STATE OF ALABAMA

IN THE CIRCUIT COURT OF CALHOUN COUNTY

BILLY R. NELSON, et al.,

Plaintiffs,

versus

CIVIL ACTION NUMBER

CV-99-502

MONSANTO COMPANY, n/k/a PHARMACIA CORPORATION, a Delaware Corporation, SOLUTIA, INC., a Delaware Corporation, and BLAKE HAMILTON,

Defendants.

_____/

DEPOSITION OF GERALD MILLER

The deposition of GERALD MILLER was taken before Deborah Salers Garrett, Certified Shorthand Reporter, Registered Professional Reporter, as Commissioner, commencing at 10:45 a.m. on May 18, 2001, by the Plaintiffs, at the law offices of Lightfoot, Franklin & White, Birmingham, Alabama, pursuant to the stipulations set forth herein.

Regional Reporting Service, Inc.
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A P P E A R A N C E S

For the Plaintiffs:

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For the Defendant:

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I N D E X

E X A M I N A T I O N S

No exhibits were marked for identification, offered or attached as exhibits hereto.

S T I P U L A T I O N S

IT IS STIPULATED AND AGREED by the parties, through their respective counsel, that the deposition of GERALD MILLER may be taken before Deborah Salers Garrett, CSR, RPR, as Commissioner and Notary Public, Alabama at Large, at Birmingham, Alabama, on May 18, 2001, at 10:45 a.m.

IT IS STIPULATED AND AGREED that the signature to and reading of the deposition by the witness is waived, the deposition to have the same force and effect as if full compliance were had with all laws and rules of Court relating to the taking of depositions.

IT IS STIPULATED AND AGREED that it shall not be necessary for any objections to be made by counsel to any questions except as to form or leading questions and that counsel may make objections and assign grounds at the time of trial or at the time said deposition is offered in evidence or prior thereto.

IT IS STIPULATED AND AGREED that notice of filing by the Commissioner is waived.

STATE OF ALABAMA, BIRMINGHAM, MAY 18, 2001

GERALD MILLER,

after having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. STEWART:

Q. State your name, please, sir.

A. Gerald W. Miller.

Q. And Mr. Miller, can you just give me a brief idea of your educational background?

A. I have two degrees from Mississippi State University, a BS in chemistry and a master's degree in chemistry.

Q. And what about your work history? Can you give me some idea of that?

A. Immediately after the BS degree, I worked for a company called Baroid in Houston, Texas, for about a year and a half. I went back and finished the master's degree and accepted employment

with a company called Monsanto Company in Anniston, Alabama. I worked there about seven or eight years. I started my own business, and I have been self-employed since.

Q. And your business has to do with analysis of soil samples and things like that?

A. One of my businesses does.

Q. What's the name of that business?

A. Guardian Systems.

Q. What are some of the things you do at Guardian Systems?

A. Just commercial analytical chemistry on demand for various clients.

Q. Would that be manufacturers of products or soil analysis from time to time?

A. We have done soil analysis.

Q. And have you worked with PCBs at any point in time while you were at Guardian?

A. Yes.

Q. Okay. Can you tell us those clients you

have done work for in the PCB area while you were at Guardian?

A. No, sir.

Q. Why is that, because of the --

A. Because we don't divulge what we do for our clients or who they are.

Q. But you have done PCB work?

A. Yes.

Q. What kinds of work have you done?

A. Analysis.

Q. Would that be soil analysis?

A. Could be.

Q. Water?

A. Could be.

Q. Air?

A. Don't remember any air analysis.

Q. Have you done any work for Monsanto as Guardian Systems with PCBs?

A. No.

Q. Have you done any work for individuals or companies that had actions against Monsanto in connection with PCB contamination in Anniston?

A. Not to my knowledge.
Q. Was that PCB work that you did for manufacturers or people who produced products that used PCBs, or was it for persons who owned property that might have been affected by PCBs?
A. I don't know.
Q. Who would have done that work in your company, somebody other than you?
A. Yes.
Q. Who would that have been?
A. Somebody in the laboratory group, in the organic analysis group.
Q. Okay. Who more than likely would have done that work?
A. It would have been done under the direction of the laboratory manager, Jerry Horncastle.
Q. Can you give me a time frame of when that was done?
A. Various points in time over the last ten or fifteen years, twenty years.
Q. All right. Can you give me an idea --

I'm not asking for the name of the business, but the nature of the business, the reason they made an inquiry to you about PCBs.

A. Generally our customers bring samples to us and request what analyses they would like to have done. Most frequently we have no idea why they want them done.

Q. When you say samples, you are talking about soil samples or water samples?

A. Soil, water, water or soil.

Q. So typically what you have done for those customers where PCBs were involved is analyze water or soil to determine the levels of PCBs in the soil?

A. That would be correct.

Q. What processes do you use to analyze that?

A. Gas chromatography.

Q. How long have you used that gas chromatography at Guardian to analyze that?

A. Probably started in the late '70s, early

'80s.

Q. Did you use -- Did you have anything else to measure or make a definitive measure of the presence of PCBs in the soil or water before that time --

MR. COX: Object to the form.

Q. -- before you started using that gas chromatography?

A. Not that I'm aware of.

Q. Mr. Miller, when you went to work with the Monsanto plant in Anniston, what did you go to work doing?

A. Chemist in the laboratory.

Q. As a chemist in the laboratory, did you have any part to play at that time in -- By the way, when was that? You may have given me the date.

A. '64 or '65.

Q. Did you deal specifically with product at that time? Is that what you were testing in '64 and '65?

A. Yeah.

Q. Were you testing the PCBs or Aroclor

products at that time?
A. I was involved with it, yes.
Q. And what tests were you performing on that product at that time? What were you looking for?
A. Mostly physical and electrical characteristics.
Q. What physical and electrical characteristics were you looking for?
A. Physical characteristics would have been color, specific gravity, refractive index.
Q. Explain to me as a lay person what you mean by that, the last thing you said.
A. Refractive index?
Q. Yeah. Can you put that in lay terms so I can understand it? I'm not a chemist and will admit that. Can you tell me what that means so a jury can understand it?
A. Every liquid has a refractive index, and it is the amount that light passing through a thin layer of material is

refracted by a certain angle. And that angle is the refractive index.

Q. Which would tell you what about that product?

A. It is indicative of density.

Q. And what did the color tell you about the product?

A. What the color was.

Q. I mean, why would you want to know the color of say PCBs in Aroclor products?

A. It was a specification of the products.

Q. So it had to be a certain color?

A. Right.

Q. Did that have something to do with the quality of the product, either one of those two things?

A. Color probably had something to do with the quality of the product.

Q. What?

A. Purity.

Q. All right. Tell me if you can what -- if you recall, what you were looking for in terms of color to tell you about the

purity.

A. Best I remember, the product was supposed to be water white, crystal clear. And you compared it against some standard color scale, and if it was less than some value on that color scale it was an acceptable product.

Q. What did you do with a product that didn't meet those standards or tests that you just told me about?

A. At this point in time I didn't do anything with them. I just reported the results.

Q. What did the company do with them?

A. I don't know.

Q. If it turned out the product didn't match the color or refractive index that you were talking about earlier, you just informed somebody above you that it did not?

A. Correct.

Q. Who was that that you informed?

A. Production supervision. I don't

remember names.

Q. Was Mr. Landwehr over your department at the time you started there?

A. No.

Q. Was he over the plant?

A. No. He was not there when -- Wait a minute. Hang on a minute. I'm trying to remember names. No, Joe Landwehr was not there.

Q. Who was your supervisor?

A. The chief chemist, whose names escapes me.

Q. Was it Toby Bell?

A. No. Owen, Dolen?

Q. Okay. So you would report that to the chief chemist?

A. Yes.

Q. And he would report to somebody in production?

A. Uh-huh (indicating yes).

MR. COX: You need to answer out loud so she can take it down.

Q. You mentioned some other tests y'all

would make of the product itself.

A. Electrical tests.

Q. How was that performed, and what was that supposed to show?

A. The purity, again.

Q. How was it performed?

A. The results that you were producing were called resistivity and dielectric coefficient. In essence an implied voltage was impressed in a cell containing the material, and the equipment would give you the dielectric constant resistivity.

Q. Can you break that down in lay terms so a jury would understand it or I would understand it?

A. Dielectric constant, I can't give you any information on that. I don't understand it myself. But resistivity is a measure of the resistance to flow of electricity.

Q. This was used for insulating purposes? The material you were producing was used

for insulating purposes in transformers?
A. That's my understanding.
Q. So you were trying to determine whether or not it would meet the standards that would be required for the product in those kinds of equipment; is that correct?
A. Yes.
Q. What happened if it did not do that? Did you report that also to your boss and then report it to --
A. Correct.
Q. What kinds of impurities were you all looking for that would be present in the product of PCBs that you produced at that time?
A. Probably the main impurity would be moisture content.
Q. Moisture? Was there not some time at the Anniston plant, Mr. Miller, that you all looked for the presence in Aroclor products of dibenzofuran?
A. Not to my knowledge.

Q. Not during the seven years that you were there?
A. If we did, I don't remember it.
Q. So that I'm clear about that, your statement to me here today is that you don't remember any tests that were performed in the plant there to determine whether or not dibenzofurans were present in the product?
A. Not to my knowledge.
Q. And by product, I'm talking about of course PCB.
A. Yes.
Q. Let me get a little history of your positions. Did you become chief chemist at some point in time?
A. Yes.
Q. When was that?
A. I'm guessing '66, '67, somewhere along in there.
Q. Now, as chief chemist in the plant if tests were performed to determine the presence of dibenzofurans in PCBs, would

you have performed that test?
A. Not to my knowledge.
Q. Not to your knowledge?
A. No, sir.
Q. But if they had been performed to determine whether or not they were present in PCBs, would you have done that -- that were produced at the Anniston plant, would you have done that?
MR. COX: Object to the form.
A. To be honest with you, I don't know. I don't remember having done it. Somewhere in this point in time there was an R and D group set up that was separate from the QC lab. It may have been done there.
Q. Now, tell me about the R and D group that was set up. Was that at the Anniston plant?
A. Yeah.
Q. Who headed that up?
A. I don't remember the fellow's name.

Q. Where was he from?
A. I want to say Virginia.
Q. Was he a Monsanto employee?
A. Yes.
Q. And was that set up in some kind of mobile facility outside the plant, or was it inside?
A. It was inside the plant.
Q. Inside. And what equipment did he use to do his work?
A. I remember him doing a lot of distillation work.
Q. Tell us what you mean by that.
A. Many compounds are purified by boiling them from one container into another container. That is a process of vaporization and condensation called distillation.
Q. Okay. So he did distillation work with what product?
A. I'm sure he used Aroclors in some of his work.
Q. Was he there to do that with Aroclors?

A. I think, yes.
Q. Okay. And who sent him there, if you remember or recall, to do that work with the Aroclors?
A. I don't know.
Q. Was that somebody from Monsanto's office in St. Louis?
A. I don't know.
Q. Well, who informed you that Mr. -- whatever this man's name was from Virginia was going to be doing R and D work there in Anniston?
A. Probably the -- Probably my boss.
Q. Mr. Olen?
A. No. He is gone by now. Luke Fuhrmeister.
Q. Luke Fuhrmeister?
A. Uh-huh (indicating yes).
Q. And what did Mr. Fuhrmeister say to you about the work that this guy was going to do?
A. I don't remember what he said.
Q. Well, do you remember the substance of

it?

A. Distillation work.

Q. Distillation work?

A. Uh-huh (indicating yes).

Q. And that work would be done in the lab that you ran there?

A. No. It was not part of my lab.

Q. Oh, it was a separate lab inside the plant?

A. Yes.

Q. What other equipment did they have there?

MR. COX: I'm sorry, Donald. In this separate facility or in his lab?

MR. STEWART: In his lab.

MR. COX: I was confused.

MR. STEWART: I don't want to confuse you, Buddy.

MR. COX: It won't be the first time.

A. Equipment related to Aroclors?

Q. I would assume so. That is what I'm

asking about. But I would like to know generally what equipment you had there to measure the kinds of things you were talking about.

A. Let's see. We had some gas chromatographs in the lab.

Q. Did they have those at the time that you went there in '64?

A. Yes.

Q. What did you use those for?

A. They were primarily used for control of plant processes and the agricultural products that were being produced at that time.

Q. Did you use them with Aroclors?

A. There was one machine there. I don't remember if it was there when I got there or came shortly thereafter that had been sent, to the best of my understanding, to the plant from St. Louis to look at the isomers present in Aroclors.

Q. Gas chromatograph?

A. Yes.
Q. Did Mr. -- whatever this gentleman's name was from Virginia have access to that equipment, that gas chromatograph?
A. I'm sure he did, yes.
Q. Did he use it?
A. I don't remember.
Q. Did y'all use that to some extent -- the one that was designated for PCBs, did y'all use that from time to time with other product?
A. Again, I don't remember.
(A break was taken.)
Q. You were telling me that y'all -- I was asking you I believe if you used that gas chromatograph piece of machine, equipment, to test other product other than Aroclors, the one there.
A. I don't remember, but I'm suspicious we probably did.
Q. Okay. What other equipment did you have there?
A. Analytical balances. There was an old

infrared spectrometer -- excuse me, ultraviolet spectrometer.

Q. Analytical what?

A. Balances.

Q. And then --

A. An ultraviolet spectrometer.

Q. Did you ever use either one of those on the Aroclor tests you performed?

A. You would use the balances.

Q. How was that used?

A. Just the weight.

Q. Just the weight of the products?

A. Yes.

Q. And I assume you had the distillation equipment that you mentioned earlier in the lab.

A. There was some rudimentary distillation equipment in the laboratory, yes.

Q. Did this person from Virginia that Monsanto sent down to do the R and D work -- did he bring with him a little more sophisticated type of equipment?

A. Yes.

Q. Did they basically equip him a lab? Is that what they did?
A. In essence, yes.
Q. You may have already said, Mr. Miller, but what was the date that he came down here? Do you remember the year?
A. No.
Q. And all you were told by your supervisor, Mr. Fuhrmeister, was that he was going to come down and set up --
A. Uh-huh (indicating yes).
MR. COX: Let him finish his question.
Q. Did he reveal any of that -- the person who was doing the work, reveal any of the reasons why he was there or what he was doing there to you during his stay there?
A. I'm sure we discussed what he was doing.
Q. What is your recollection of those discussions?
A. I have no recollection.
Q. When exactly did you leave the plant?

A. 1971.
Q. What part of '71?
A. I don't remember. Probably in the spring.
Q. Of '71?
A. Uh-huh (indicating yes).
Q. Now, at some point in time during your time there with Monsanto, did you have some people come from Japan?
A. Yes.
Q. When did they come to the plant?
A. I'm sorry. I didn't hear.
Q. When did they come to the plant?
A. I'm going to speculate it was in the late '60s.
Q. Late '60s?
A. Yes.
Q. And they worked with you in the lab?
A. They had come to be trained, and they visited in the lab, yes.
Q. They had come to be trained for what purpose?
A. Best memory serves me, they were being

trained to understand how to produce biphenyl.

Q. Were they Monsanto employees?

A. Again, I don't remember.

Q. How long did they stay at the plant?

A. A couple of months.

Q. So they were there to learn how to produce biphenyl?

A. Biphenyl.

Q. Which would be used in Aroclor production?

A. Yes.

Q. How many were there that came?

A. I believe there were two.

Q. What did they do with you in the lab?

A. I'm reasonably sure they went through the quality control procedure for the product biphenyl.

Q. Now, who told you that those folks would be working with you?

A. Here again, I assume it was Luke Fuhrmeister.

Q. What was his position?

A. He was the technical services manager.
Q. Okay. And where was he located?
A. At the plant facility in Anniston.
Q. In Anniston?
A. Yes.
Q. Weren't there some studies done by that particular division in connection with -- that had to do with the purity of product, whether or not that product had dibenzofurans in it during that period of time?
A. The product biphenyl?
Q. No, Aroclors. Your mentioned the technical services --
A. Uh-huh (indicating yes).
Q. -- portion of the plant that was headed by Mr. Fuhrmeister. Were there not some studies put together at that time to determine whether or not there were some impurities present?
A. I don't remember.
Q. What did these gentlemen from Japan do in connection with the work they were

involved in at the lab?
A. Here again, my memory is that they had come to be trained, and they were trained as to how to -- from my standpoint, how to do the QA/QC testing.
Q. Well, I guess what I'm looking for -- And it may be that you don't remember or you don't recall it. But had they -- Let me see if I can get at it this way. Had they been involved in the production of biphenyl before they came to this plant, or do you know?
A. I don't know.
Q. You don't remember whether they were or not?
A. No, sir.
Q. Were you familiar at that time, Mr. Miller, with some problems that might have been involved in either the production of or the use of a PCB type product in Japan?
A. No.
Q. When is it that you first became

familiar with that particular matter?
A. When you mentioned it just now.
Q. You didn't know --
A. I never heard anything about a problem in Japan.
Q. Never have had any knowledge of that particular problem?
A. I'm totally unaware of any problem in Japan relative to what we are discussing here today.
Q. And you weren't aware of that at the time you were working at the Anniston plant in connection with testing Aroclors and analyzing Aroclors?
A. Was not aware of what?
Q. A problem that had occurred in Japan with some PCB type products.
A. I'm totally unaware of any problems that occurred in Japan, period.
Q. Well, were you aware of some concerns about the product or concerns when you worked there?

MR. COX: Object to the form.

Q. Did you become aware of some concerns about the products?
A. Later in the years, yes, sir.
Q. That would have been about the time the folks from Japan were there? You said it was the late '60s. You left in '71?
A. '71, might have been '72. I don't remember exactly when I left. Could have been the spring of '72.
Q. So were you aware or made aware of some problems that there might have been with the product at the time you were there?
A. Yes.
Q. Who made you aware of that?
A. I don't remember who first made me aware of it. But correspondence through the technical services management and contact with the research department in St. Louis.
Q. Who was your contact in the technical service department in St. Louis?
A. The only name I remember was a fellow named Ralph Munch.

Q. And would it have been with Mr. Munch that you discussed these problems?
A. It could very well have been.
Q. And what was the substance of the conversations with Mr. Munch or whoever it was you talked to at the research department about the problems with PCBs?
A. The essence of it was that northern Europeans -- I have forgotten exactly which country -- had determined that the ghost peaks, as they were referred to in the literature, that frequently showed up in chromatograms, high sensitivity chromatograms I might add, had been identified to be polychlorinated biphenyls.
Q. Why was that of concern?
A. Because Aroclor is a polychlorinated biphenyl.
Q. Why would the presence of these ghost peaks of PCBs have been a concern on the part of people in the northern area?
A. Simply because it showed up when the

analyses were being performed for DDT.
Q. Was there some concern about DDT at that time, about the dangers of DDT?
A. I don't remember. I'm sure there were. I don't know if it was at that time or later or before.
Q. Did Mr. Munch or anybody else with research tell you what the concerns were?
A. No.
Q. Just that these ghost peaks had shown up; is that right?
A. That's correct.
Q. And what did you all do at this Anniston plant in response to that?
A. There was an off-site laboratory established.
Q. Is that different from this R and D lab?
A. Yes.
Q. Okay. So it is not the one that the fellow ran from Virginia?
A. No. There was an off-site lab established and equipped with the right

kinds of analytical instrumentation.
Q. Which was what?
A. In that case I believe it was electronic capture gas chromatography.
Q. Now, was that something that had been on the market for a while?
A. No.
Q. When was it first used, to your knowledge, in the fields that you are involved in?
A. I don't know. I know it was very new technology.
Q. When do you recall this off-site lab being put in place?
A. Here again, in the late '60s.
Q. And what was that particular device and that lab -- What did it do? What was it --
A. The laboratory generally was set up to analyze samples for PCB content.
Q. Samples of what?
A. I know that they looked at a lot of water samples.

Q. From where?
A. Insides the plant, and I'm sure there were quite a few from outside the plant.
Q. Okay. Where inside the plant if you know did they take the water samples?
A. I don't know.
Q. Just at various places throughout the plant facility?
A. I would suspicion that is what they did.
Q. And were you made privy to the results of those --
A. No.
Q. Why? Weren't you chief chemist at this time?
A. No. I don't think I was chief chemist at this time. I think I had moved into production at this time.
Q. Moved into production?
A. Yes.
Q. When did you do that?
A. About '69 or '70.
Q. And the lab was moved in there in '69 or '70, this off-site lab?

A. I don't remember. I think that's about when it was.
Q. So you weren't working in the lab any more?
A. Correct.
Q. Weren't you responsible for the Aroclor production at that time?
A. Yes, sir.
Q. And they didn't say anything to you about what was happening as far as the -- or the results they were getting on these water samples from the plant?
A. I'm sure I got some information from them about what was going on. I don't remember being reported to specifically as to what the analytical results were.
Q. Were they concerned about the off-migration of PCBs into the water? Is that what they were concerned about?
A. I would be highly suspicious of that, yes.
Q. That is what you think they were looking for?

A. Sure.
Q. What other kind of samples did they take at that time which were analyzed in this lab?
A. I don't know.
Q. Were soil samples taken?
A. I don't remember. I wouldn't say that there are or not. I don't know.
Q. You do know there were water samples taken?
A. I do know that there were water samples taken.
Q. What about air samples?
A. I don't remember any or don't have any knowledge.
Q. In view of the fact that you were involved in the production and had been chief chemist there at the plant, why is it if you know they didn't let you know what was happening as far as the off-migration of PCBs?
MR. COX: Object to the form.
A. I'm not saying they didn't let me now.

I'm sure I got some of that information, but I was not the focal point of the information.

Q. Who would have been?

A. Here again I assume it would be the technical services manager.

Q. Mr. Fuhrmeister?

A. I think by now Mr. Fuhrmeister is gone and Mr. Landwehr.

Q. Joe Landwehr?

A. Yes.

Q. Did he ever tell you to do anything different in the production because of the findings of this off-site R and D group?

A. Reporting responsibilities at that point in time were not to Mr. Landwehr. I was reporting to a production superintendent.

Q. Do you remember who that was?

A. I'm trying. A single fellow, heavy set. I can't remember the guy's name.

Q. But did he tell you to do anything

different than what you had been doing?
A. There was an effort underway during the tenure of my being in production to reduce, curtail, and minimize PCBs leaving that site.
Q. What was that effort? What was done?
A. Tighten things up around production.
Q. How?
A. Making sure that there were no leaks in anything, increased awareness to spill containment of any kind. And about that same period of time is when the rearrangement of the discharge system in the front of the plant that is on the east side of the plant was undertaken to expand and enlarge the neutralization and sedimentation facilities that water from the Aroclor production area exited the plant through.
Q. Where did that water eventually wind up that exited the plant through that pit?
A. Snow Creek.
Q. To your knowledge did this off-site

lab -- Were they in a mobile building --

A. No.

Q. -- on the premises? Where were they?

A. They were in a small block building.

Wilmer is one block east of Quintard?

Q. Yes.

A. On south Wilmer Street.

Q. On south Wilmer?

A. Yes.

Q. How many employees did they have there?

A. I think there was one, maybe two people that worked there.

Q. Were they the people who were responsible for doing the tests of the water or whatever it was they tested?

A. Yes.

Q. How else did PCBs leave the reservation, leave the plant site?

A. Well, product naturally left in either tank cars or drums.

Q. I'm not talking about the product itself.

A. I know.

Q. I'm talking about the --
A. I'm sure some left in muriatic acid that was produced.
Q. Where did that go?
A. It is my understanding -- not my direct knowledge -- that that was used to -- some process in corn processing, making sweeteners out of corn.
Q. Where did the waste stream go? When it left the plant, where did it go?
A. It is my understanding, as I have explained, that it all exited out the east side of the plant in Snow Creek.
Q. Okay. What did you all do in connection with the workers that worked there? What kind of safety precautions did you take with regard to Aroclor production?
A. The main consideration for workers in the production area was against thermal injury for burns, because the process was a very high-temperature process. The other things I can remember was respiratory protection from exposure to

chlorine gas or hydrogen chlorine gas.
Q. Anything else?
A. Don't remember anything else other than routine safety procedures that applied to the entire plant.
Q. Did y'all provide them with rubber shoes?
A. Rubber shoes?
Q. Uh-huh (indicating yes).
A. I don't remember rubber shoes per se. I know they were provided with work clothes and shoes and hats and glasses. I don't remember if they were rubber or not.
Q. Did you provide them with rubber gloves?
A. Again, I remember gloves. I don't remember if they were rubber or not.
Q. What happened to the gloves at the end of the day? Were they disposed of?
A. It seems to me each employee had a locker in the operating floor where they put their operating equipment at the end of the day and came back the next day

and used it again.
Q. What about the clothing?
A. There was a bathhouse at the employee entrance. And as to whether or not these gentlemen took their clothing off and took a shower and changed clothes before they left, I don't know. But the opportunity was there.
Q. So you are saying whatever they did with the clothing you provided them was up to them to do? The company did not wash the clothing and provide clothing for them every day?
A. The company provided work uniforms to them.
Q. Would they wear it more than one day, or could they?
A. I don't know.
Q. But you don't recall a process where y'all provided them with clean clothing every day?
A. I don't recall anything about their clothing other than they were issued

company work uniforms.

Q. How often were they provided that, once a week?

A. I don't know.

Q. As you sit here today, do you recall a process where they might have been provided clean clothing every day, the operators?

A. I don't know.

Q. Now, the effort that was underway that you say was started in the technical services, did that have anything to do with waste product other than this water that you have talked about that you all attempted to curtail, I assume by enlarging that pit out front? Is that what you did?

A. Well, I know the pit was a single pit and was made into a dual facility, side by side.

Q. But other than that, where did the other waste go?

A. It went to a landfill.

Q. And how was it taken to the landfill?
A. Here again if my memory serves, it was drummed out, picked up on a bobtail truck and carried to the landfill.
Q. All right. Tell me what form that was in at the time that it came off the process. What did it consist of?
MR. COX: The material that was drummed and landfilled?
MR. STEWART: That's what I'm talking about.
MR. COX: I just wanted to make sure.
A. I'll say that waste was almost exclusively still bottoms, period.
Q. What was the -- Did y'all have the -- guidelines at that time that would tell you as production manager of the Aroclors what kind of waste product you would expect to produce off a batch?
A. I'm sure there were some guidelines as to what you could anticipate.
Q. Do you recall those?

A. No.
Q. Do you recall any kind of percentage as to what you would expect to find at the bottom of the vat at the end of the process that would be waste?
A. No.
Q. Was there a calculation that was known to people in production at the time as to what would be -- would wind up waste product? Other employees have said there was such a calculation. I'm just wondering if you remember.
A. The only thing I remember is in the distillation process, you continued the distillation until you reached a certain temperature at a certain pressure. At that point the distillation was over, and what remained in the steel kettle was waste.
Q. What I'm saying is for a given batch of PCBs was there a calculation that you could generally expect or that would tell you what to generally expect for

waste?

A. I'm not aware of any calculation. The information that was available probably appeared from having produced that product for years.

Q. But there was a way of calculating the waste product or y'all knew pretty well what the waste product would be for a given period of production?

A. I presume. I don't know.

Q. So you took that, the still bottoms, and drummed it? Was the landfill south of 202 present there?

A. The only thing I remember about the landfill before the highway department rearranged that part of the world over there was that it was across old 202 to the south of the main entrance to the plant and on the east side of old 202.

Q. Was that a former pit or land type mine?

A. I only went there once that I can remember, and I remember being up on a high bluff overlooking a ravine, pit

area.
Q. And how is it -- They just put the drums over in there?
A. That's correct.
Q. Were these steel drums?
A. Yes, they were steel drums.
Q. Was there any point in time to your knowledge that the still bottoms were put in there without being put in a steel drum?
A. Not to my knowledge.
Q. Now, once they got the steel drums, what if anything did they do to cover them? Did they just keep putting them in there? Is that what they did?
A. I guess. I don't remember.
Q. Now, what testing if any did you do as the chief chemist around that landfill there?
A. I don't remember any.
Q. Do you know of any tests that were performed around the landfill site by the guy from Virginia who came down to

do the R and D work or by this off-site lab?

A. I don't have personal knowledge of any.

Q. Do you have secondhand knowledge of the fact they were doing some testing around those sites, that landfill site?

A. I know they were doing testing around the plant area.

Q. Did that include, not from your personal knowledge but say secondhand knowledge, around that landfill area?

A. The landfill was in the plant area, so one might assume.

Q. And that would have been soil samples as opposed to water samples?

A. I don't know.

Q. Now, at any point in time during the time frame you were there did you participate in any discussions with a group that talked about how to improve that landfill or improve the disposal of the waste at the site in Anniston?

A. I'm sure I was in many meetings where we

discussed enhancing and improving or controlling materials leaving the plant. I don't remember being in any particular meeting discussing waste leaving the landfill site.

Q. Do you know a Mr. Taffee?

A. Yes, I remember Mr. Taffee.

Q. Do you remember ever having discussed with Mr. Taffee or being involved in any discussion where Mr. Taffee talked about improvements that had to be made to the landfill itself?

A. I don't remember.

Q. You were aware, were you not, Mr. Miller, at time that you worked at the Anniston plant that the water wastes that were -- and drainage basins there were affected by PCBs, were you not?

A. I became aware of the fact there were PCBs in the water and waterway leaving the plant, yes, sir.

Q. When did you become aware of that?

A. Here again, in the late '70s -- Excuse

me. Late '60s.

Q. And that is from tests that you all had performed yourself?

A. Yes.

Q. Do you recall being present in a meeting with Mr. Crockett at the Alabama Water Improvement Commission?

A. Yes.

Q. When did that meeting take place?

A. Late '60s.

Q. What was the purpose for that meeting?

A. To inform the Water Improvement Commission as to what information Monsanto had about this issue at that time.

Q. What issue are you talking about?

A. The Aroclor or PCB issue.

Q. Okay. Who all was involved in preparing for that meeting?

A. Here again I would speculate that obviously I was. Mr. Landwehr or Mr. Fuhrmeister, whoever was there at that time was.

Q. And who else?
A. I don't remember.
Q. Was Mr. Jessie involved, Gene Jessie?
A. First of all, I don't remember any particular meeting in preparation of the meeting with AWIC.
Q. Y'all didn't have any meeting ahead of that meeting, before that --
A. One would be highly suspicious that we did, but I don't remember it.
Q. Tell me if you would what prompted the meeting, if you know.
A. Here again, this is speculative on my part, but I think Monsanto felt like they should go forward to AWIC and inform them of what information we had, that they had at that period of time.
Q. Which was?
A. That we had PCBs leaving the plant.
Q. And?
A. And I guess tell them how we had determined this, where the analysis -- where the identification material came

from.

Q. And then I guess what I'm just interested in is how is it that you determined that you needed to see Mr. Crockett? Who made that determination?

A. I'm sure I was told by somebody to go see Mr. Crockett.

Q. Okay.

A. And since either Mr. Fuhrmeister or Landwehr were my boss, one of those two told me.

Q. Okay. And who was E. G. Wright?

A. A fellow that had been assigned to investigate this problem. He was a member of the technical services department.

Q. There in Anniston?

A. Yes.

Q. And he had been assigned to investigate the problem?

A. If memory serves me, that's correct.

Q. And when you say the problem, that was

the problem about the stuff leaving the plant?

A. Yes.

Q. What were the levels that you all found in the studies that you did of the creek, that were in the creek at that time?

A. I don't remember.

Q. Did you make known to Mr. Crockett what levels you all had found?

A. Here again I don't remember.

Q. What levels did y'all determine to be of concern to you at that time?

A. I don't think anybody knew what levels would be a concern at that time. We didn't. I didn't.

Q. You did not?

A. I didn't.

Q. Had anybody told you what levels at that point in time would be of concern in the air?

A. No, sir.

Q. There were fumes that came off the

manufacturing process, weren't there, Mr. Miller?

A. A fume? Is that what you said?

Q. A vapor. Didn't the stuff vaporize off the manufacturing process, the Aroclors?

A. In the chlorination process you are producing an off-gas, hydrogen chloride, which is scrubbed down to make muriatic acid.

Q. And PCBs would be present in the fume?

A. It would be in the fume.

Q. How were those released from the plant?

A. I'm sorry?

Q. How were those released?

MR. COX: He is asking you how the fumes were released from the plant, under of the HCl gas.

A. The HCl process is -- I don't know the best way to put this. It was very well contained.

Q. How was it contained?

A. Scrubbing the fumes down with water to produce muriatic acid.

Q. You used water in the process, and that is how PCBs got in the water?
A. I assume so.
Q. You are talking about acid. Are you talking about hydrochloric acid produced in the process?
A. Yes.
Q. And muriatic acid is produced in that; is that correct?
A. (Witness nods head affirmatively.)
MR. COX: You need to answer out loud.
A. Yes, hydrochloric acid and --
Q. And do you pour water over the hydrochloric acid, and then that is what left the plant through those pits?
A. The off-gas from the chlorinators is hydrogen chloride gas, which when you scrub it down produces hydrogen chloride or hydrochloric acid or muriatic acid.
Q. Then there are vapors that come off that process that contain PCBs, right?
A. I don't know.

Q. Sir?
A. I don't know.
Q. Were there not certain levels set by people at Monsanto that would be dangerous to people?
A. Levels of what?
Q. PCBs in the air that would be, say, around people.
A. I'm not aware of any.
Q. So as chief chemist there and while in production somebody from Monsanto told you there were unsafe levels or a threshold on which you should go to the neighbors?
A. I don't remember it if it was there.
Q. Did anybody tell you, Mr. Miller, about findings that had been made by Monsanto or others in testing that had been done to make that determination?
MR. COX: Object to the form.
A. Here again, I don't remember it if it was there.
Q. What I'm asking you is did somebody tell

you, "Well, Mr. Miller, we have to make sure our piles are not exposed in terms of PCB contaminated air beyond this level"?

A. I'm not aware of it.

Q. So nobody from Monsanto as you sit here today do you recall telling you that about first your employees at the plant --

A. If there --

Q. -- is that correct?

A. If there was anything like that, I don't remember it. And I don't remember it or I'm not aware of it.

Q. Were there air tests performed by the technical services group at the time?

A. Again, I don't remember if there were.

Q. So you weren't told about any air test results, weren't to gather any levels, don't remember anything about air at that time?

A. That's correct.

Q. Or the danger it might pose to either

employees or perhaps the people who lived around the plant?

A. No knowledge.

Q. What kind of venting process did you have with the production process?

A. Here again the muriatic plant is the vapor process.

Q. Where did those vapors go, or was that all a self-contained type thing?

A. It was a scrubber system that scrubbed the vapor down, and the muriatic acid was then put in storage tanks and sold.

Q. In that scrubbing system, was it open to the air, or was it's a self-contained scrubber?

A. I don't remember. I'm sure it had some kind of pressure relief or barometric lid on it.

Q. So there would have been some let out into the system; is that correct?

A. Not on a regular basis because the hydrogen chloride gas would have given you a problem, an immediate problem.

Q. Tell me if you would if there were pipes and things throughout the system we are talking about.
A. Certainly.
Q. And you then mentioned earlier that y'all had fixed leaks on that.
A. Uh-huh (indicating yes).
Q. Would it not be fair to say that vapor was released in that process of fixing those leaks in the pipe and had been for years before you hyped up in the late '60s?

MR. COX: Object to the form.

A. During the period of time I worked there, there were efforts made to reduce the number of leaks and spillages and so forth. Before that I don't know what they did.
Q. Before that process was undertaken to keep those leaks down, in that process there had been leaks?
A. I'm sure there had been.
Q. Have vapor leaks been given up in that

Aroclor production process?
A. Probably.
Q. And PCBs were in that just like they were in the water, correct?
A. They would have been if there was a vapor leak, yes.
Q. Now, were you told about any specific illnesses that resulted from PCB exposure at the time you worked at that point?
A. No.
Q. Were you ever told by anybody from St. Louis that could cause liver disorders?
A. Not to my knowledge.
Q. That it might be carcinogenic?
A. Here again, not to my knowledge.
Q. That it could cause chloracne?
A. Again, I don't remember.
Q. So no one told you that at the time you worked at the plant?
A. Not to my knowledge or memory.
Q. Okay. So in the meeting with Mr. Crockett were any of those things

that I just mentioned discussed?
A. Here again, not to my knowledge. I didn't know anything about them.
Q. And I guess what concerns me about this meeting with Mr. Crockett is you had indicated that y'all didn't have a meeting before y'all went down there that you recall. Can you tell us how that meeting was initiated? Did you call Mr. Crockett after being told by one of the employees to call him?
A. I'm sure I initiated the meeting with Mr. Crockett by calling him and setting it up. I'm reasonably certain that we had a meeting at Monsanto before I left to go have the meeting with Mr. Crockett, but I don't remember the details of that meeting or who was there.
Q. Who is a Mr. Minkler? Do you know who that is?
A. I remember the name. He was from St. Louis. That's all I know.

Q. And do you remember what department he worked in or what his -- Y'all were cited -- Y'all were supposed to provide information to Mr. Minkler at this meeting. Do you remember doing that?
A. No.
Q. Let me show you a confidential memo. Let me let you take a look at it. It was previously shown to you in the deposition. Take a look at that.

MR. STEWART: Off the record.

(Discussion held off record.)

MR. STEWART: We are going to continue the deposition to another time of Mr. Miller.

(The deposition of Mr. Gerald Miller was continued to an unspecified date and time.)

I do hereby certify that the witness whose attached deposition was taken before me was by me first duly cautioned and sworn to tell nothing but the truth in the cause aforesaid; that the testimony contained herein was by me reduced to writing in the presence of said witnesses by means of stenography and afterwards transcribed by means of computer aided transcription. The foregoing is a true and accurate transcript of the whole of the testimony given by said witness, as aforesaid.

I do further certify that I am not connected by blood or marriage with any of the parties or their attorneys or agents and that I am not an employee of any of them, nor interested in the matter of controversy.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal at Gadsden, Alabama, County of Etowah, this 30th day of May 2001.

Deborah Salers Garrett
Certified Shorthand Reporter
Registered Professional Reporter
Notary Public, Alabama-at-Large
My Commission expires: 3-6-05