate easier, are carried over the process and collected in what's left in the bottom of that pot, are the still bottoms from the

distillation process. Exactly.

Q. Similar to the old bootleggers whiskey still, as we say around here?

A. It's very similar to that. At the bottom of that still would have been a thickened residue from that process also, yes, very much similar.

Q. Is that what's put in the drums?

A. Yes. The still bottoms were drummed and put in the landfill, yes.

Q. Assuming we dug one up today, what would that material in those drums look like?

A. It would look like asphalt, basically, a very thick or solid material.

Q. Not --

A. Would not be free-flowing. Would not be anything that someone would say, oh, that's PCBs. It would basically look like road tar.

Q. Thank you.
Dr. Ellis testified on Wednesday and stated that the efforts which Monsanto had made at the south landfill, which we saw in the last paragraph, was to put on a useless, permeable geotextile cover, and that's all we did. Is that correct?

A. No. I think we have described several times -- I think he was referring to this porous material. He misunderstood the different layers that we put on the

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landfill.
Q. Is the water discharge and so forth from that landfill monitored now?
A. Yes. As I mentioned, all of the storm water flow from the diversion channels, from the landfills themselves and from that east side cover area are all collected at a single discharge point near Tenth Street now, east of the plant. And that is monitored under ADEM and EPA regulations during storm flow events.
Q. The retention pond that we show, does it stay full? What happens to the water from that?

A. Well, there is water in it, I think, at all times. I don't think I have seen it dry. Basically it's a flow that has a standpipe in it. When the water gets above the standpipe level, it flows also into piping which carries it to that discharge point.

So it goes up and down, whether there is storm water or not. But it's basically there to regulate the amount of water that can get into Snow Creek.
Q. Is that monitored in any way?
A. Well, it's monitored at the discharge point. Again, during storm flow events, samples are collected and PCBs measured in the samplings also. And they have not been detected in recent times.
Q. I think we have covered this also, perhaps, but Dr. Ellis also testified on Wednesday that the only thing Monsanto did to the property -- I'm talking about the east side, north side property that it purchased -- was to knock down

buildings and fencing. Is that true, that that's the only thing Monsanto did?
A. Again, as we discussed today on the properties on the east side, there was -- the grade was leveled in areas where there were high levels of PCBs. Mostly in the ditches themselves, or the former ditches themselves, the impermeable water level -- or water-impermeable layer was placed. And then over the whole area, including the ditches, the marker layer of geotextile was placed, eighteen inches of clay were put on it. And it has been seeded and landscaped to some extent.
Q. Another thing Dr. Ellis said Wednesday was in all this time in Anniston, EPA has done nothing. Is that true?

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A. That's not true. They have been overseeing this process since 1996. In the last couple of years they have undertaken a great deal of sampling on their own accord. We are currently

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under an administrative order, a consent order, with the EPA to do additional residential sampling and to remove soils when they are above a certain level.

Q. Is Monsanto through with what it plans to do in that area?

A. No. We are continuing to work under the terms of that consent order. We have further -- will have further responsibilities once the EPA determines what is called the final remedy, or the final cleanup level for that area. We will then have additional responsibilities.

Q. Based on your involvement in the remediation efforts with the EPA and ADEM in Anniston, will that process result in the EPA setting some absolute removal level or something for properties in Anniston?

A. Yeah. That's what I was addressing in my last answer, yes. Eventually -- The order we are working under now has a

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level which requires us to address certain properties. As the process goes forward, a presumably lower level will be established and then the properties will have to be cleaned up to that level. That is the process we are in right now.

Q. And will Monsanto be the one to clean up those properties?

A. Yes.

Q. What about properties in the area that may have levels below whatever level the EPA eventually sets?

A. I'm sorry. The EPA level is set to address those areas. So if the -- to all areas, to set what they call a risk-based level. And so the levels below that final established level will not require cleanup.

Q. Without the backing or assistance or whatever of EPA, can Monsanto go on to private properties and do remediation work?

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A. Well, under the --

Q. Without the owner's --

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A. Of course, first we would have to have the owner's permission, as we have done throughout this process. Even to sample we have to have the owner's permission to sample the properties. If cleanup is necessary, we have to have permission from the owners to do that also. Even if EPA orders us to do so, we still couldn't do it without the owner's permission.
Q. Have there been disputes from time to time with Monsanto or ADEM or EPA about what should or shouldn't be done?
A. I guess it can be characterized as disputes. There are discussions. I think -- We don't always see exactly eye to eye. But certainly ADEM and EPA have the ultimate deciding authority.
Q. Has Monsanto or Solutia ever been cited or fined by either one of these agencies you are dealing with for its dealings

with PCBs?
A. No. We have not.
Q. Now, I want to look at Defendants' Exhibit 1287. I think this may have been introduced in part in the testimony of Dr. Matson, perhaps, or Dr. Hermanson. I'm not sure which.
Do you recognize that document, Dr. Kaley?
A. Yes, I do. It's a document off the ATSDR, the Agency for Toxic Substances and Disease Registry website.
MR. FORD: We want to offer that, Your Honor, as Defendants' 1287.
THE COURT: Admitted.
(Whereupon Defendants' Exhibit 1287 was offered and admitted into evidence.)
Q. In that document, which I think was shown in part, it lists the top twenty substances as Dr. Matson, I believe, stated. Top twenty hazardous substances

from the CERCLA priority list of hazardous substances.
Do you see that?
A. Yes, I do.
Q. What is CERCLA?
A. CERCLA is better known as Superfund. It's another one of the environmental regulations that the chemical industry has to comply with. I'm not sure I can come up with what the letters stand for. Basically it's the Superfund law.
Q. And if we will -- There are four listed

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down at the bottom of page one, arsenic, lead, mercury, vinyl chloride. If we could go to page three, I believe it is, What is the CERCLA list -- I'm sorry. Page two. Listed PCBs? No? All right. Yes. I'm sorry. You don't have that, do you?

On page two, Dr. Kaley, number five, is polychlorinated biphenyls, PCBs, correct?

A. That's correct. I might also point out,

as -- I believe it was Dr. Matson pointed out number thirteen is Aroclor 1254, and number fourteen is Aroclor 1260, both of which are also PCB products.

Q. If we could go to page three, please, Don. And highlight the part that's already highlighted, please.

Would you read that, please, to the jury, Dr. Kaley?

A. Yes. The statement says, "It should be noted that this priority list is not a list of 'most toxic' substances, but rather a prioritization of substances based on a combination of their frequency, toxicity, and potential for human exposure at NPL sites."

And NPL is the National Priorities List, which is really the list of Superfund sites.

Q. Who owns or controls or manages these Superfund sites?

A. EPA does, yes.

Q. None of the landfills at Monsanto or Solutia are Superfund sites?

A. No. They are not on the list yet.

Q. Let's go down to the next paragraph, if you will and bring that out. Let Dr. Kaley read that for the jury, please.

A. That says, "Thus, it is possible for substances with low toxicity but high NPL frequency of occurrence" -- that means it is on the list a lot -- "and exposure to be on this priority list. The objective of this priority list is to rank substances across all NPL hazardous waste sites to provide guidance in selecting which substances will be the subject of toxicological profiles prepared by ATSDR."

Q. So this list that was offered is actually a list of substances that have a combination of frequency, toxicity, and potential for human exposure at

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Superfund sites?

A. Yes. And really, as it says, the purpose of the list is to prioritize these chemicals for the preparation of what is called tox profiles, toxicological profiles. One of the jobs that ATSDR has is to put out books summarizing all of the toxicity and regulatory and other information on this list of chemicals. And there is such a book for PCBs.

Q. And also, Dr. Kaley, are there presently any -- or have there been in the past -- been any rules or laws or regulations enacted that require that PCB waste of the type that may be in this south landfill, including the old building and so forth, have to be removed and buried elsewhere?

A. No. In fact, most solid PCB wastes, the recommended disposal is disposal in the landfills.

Q. Are there downsides to doing that? Are there dangers that might be associated

with digging up the old landfills?

A. Excuse me. As with any major construction project, there are always construction dangers. There are traffic dangers. And there are a number of materials in those landfills in opening those and subjecting them to construction type activity that always presents some risk.

MR. FORD: We would offer Defendants' Exhibit 1287.

THE COURT: It's admitted.

(Defendants' Exhibit Number 1287 was offered and received as evidence.)

MR. FORD: And I believe that's all. Thank you, Dr. Kaley.

THE COURT: Redirect?

MR. STEWART: Yes, sir.

REDIRECT EXAMINATION

BY MR. STEWART:

Q. Dr. Kaley, you have indicated one of

these exhibits that y'all did some work -- it may be easier for the jury to see that -- to clear that ditch.

MR. STEWART: I think it's 1288. Do you mind if we take a look at 1288 G?

Q. And there is a -- there is a -- I'm

going to give you one of these. You gave it back to me at lunch. But I want you to help me if you would.

There is a ditch that runs along this railroad track.

A. Yes, there is.

Q. And at some point in time it reaches what is known as Snow Creek as a confluence or it flows into Snow Creek?

A. Yes, it does.

Q. Down some railroad track; probably over here on the wall somewhere, if we have our map right?

A. That's correct.

Q. Now, there is some work that y'all did off of this south landfill or over here

on the east side that at some time in the '80s you cleaned up some property over there or cleaned up some tributaries?

A. Yes.

Q. That led away either from the east side of your plant or from the south landfill; is that correct?

A. That's correct. If we are talking about the same project, the '85 proposal and the '89 project. Is that the one you're talking about?

Q. Yes. That's exactly what I'm talking about.

A. Okay. Yes.

Q. And y'all went -- That's where we got involved in the fifteen hundred feet and hundred feet.

Y'all went down here in the ditch, and y'all went down to Snow Creek and took in about a hundred feet of Snow Creek; is that right?

A. Yes. I believe that's correct.

Q. We have previously introduced Plaintiffs' Exhibit 398. Let me make sure I've got one for myself.

And is that the protocol that Jerry Brown sent to Mr. James M. Moore?

And Jerry was from Monsanto, wasn't he?

A. Yes, he was.

Q. And that tells what y'all did at that time, didn't it?

A. I believe that's correct.

Q. And Mr. Brown's proposal, Plaintiffs' Exhibit 139, was entitled the Snow Creek Tributary Sediment Removal. But what we are really talking about is from somewhere over in here and down that Eleventh Street ditch; is that right?

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A. Primarily, yes.
Q. And just a hundred feet -- I'll give y'all the benefit of the doubt -- a hundred feet of Snow Creek?
A. Of Snow Creek itself, that is correct.
Q. Didn't you actually clean that?

A. I believe we did, yes, some portion. I don't know if it was exactly a hundred feet. But I think there was some portion of that collected.
Q. I'm not talking about Snow Creek now. I apologize. I didn't make myself clear. I'm sorry. I do that sometimes.

My wife gets mad at me for using pronouns, and she gets mad at me for talking in riddle sometimes.

But what I'm talking about, did you actually clean that Eleventh Street ditch?
A. Yes. We removed the sediments from that ditch, let the sediments dewater, and then moved those dewatered sediments eventually to the hazardous waste landfill at Emelle, yes.
Q. Why are you having to clean that 11th Street ditch today?
A. Well, I believe there must have been some additional sources of contaminated material that had gotten into there. In

fact -- I don't know exactly --
Q. Wouldn't it seem possible that it came right off this landfill right over here?
A. Based on the soils that we saw in our investigations, no, I don't think so.

We haven't seen PCB sediments with the kind of levels that are in the storm water that could account for those. I do not believe they came from the south landfill, no.
Q. Well, did it come over here from the west landfill?
A. Again, I believe so. I think there may have been materials that were -- there is a portion of the -- on the Monsanto property, some cover tributary that may have been in there. We did not go into that covered tributary in '85.

In retrospect, it appears that might be it. But I don't think anybody knows exactly where it came from.
Q. It came from Monsanto, didn't it?
A. Presumably it came from somewhere on the

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site, yes.
Q. And in the ditch that you had already cleaned up?
A. We removed the sediments from that ditch, yes.
Q. And that would have been sometime between 1988 or '89 and the time that the power company found something over here in 1993?
A. That is correct.
Q. Would it be fair to say that a substantial amount of PCBs were leaching and moving away from this site here in Anniston of yours that caused that to happen and occur?
A. Well, certainly there was some -- there is some source of PCB-impacted sediments into that Eleventh Street ditch that either weren't removed at the time of the '89 removal or that had gotten in there somehow since.
Q. Now, wait just a minute, Mr. Kaley. Are you telling me and the ladies

and gentlemen of the jury and this Court that y'all really didn't do what you told the Attorney General you would do in 1989?
A. No. We did do what we told ADEM we would do in 1989. And that is to remove the sediments from the bottom of that ditch and treat those sediments appropriately for disposal.
Q. So I assume, then -- What were the levels that you found over there in that ditch today? Pretty high, aren't they?
A. Some of them are in the hundreds of parts per million, yes.
Q. Isn't that highly unusual for y'all to find in sediment like that, Dr. Kaley?
A. I would agree that is unusual. I don't really understand how those got there. But we are dealing with those issues.
Q. It means stuff was coming off this landfill like sixty, didn't it?
A. I don't believe it was coming off the landfills, no.

Q. Isn't that what y'all find up there around the Mars Hill church? Didn't you find hugely high levels of PCBs, even higher than those you found in the Eleventh Street ditch?
A. There was one spot behind Mars Hill church on the Monsanto property that had higher levels, yes.
Q. Well, now, Dr. Kaley, that's right over in there, isn't it?

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A. Generally that area, yes.
Q. Right around that retention pond?
A. Where the retention pond now is, yes.
Q. It's just to the west of it, isn't it?
A. Well, the retention pond wasn't there when the creek was there.
Q. I understand that. And I'm sorry.
A. Yes. I'm sorry. I'm agreeing with you. Yes, that was the general area.
Q. What were those levels that you found over there?
A. Our best understanding is that must have been part of the toe of the landfill

that when Highway 202 was cut into there that that must have been materials that were part of the toe of that landfill.
Q. Now, Dr. Kaley, didn't y'all tell the highway department when that landfill was cut into, when 202 was built, that y'all moved and put that stuff over in these cells over here?
A. Yes. That's exactly what we did.
Q. Didn't y'all tell them that it was parathion? You didn't tell them it was PCBs, did you?
A. I don't know if we told them specifically what it was. We told them that that was the toe of the landfill and those materials needed to be moved up. I don't know specifically wheter the materials were characterized or not.
Q. I want to be clear, now. You're telling me that y'all told them that you were removing it; is that correct?
A. We told them that the toe of the landfill -- there was materials there

that needed to be moved so the highway could go through there, and we moved them, yeah.
Q. And it's your best recollection as you sit here today and the person who is responsible for this particular kind of activity at Monsanto that y'all really didn't tell them what you were removing, the parathion or --
A. I didn't say that. I said I don't know what was told them about the characteristics of the material that was being moved.
Q. Now, I want to ask you, Dr. Kaley, if I possibly can, if we can take a look at Defendants' Exhibit 874. Do you have that up there?
A. Is that the one that Mr. Ford gave me?
Q. I'm sorry. It's Defendants' Exhibit 874.

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A. Yes. I have that.
Q. And it appears that on page two there is a gap in there.

A. Yes.
Q. Do you know what was taken out of there?
A. I don't specifically.
Q. Sir?
A. I don't. My guess would be it related not to PCBs. I don't know that specifically, though.

MR. STEWART: Do we have Exhibit 139? Could we take a look at the second page? Now, could you pull up the legal aspects there?

Q. Now, Dr. Kaley, that deals with PCBs, doesn't it?
A. Yes. It appears to.
Q. And this has to do with the legal aspects of the problem that existed at the Anniston plant, didn't it?
A. It appears to be so, yes.
Q. That doesn't show up on the minutes of the meeting of the Corporate Development Committee document, Defendants' Exhibit 874, that you gave to us?

A. No. The copy that I have got, no.
Q. It does deal with PCBs?
A. Yes, it does.
Q. Now, let's go to this landfill.

MR. STEWART: Pull that back up again. I think it's either H or G, Don.

Q. Now, y'all built a berm, did you not, around that landfill?
A. Well, that upper -- Whatever they call it. The upper diversion channel.
Q. The upper diversion channel?
A. I mean, it isn't around the landfill. It's across the upper boundary.
Q. Across the upper landfill.

MR. STEWART: The picture of that -- Do you have Exhibit 1038 to show the ladies and gentlemen of the jury how that was built. Could you pull that up, please, for us, sir?

Q. So this is the work that was being done on the landfill?

A. That's correct.
Q. Now, do you know Jerry Brown?
A. I do know Mr. Brown, yes.
Q. And does he still work for Monsanto?

A. He's retired. I believe he works on a consulting basis occasionally.
Q. Did he work for Monsanto at the Anniston plant when this work started right here?
A. I believe he did, yes.
Q. Would you say that he would know why y'all did this right here?
A. He wasn't directly involved in the project at that time. So he may or may not have known.
Q. Are you saying that if he said that it was for parathion and not PCBs he wouldn't know what he was talking about?
A. I would say he was operating under some misinformation, yes. There is parathion in those cells.
Q. The cells under this?
A. Yes. But the primary reason for the

covering of that landfill was the presence of PCB-impacted soils on that part of the landfill.
Q. So there were PCBs on top of this parathion?
A. There were low levels of PCBs on the soil, yes.
Q. What do you consider to be low levels?
A. A few parts per million.
Q. How much did that cost right there to build?
A. I don't know specifically.
Q. A lot of money, wasn't it?
A. It was expensive, yes.
Q. And y'all did that for low levels of PCBs on your plant site?
A. The purpose of these interim measures has always been to remove the source -- the potential source of PCBs to storm water which were sufficient levels of PCBs, yes.
Q. Now, there were PCBs, were there not, buried over in here?

A. There are PCBs buried over there. But there were no PCBs on surface sediments in that area of the landfill.
Q. Now, can you tell the ladies and gentlemen of the jury what is at the bottom of those landfills where the PCBs are buried? Doesn't it go down to bedrock?
A. Clay. I think it's clay primarily. I don't know whether it goes down to bedrock or not.
Q. Didn't there used to be iron ore pits over there?
A. My understanding is there were some iron ore pits over there, yes.

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Q. And y'all used that as part of your landfill at some point in time?
A. In the earlier points in time, that's my understanding, yes.
Q. And you all as a result of putting these landfills up there on top of that hill where that bedrock is are finding PCBs in the groundwater monitoring wells even

today, aren't you?
A. There are PCBs measured in some of the wells for unfiltered samples. But the PCBs are removed from that well water when the samples are filtered to remove the solids.

So the PCBs are not in the groundwater. They are not moving with the groundwater. They are adhering to solids in the groundwater.

But the fact is yes, in some of those wells the unfiltered samples of well water do have trace levels of PCBs.
Q. Dr. Kaley, I heard you. And please forgive me. But I heard you say that they were attached to particles?
A. Yes.
Q. Y'all filter out the particles that have the PCBs on them?
A. Yes.
Q. And then you don't find PCBs in the water?
A. In the water itself, that's correct.

The water is what moves, yes.
Q. But you found the particles with PCBs on them at the bottom of that well, didn't you?
A. That's the problem. We don't know whether it's from the bottom of the well or whether it was contamination from when the well was drilled. And that's why we do those analyses in both ways.
Q. Now, Mr. Branchfield, who is your remediation expert, said -- He's handling the site out there now, isn't he?
A. Yes, he is.

MR. FORD: Your Honor, Mr. Branchfield's testimony is not in evidence.

MR. STEWART: I was just going to ask him if he agrees with it.

MR. FORD: Whether he can challenge him with statements not in evidence. It may not ever be in evidence.

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THE COURT: I'm not sure what the question is yet. I haven't heard a question.

Q. I was just asking you if Mr. Branchfield said that y'all found PCBs in the groundwater montering wells around that landfill on the south side, would you disagree?

A. I did not disagree. I said there were PCBs in some of the groundwater well samples on the unfiltered samples, yes.

Q. And five to ten percent of the time when he said that they filtered the samples they still found PCBs. Would you disagree with that?

A. If that's what he said. He would know the data specifically better than I do. I didn't realize there were those detections.

Q. You also had a Tiger team report from the EPA that indicated, did you not, Dr. Kaley, that the PCBs were found in groundwater wells north of the plant

site?

A. I don't recall that specifically. Again, I'm sure those would have been in unfiltered samples.

MR. STEWART: Could you bring up H again?

Q. Now, that would be somewhere over in this area over here (indicating)?

A. Actually it would be on the other side of the tracks, on the other side of the railroad tracks.

Q. Isn't that the railroad track right there (indicating)?

A. Yes.

Q. So it would be around in there?

A. No. It would be on down on the plant side.

Q. On the plant side?

A. Yes.

Q. They indicated it was --

A. I believe that's correct. I may be mistaken. I believe that's correct. I believe they were on the plant side of

the railroad tracks.

Q. Don't y'all have monitoring wells over there, in the lot over there?

A. I don't believe so. Because the area shown in green is the area where we did remediation. And that was property we purchased after 1995. I do not believe there are monitoring wells over there. I could be mistaken, but I don't believe they were.

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Q. It indicated it possibly came from the south landfill, almost a quarter of a mile away.
A. I don't know if that's what the report says or not. I would not agree with that characterization.
Q. And it indicated that it was around the Jacksonville Fall, which charges Coldwater Spring that feeds the water supply to Anniston. Y'all ought to be concerned about that. Did he indicate that in that Tiger team report?
A. We are aware of the fact. But we are

also aware that the Anniston water supply has been tested for PCBs a number of times and does not have PCBs in it.

MR. STEWART: Now, can you bring up 1038, if you don't mind?

Q. Before y'all built all of this stuff over here and all of this stuff in here and diverted that water like you did, where did that water go that went over that landfill that was contaminated with PCBs?
A. Well, the water -- the water that was tearing over the landfills -- I don't know whether it was or was not contaminated with PCBs. It basically ran into ditches which crossed Highway 202 at various points on along the highway and eventually ran into the ditches in Snow Creek.

And that's exactly the water we tested that found to have trace levels of PCBs in it. That's why we did all of that, because that storm water did have

trace levels of PCBs in it.
Q. Maybe I'm just a country boy from Munford, Mr. Kaley. But if these caps and things work, why did you have to divert the water around?
A. That water diversion was done before the caps were placed on the landfills.
Q. Just to prevent it from --
A. From running across the landfills while we were doing that work, yes.
Q. Now, Dr. Kaley, let me show you what we have previously marked -- Let me get my glasses so I can see. And I apologize -- previously marked as Plaintiffs' Exhibit 420-13.

Now, this is that south landfill area before 202 was constructed, isn't it? Can you see that?
A. Yes. I'm trying -- I'm trying to orient myself.

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Q. Here is the plant site (indicating)?
A. Yes.
Q. And then there is the south landfill

area.
That was an open pit over there where people just took PCBs and dumped them in there. They dumped them in there?
A. In 1969, when that picture was taken, my understanding is that those cells were open, yes.
Q. Do you know the term redeposit? Do you know what that means?
A. Not necessarily, no. Well, deposit again. But I don't know specifically what you're referring to.
Q. Well, do PCBs attach to soil?
A. Yes, they do.
Q. And does that soil get picked up and blown around the community?
A. There is a potential for PCB dust to be stirred up sometimes, yes.
Q. Did you use dirt around that open landfill, Dr. Kaley, even up until the time that it was closed in '89?
A. Did we use dirt around it?

Q. Yeah.
A. I don't understand what you mean.
Q. Was there dirt around the landfill for the PCBs to attach to and then redeposit?
A. No. The PCBs that were put in the landfill were sealed in drums. I think we've talked about that earlier. So the potential for PCBs actually getting on that dirt was minimal.
Q. There was some testimony that at some point in time y'all began to take the PCB still bottoms and heat them up, put them in skipjacks and take them up there to the landfill. What is that? What's a skipjack?
A. I'm not aware -- I don't know.
Q. That wouldn't be a barrel, would it?
A. I don't know.
Q. Now, when y'all first got on this site at the time the Alabama Power Company found the PCBs in 1993, y'all were actually moving some material off the

west landfill to Emelle, weren't you?
A. At the time of that discovery? I'm not aware of that.
Q. Is it your testimony here today that after that discovery and after y'all

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took that property back from the Alabama Power Company that you all did not take some roughly four hundred thousand pounds of PCBs and truck it to Emelle?
A. I'm sorry. I misunderstood your question. I thought you said at the time of the discovery were we taking material from the -- yes.
Q. And have it disposed.
A. After the discovery was made and we began some of our cleanup on that site, we did take some material to Emelle, yes.
Q. Now, that's because you all did not have that particular site regulated by RCRA, did you?
A. I believe that is correct. Well, I don't know that that's the cause. I

believe it is correct that at that point in time that was not one of the RCRA-regulated sites on our property.
Q. So you had to take it to Emelle?
A. No. We did not have to take it to Emelle. We were doing it at that time as part of the response. I don't know if there was any regulatory requirement to take it to Emelle.
Q. And you later made some adjustment in your permit and got this property that you took back to the power company grandfathered into your RCRA permit; isn't that correct?
A. I don't know exactly the terms. I know at some point an agreement was made that the materials that were not previously under the cover were moved to an area where when the cover was constructed they would be under those covers, yes.
Q. And until y'all got that approval, you had spent the money to take it -- take it to Emelle?

A. I don't know the exact timing. But certainly there were materials taken to Emelle, yes.
Q. Who is Mr. Robert Jones?
A. He's an employee at our Solutia plant.
Q. And would he have been the environmental compliance officer at the Solutia plant at that time?
A. I believe that's correct, yes.
Q. Now, isn't it a fact, Dr. Kaley, that Monsanto knew early on the best process to use to get rid of PCBs?
A. I believe we have been aware of a variety of processes for PCBs. I don't know specifically what you're

addressing.
Q. Didn't you all say that incineration was the best process, that you shouldn't bury them near a water supply?
A. For liquid PCBs, that is the correct understanding.
Q. Let me show you what we will mark as Plaintiffs' Exhibit 252.

(Plaintiffs' Exhibit Number 252 was marked for identification.)

Q. I will ask you if in fact that's what that refers to. It's a letter dated July the 22nd, 1971, from Mr. Benignus to C. L. Curtis.
A. Okay.
Q. Y'all had an incinerator, did you not, at Krummrich?
A. At about this time we did have an incinerator at Krummrich. I don't know exactly when it went in. But we did at some point in time -- And it says, "As we now have an incinerator." So we must have had it at that point in time at Krummrich, that's correct.
Q. And you were taking product back from the customers and you were incinerating that product and disposing of it, were you not?
A. Some of that was true and done, yes.
Q. And that wasn't a real new technology.

That was something y'all knew how to do before that time, didn't you?
A. No. To have an incinerator which actually could be demonstrated to destroy PCBs was a pretty far step ahead at the time, yes.
Q. And y'all knew at the time that you constructed this landfill or this landfill was closed up there on the site in Anniston that there were better ways to dispose of PCBs than what you all had done?
A. Well, again, I think we need to understand that there are PCBs and there is PCB waste.

This material is talking about scrap askarel material. It's talking about material -- askarel is a term that's used to describe electrical fluids, transformer fluids and capacitor fluids. So what they're talking about is free-flowing liquid Aroclor materials.

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By '71 we did have an incinerator, and it was understood that incineration was appropriate for those kinds of materials.

Again, this is written right after -- just as the Anniston plant was closing.

The materials that were disposed in the Anniston landfill were still bottom waste, solid materials in drums as -- and eventually the plan itself.

Q. Let me show you, if I can, Plaintiffs' Exhibit 376. I will ask you if in fact y'all knew that there were better ways to dispose of the waste than what you had done up on top of that hill up there on the south landfill and over there on that property that y'all deeded to the Alabama Power Company.

Q. Have you had an opportunity to look at that?

A. I have looked at it briefly, yes.

Q. And that's your worldwide environmental

protection guideline number two?

A. Yes, from 1981, right.

Q. Telling you how to dispose of hazardous waste and how to manage the waste?

A. Well, it talks about a general order of preference. It lists some different alternatives in order of preference.

MR. STEWART: We offer that into evidence, Judge.

THE COURT: It's admitted.

(Plaintiffs' Exhibit Number 376 was offered and received in evidence.)

MR. STEWART: Will you pull that up? Pull up the first paragraph, please.

Q. It says "established" in that second sentence, "Monsanto monitored and/or controlled" -- "all solid waste."

A. Yes.

Q. And then it lists a series of one, two, three, four, five that y'all had in the next paragraph.

MR. STEWART: Can you pull up the next paragraph, beginning with the general order of preference?

Q. It says, "Biological or chemical is the first in the general order of preference of treatment and disposal of hazardous waste pending completion." It says, "For corporate-wide hazardous waste management study that was going on at

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the time. And thermal destruction or separation of hazardous constituence in the waste with energy or raw material." Would that be incineration?

A. It would be for materials that are appropriate to that approach. But I would say the PCB solid wastes were not at the time and still not are appropriately treated in that manner. This is ten years after we quit making PCBs in Anniston.

Q. And then it says, "Deep well disposal limited to individual process waste

streams approved by the EPC."

A. Yes.

Q. And then ocean disposal?

A. Yes.

Q. And then what is last?

A. Land disposal of waste not amenable to practical alternatives.

Q. And certainly land disposal of wastes was not the only alternative y'all had for the PCB waste that you generated. You had regulated landfills that you could have taken that to other than the landfill that y'all put it in up there on the side of that mountain that had as its bottom just bedrock?

A. Well, I would say two things to that.

Number one, I would say that of all of those materials listed I know today of none of those approaches that would be appropriate for PCB waste, although today there are incinerators which can handle solid PCBs.

At the time that we were making

PCBs in Anniston and even at the time this memo was written there were really very few incinerators that could handle solid PCBs or PCBs in a solid form.

Ocean disposal certainly was not appropriate. Deep well disposal is for liquids. And even today there are no treatments to render those wastes, I would say, to innocuous materials; at least none that would be practical.

I would also say that if you go down one paragraph it says that another order of preference for dealing with those wastes is Monsanto owned and operated facilities at which only our wastes would be treated to store and dispose.

So even ten years after the fact I think the fact that we had those

landfills and were using them was an appropriate way to dispose of those wastes.

Q. So you would disagree with Mr. Cheever

when he said in his deposition that there was off-the-shelf technology at the time y'all were disposing of this solid waste that would have allowed you to dispose of it even by incineration?

A. I would disagree with that, yes.

MR. STEWART: I believe that's all, Judge.

THE COURT: Any further questions?

RECROSS EXAMINATION

BY MR. FORD:

Q. Dr. Kaley, the exhibit that is -- was just introduced, Plaintiffs' Exhibit 376 --

A. Yes.

Q. What's the date of that?

A. It's october of 1981.

Q. By the time that was generated, isn't it a fact that all the PCBs that had ever been made in Anniston and all the waste generated from them had basically already been buried in the landfills?

A. Well, the wastes that were generated in the plant were buried in the landfill. The PCBs that were manufactured --

Q. The wastes, right.

A. -- they were not buried in the landfill, no.

MR. FORD: All right. Thank you. That's all.

MR. STEWART: That's all I have got, Judge.

THE COURT: Thank you.

THE WITNESS: You're welcome.

THE COURT: Ladies and gentlemen, we will be in recess until nine o'clock tomorrow morning. Does anybody have a problem with nine in the morning? We will be in recess until nine tomorrow morning. Thank you.

(Jury not present.)

(EXAMINATION

BY THE COURT:

Q. Mr. Kaley, I have got just a couple more questions I need to ask. I certainly needed to let the jury get out.

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First of all, I know you responded to Mr. Stewart's direct examination at one point that you don't know the cost associated with any of the remediation efforts.

A. I know the overall cost associated with it. I don't know the specific breakdowns.

Q. I have seen and I have heard and I have read that those costs were around forty million dollars.

A. To date that is about correct, yes.

Q. And I believe you testified on cross that you don't know the exact costs for -- I believe that was associated with Defendants' Exhibit 1038, the south landfill.

A. I don't know that specifically. All I know is the aggregate.

Q. Who would know the cost, the overall cost, and who would have hard copies of the receipts for what Monsanto has spent on remediation efforts so far?

A. Our remediation team should have that information.

Q. What are their names?

A. Craig Branchfield is the remediation manager right now. He should be able to put that information together.

Q. Craig Branchfield?

A. Branchfield.

Q. He would have all that information?

A. I believe that's correct, yes.

Q. Now, from what I understand, the ditch that was constructed above the south landfill --

A. Yes.

Q. That was constructed before the work on the landfill was done?

A. That's correct.

Q. So it's basically useless now?

A. No. It still prevents -- What it does

now is protecting the integrity of those covers by keeping all that sheet flow from coming across the landfills.

We still have covers on those landfills, so it's protecting that water from sweeping over those landfills. And we're diverting it around it. So there is no tendency to erode those covers -- that clay cover off the landfill.

THE COURT: That's all.

MR. STEWART: Judge, if I could check with George. There are a couple of things that I don't know whether I offered

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or not. I want to make sure that I did.

MR. FORD: Judge, we may have one matter.

MR. STEWART: George, could I call these off and make sure they are admitted?

MR. FORD: Sure.

MR. PECK: I guess I'm the keeper

of the book.

MR. STEWART: Plaintiffs' Exhibit 139, 542, 278, 404, 457, 458, 252, and 376.

THE COURT: They are admitted.

(Plaintiffs' Exhibits Numbers 139, 542, 278, 404, 457, 458, 252, and 376 were offered and admitted into evidence.)

THE COURT: What else did we need to take up?

MR. WHITE: We want to make an offer of proof.

These are some letters which did come up earlier, Your Honor. But I think it was for the Plaintiffs.

Ms. Hutchinson. There might be one more that would relate to efforts to -- And a couple of them are not Plaintiffs in this phase.

It's for purposes of the record.

THE COURT: Well, then, let's don't admit them if they're not Plaintiffs in this phase.

MR. WHITE: Well, what I'm saying is that it's one letter that relates to more than one plaintiff.

We would just offer Defendants' Exhibit Number 24, Defendants' Exhibit Number 1006. Not 1006. 1069. And then -- We'll put stickers on them. I have multiple copies here. And Defendants' Exhibits 4000 and 4001.

And these are all letters dealing with efforts and requests by Monsanto in conjunction with EPA to remediate certain properties.

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THE COURT: Have y'all tried to get into this?
MR. WHITE: Yes, sir. With Ms. Hutchinson.
We had -- This is where we had written -- because her property was above the EPA trigger level.
THE COURT: Wait a minute, now. You're talking about when you had written.
MR. WHITE: Yes, sir.
THE COURT: I believe I did keep Monsanto letters out. But I don't remember seeing EPA letters.
MR. PECK: I actually think that when I was doing Dr. Ellis we admitted 1069 and 1224.
MR. WHITE: I believe so.
MR. PECK: I believe you allowed me to go into that with Dr. Ellis.

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MR. WHITE: And this 4000 and 4001 are letters which -- This is what I think we addressed earlier.
MR. STEWART: Could I see those since you're offering the exhibits?
MR. WHITE: Where we were asking permission to go on, and then Mr. Stewart's response.
MR. STEWART: Judge, I would object to the introduction of these things in an effort to settle basically or resolve an aspect of this suit.
THE COURT: Well, I'm certainly not going to allow Defendants' Exhibit number 4000. That's a letter from Lightfoot, Franklin, and White. And I'm not going to allow Defendants' Exhibit 4001, a letter from Donald

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Stewart.
It's not a letter from EPA or anyone else at all. So this Court considers it, yes, settlement negotiations in this case, which is kind of hard to believe because there haven't been any in this case.

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MR. WHITE: No, sir. Just so you will understand, it is our position that these offers were not made in connection with any settlement offer to Ms. Hutchinson or the other Plaintiffs.
THE COURT: But those weren't made to them either.
Again, I have allowed in the letter from EPA that talks about remediation of Ms. Hutchinson's property or someone else's -- one of the

other Plaintiffs' property.
MR. PECK: It was Ms. Hutchinson.
MR. WHITE: For purposes -- Overruled, then, as I understand.
THE COURT: Yeah. I overruled. They're not in.
MR. WHITE: Well, just for purposes of the record where do I put them, though, since I offered them.
THE COURT: I don't think they're in the record.
MR. WHITE: Well, don't they need to be -- any exhibits that's not offered --
THE COURT: Why don't we just let every piece of discovery that's been exchanged in this case in if that's what we're going to do.
So give them back to him.

MR. WHITE: Okay.
THE COURT: I'm telling you I have allowed in --
MR. WHITE: I understand the Court's ruling. And I'm not giving them to the court reporter for purposes of saying they're in evidence. I understand your ruling here.
But all we did was make an offer of proof. And I thought in connection with an offer of proof that the exhibits --
THE COURT: Well, I'm striking your offer of proof.
MR. WHITE: All right, sir.
THE COURT: We have gone over

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this. I have allowed into evidence the letter from EPA that deals with exactly the same thing you want to make

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an offer of proof about.

MR. WHITE: All right, sir.

THE COURT: Anything else?

MR. WHITE: No, sir.

MR. PECK: I hesitate to ask. But shall we take up the Maloy issue in the morning since Your Honor is still considering that?

THE COURT: Yeah. I'm still going to consider it tonight. But assume I'm letting it in.

MR. PECK: I have assumed that for purposes of my preparation.

MR. WHITE: Judge, this doesn't need to be on the record unless you want it.

You had asked that we have someone come down here to talk to you. And I was just going to let you know that I have got someone that will be here at the close of

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Court tomorrow.

THE COURT: Good. I was going to inquire this morning. I thought no; I'm going to see if they are going to bring it up themselves or if they thought I was serious.

MR. WHITE: All right, sir.

THE COURT: There is one more matter I want to discuss.

I have the letter here talking about the efforts of preparing the remainder of this case.

It says, "Noticing the depositions of Phase Two Plaintiffs is scheduled to begin Thursday, February the 6th."

Who's the first Plaintiffs' deposition that is going to be taken Thursday?

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MR. WHITE: I don't know. I was on the phone over lunch with Eddie Newsom, who is spearheading that. And he

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was, along with others, putting together a list and was going to get them to Donald.

MR. STEWART: Judge, we have three lawyers who are dedicated to -- who are assigned to doing nothing but that.

MR. WHITE: Same here.

THE COURT: Okay. Then I should know names tomorrow and dates and times.

MR. WHITE: All right.

MR. STEWART: I will make sure you have dates, times, and names.

THE COURT: Thank you.

(Adjournment at 2:05 p.m.)

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