

1 STATE OF ALABAMA
2 IN THE CIRCUIT COURT FOR ETOWAH COUNTY
3 (Transferred from Calhoun County, Alabama)
4 SABRINA ABERNATHY, et al.,
5 Plaintiffs,
6 versus CIVIL ACTION NO.
7 CV-2001-832
8 MONSANTO COMPANY, et al., (Consolidated)
9 Defendants.
10 _____/

11 DEPOSITION OF RICHARD S. WILLIAMS, PH.D., P.E.

12 The deposition of RICHARD S. WILLIAMS,
13 PH.D., P.E., was taken before Deborah Salers
14 Garrett, Certified Shorthand Reporter,
15 Registered Professional Reporter, as
16 Commissioner, commencing at 1:00 p.m. on
17 September 11, 2001, by the Plaintiffs, at the
18 law offices of Lightfoot, Franklin & White,
19 The Clark Building, 400 North 20th Street,
20 Birmingham, Alabama, pursuant to the
21 stipulations set forth herein.

22 Regional Reporting Service, Inc.
23 755 Walnut Street
 Gadsden, Alabama 35901-0755

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2

1 A P P E A R A N C E S

2 For the Plaintiffs:

3 CHARLES CUNNINGHAM, Esq.
 Morrissey Building, Suite 200
 Page 1

4 ABERNATHY 09-11-2001 Williams, Richard S.
304 West Liberty Street
Louisville, Kentucky 40202

5

6 For the Defendants:

7 WILLIAM G. COX, III, Esq.
8 LIGHTFOOT, FRANKLIN & WHITE, LLC
The Clark Building
400 North 20th Street
9 Birmingham, Alabama 35203

10

I N D E X

11

Page

12 Stipulations

3

13 Reporter's Certificate

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14

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

15

Witness: RICHARD S. WILLIAMS, PH.D., P.E.

16

Page

17 By Mr. Cunningham

4

18

E X H I B I T S

19 Plaintiffs'

Marked

Offered

20 One

4

21 Two

188

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

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to

3

1

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

2

3 IT IS STIPULATED AND AGREED by the
4 parties, through their respective counsel,
5 that the deposition of RICHARD S. WILLIAMS,
6 PH.D., P.E., may be taken before Deborah
7 Salers Garrett, CSR, RPR, as Commissioner and
Page 2

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ABERNATHY 09-11-2001 Williams, Richard S.

8 Notary Public, Alabama at Large, at
9 Birmingham, Alabama, on September 11, 2001, at
10 1:00 p.m.

11

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

19

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

22

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1 BIRMINGHAM, ALABAMA, SEPTEMBER 11, 2001

2

3 RICHARD S. WILLIAMS, PH.D., P.E.,
4 after having been first duly sworn, was
5 examined and testified as follows:

6

7 (Plaintiffs' Exhibit Number
8 One was marked for
9 identification.)

10

ABERNATHY 09-11-2001 Williams, Richard S.
EXAMINATION

11

12 BY MR. CUNNINGHAM

13 Q. Mr. Williams, good afternoon. My name
14 is Charlie Cunningham. I'm from
15 Louisville, Kentucky. I represent the
16 plaintiffs in some litigation out of
17 Calhoun Circuit Court here in Alabama
18 styled Abernathy, et al, versus
19 Monsanto, et al, and some cases
20 consolidated with it.

21 Have you been involved in a
22 deposition before?

23 A. Yes.

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1 Q. So you understand that the lady to my
2 left, to your right, is going to take
3 down everything that we say so that we
4 can read it back later and remember it
5 verbatim. And you are under oath. This
6 is not a test or a quiz. It is just an
7 effort to find out what facts or
8 information you might have to light
9 everybody's understanding of the case.

10 There are two particular
11 idiosyncrasies about me that I like to
12 share with witnesses beyond their
13 typical experience of depositions.

14 MR. COX: There are more than two,
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15 but there are only two that
16 he will tell you about on the
17 record.

18 Q. Truly. First, I have a bad habit of
19 asking a question and you will give me
20 some part of an answer, and I will
21 either think that you have finished or
22 will get this brilliant idea, and I'll
23 fire another question off without you

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1 having had a chance to conclude your
2 answer. If I do that, please let us
3 know, because we do want complete
4 answers.

5 The second thing, I have a
6 tendency to ask questions with absolute
7 confidence, as though I know exactly
8 what I'm talking about. And sometimes
9 you may listen to it and think that's
10 not right, but you will answer as though
11 it is because I sound so confident. If
12 I say something that sounds inaccurate
13 or incorrect or you just don't
14 understand it, please ask for
15 clarification.

16 A. Okay.

17 Q. Now, we'll start with some easy ones.

18 ABERNATHY 09-11-2001 Williams, Richard S.
 Will you give us your full name,
19 please?
20 A. Richard S. Williams.
21 Q. And where do you reside?
22 A. In Naperville, Illinois.
23 Q. And is that where you work as well?

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1 A. Yes, that's where my office is.
2 Q. And do you live with anyone there in
3 Naperville?
4 A. My wife.
5 Q. And have you ever had your serum PCB
6 level interpreted or diagnosed?
7 A. No.
8 Q. Have you ever had your fat biopsy tested
9 for PCB level?
10 A. No.
11 Q. Do you have any idea what the level of
12 PCB in your household dust is?
13 A. No.
14 Q. In the backyard dirt?
15 A. No.
16 Q. In the ambient air at your home?
17 A. No.
18 Q. What would be the closest Superfund site
19 to where you reside there in Naperville
20 that you know of?
21 A. About a mile, mile and a half from my
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22 home.

23 Q. And what is that site?

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1 A. It's an old Army Nike missile base that
2 has TCE in the groundwater.

3 Q. Okay. And does your home have a well?

4 A. No.

5 Q. So you are on what people call city
6 water, a domestic municipal water
7 supply?

8 A. That is correct.

9 Q. Okay. Do you have any sort of routine
10 medical examination that you -- or
11 surveillance that is performed on you
12 pursuant to your employment?

13 A. No. I have an annual physical, but not
14 specific for the occupation health
15 exams.

16 Q. That is just something you choose to
17 do?

18 A. Yes.

19 Q. You told me before you have been through
20 depositions. How many times have you
21 been deposed?

22 A. Somewhere between six and ten perhaps.

23 Q. Okay. And what sort of subjects have

- 1 those depositions been on?
- 2 A. They've related to remediation at
- 3 superfund sites. They have related to
- 4 landfill design and performance --
- 5 Q. When would --
- 6 A. -- regulations, landfill regulations,
- 7 and superfund regulations. Those
- 8 typically have been the topics I've been
- 9 deposed on.
- 10 Q. Have you ever given deposition testimony
- 11 or courtroom testimony concerning
- 12 situations arising at the Anniston,
- 13 Alabama Monsanto facility?
- 14 A. No, I haven't.
- 15 Q. Do you have a resume or curriculum
- 16 vitae that you keep at least somewhat
- 17 current?
- 18 A. Yes, I do.
- 19 Q. How -- Do you have one here in Alabama
- 20 anywhere, in Birmingham?
- 21 A. Not that I can think of. I can
- 22 certainly supply one.
- 23 MR. CUNNINGHAM: Do you think you

1 might have one on hand?

2 MR. COX: Let me ask a question.

3 Was there one attached to
4 the initial work plan for
5 the on-site RFI/CS
6 investigation?

7 THE WITNESS: There may have been
8 one, yeah. That was back in
9 '97. If so, that would be
10 the most recent I would have
11 here. But it has been
12 updated since then.

13 Q. okay. Well, let me take you through a
14 few things. Let's start with -- You say
15 you have been deposed. In this case,
16 you have been working as a consultant to
17 a company that bore some measure of
18 responsibility for some contaminants of
19 concern.

20 MR. COX: Object to the form.

21 A. I've been working as a consultant to
22 Solutia for five years.

23 Q. All right. Have you been in a similar

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1 setting in all of the other six to ten
2 cases in which you gave deposition
3 testimony?

ABERNATHY 09-11-2001 Williams, Richard S.

4 A. No. It has varied. I've worked both
5 for the plaintiffs as well as for the
6 defense.

7 Q. Okay. Well, let me ask you, please,
8 about cases where you worked for the
9 plaintiff or plaintiffs. Tell me about
10 those cases.

11 A. Plaintiff cases, I'm currently working
12 on one of them now as an expert witness.
13 A landfill company that owns and
14 operates landfills is suing their
15 insurers for environmental liability.

16 Q. So you represent the landfill owner?

17 A. That is correct.

18 Q. In an insurance litigation?

19 A. That is correct.

20 Q. And I'm curious. What is your role in
21 that case as an expert? What opinions
22 in broad terms do you understand you are
23 going to be supplying?

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1 A. The operation of the workings of a
2 landfill, how landfills work, with
3 particular emphasis on gas transport and
4 volatile organic transport in landfill
5 gasses and their impacts in groundwater.

6 Q. Is there some dispute in that case as to
7 whether or not landfills generate gasses

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8 or --
9 A. There is a dispute as to whether --
10 MR. COX: Make sure he finishes.
11 A. Could you ask that -- restate the
12 question, please?
13 Q. I'll restate it. I'll make it very
14 simple. What is in dispute in the
15 case?
16 A. Whether landfill gas can transport
17 volatile organic constituents out of the
18 landfills into shallow groundwater.
19 Q. Are you rendering an opinion that it can
20 or that it cannot?
21 A. That it can.
22 Q. That it can. Okay. And are there
23 particular volatile organic chemicals

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1 that are of concern in that particular
2 case?
3 A. Yes. Benzine is one of them.
4 Q. Okay.
5 A. The primary one.
6 Q. Is there any data in that case showing
7 PCB contamination in shallow
8 groundwater?
9 A. No.
10 Q. So it is just not an issue in that

11 ABERNATHY 09-11-2001 Williams, Richard S.
particular case?

12 A. PCBs are an issue at that site, yes, not
13 in groundwater.

14 Q. All right. What is the nature of the
15 concern about PCBs at that site?

16 A. PCBs, there is a creek which runs
17 through the landfill. The company that
18 I worked for previously did the
19 investigation, what is called the
20 remedial investigation, feasibility
21 study. This is a Superfund site. We
22 detected PCBs in the sediments of that
23 creek as well as in the sediments of

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1 some wetlands which bordered the
2 landfill.

3 Q. Where is that landfill located?

4 A. It is in a city called Waukegan in
5 Illinois.

6 Q. And your client or the plaintiff in that
7 case is what company?

8 A. Allied -- I'm not sure what their formal
9 name is. I think it is Allied Waste
10 Systems. I'm not sure of the corporate
11 name.

12 Q. Okay. And I take it the insurance
13 company has found some expert who is
14 willing to come in and render an opinion

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- 15 that gasses coming off the landfill
16 cannot carry with them benzine?
17 A. I believe that is the case, yes. I've
18 seen -- I've seen an affidavit to that
19 effect, yes.
20 Q. And you are basically going to talk, I'm
21 guessing, that the transport gas is
22 methane?
23 A. That is correct, yes.

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- 1 Q. And it is carrying along some benzine,
2 and that is in turn showing up in the
3 shallow aquifer?
4 A. That is correct.
5 Q. Has that impacted this creek that is
6 running through?
7 A. I'm not sure I understand. Has what
8 impacted the creek?
9 Q. Is some of that benzine making its way
10 from the shallow aquifer into this creek
11 that you mentioned that runs through the
12 site?
13 A. Not that we detected during the
14 investigation.
15 Q. Okay. Aside from that case where you
16 were an expert retained by the plaintiff
17 who we think may be Allied Waste Systems

18 ABERNATHY 09-11-2001 Williams, Richard S.
19 against its insurer, any other cases
20 where you have represented someone on
21 the plaintiff side of litigation?
22 A. Yes. I'm also working as an expert
23 witness -- Here I'm not really sure. My
 client is a potentially responsible

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1 group, PRP group at a Superfund site.
2 They are interveners in the litigation.
3 They are not one of the primary
4 plaintiff or defense. They are
5 interveners on behalf of the plaintiff.
6 Q. Okay. And what is your role as you
7 understand it? What expertise are you
8 bringing to bear in that case?
9 A. Again, it is a landfill. The particular
10 charge that I have was to look at
11 groundwater records, chemistry,
12 groundwater chemistry, as well as other
13 data reports, inspection reports by the
14 state agency, whatever available reports
15 there are, and to render an opinion as
16 to whether there was a release from the
17 landfill over a certain period of time.
18 Again, this is litigation where the
19 plaintiff is the landfill owner and
20 operator and is suing his insurance
21 company for coverage.

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22 Q. And aside from -- where is that landfill
23 located?

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1 A. It is in a city called Belvidere in
2 Illinois.

3 Q. Okay. Any other testifying experience
4 where you were on the side of the
5 plaintiff?

6 A. Yes.

7 Q. Okay. Tell me about that one, please.

8 A. It was litigation -- Again, this was the
9 owner of -- It was a multinational
10 corporation. They owned a number of
11 industries, including a railway and
12 foundries. It was called the Whitman
13 Corporation, as it still exists, I
14 believe. And again, they were suing
15 their insurers for coverage at a number
16 of sites. These were industrial sites.

17 And my role in that litigation was
18 basically to render opinions as to the
19 absence or presence of groundwater
20 impacts, soil impacts, basically just
21 general environmental impacts to various
22 media.

23 Q. Were PCBs at all an issue in the Whitman

- 1 litigation?
- 2 A. No.
- 3 Q. What about the case that arose in
- 4 Belvidere?
- 5 A. PCBs were not -- They may have been
- 6 present in leachate in various
- 7 concentrations. I can't recall. They
- 8 were not a major issue.
- 9 Q. Does that cover the universe of what you
- 10 recall of the personal experience as a
- 11 person who gave deposition testimony on
- 12 behalf of a plaintiff in litigation?
- 13 A. As near as I can recall, yes.
- 14 Q. Okay. Have you had other experience
- 15 that perhaps didn't get to the point of
- 16 a deposition where you were representing
- 17 or rendering opinions for a plaintiff
- 18 other than the cases you have already
- 19 talked about?
- 20 A. Yes, I have. I have worked on a number
- 21 of cases over the years that were, you
- 22 know, settled before they got to either
- 23 a deposition or certainly before they

1 got to trial.

2 Q. Okay. We may come back to some of that
3 here in a moment to the extent that
4 seems to pertain to what you are doing
5 in this case.

6 Let me, before we move on, get
7 your educational background, if I might.
8 Obviously you graduated from high
9 school. Where did you do that?

10 A. In the Caribbean, an island called
11 Trinidad in the West Indies.

12 Q. Are you a native of Trinidad?

13 A. Yes, I am.

14 Q. Williams is not what I think of as a
15 classical Caribbean surname. Your
16 family, how many generations there on
17 Trinidad?

18 A. As far back as I can -- as I know.

19 Q. So is English your native tongue?

20 A. Yes, although --

21 Q. Fluent in others?

22 A. No. There are some people that question
23 whether I have fluency in English or

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1 not.

2 Q. I think your English is very good. Of
3 course, I'm from Kentucky. We have low

4 ABERNATHY 09-11-2001 Williams, Richard S.
standards of spoken English.

5 where did you go to college?

6 A. At McGill University in Montreal,
7 Canada.

8 Q. Now, my limited understanding of
9 geopolitics, Trinidad is an independent
10 country. Isn't it Trinidad and Tobago?

11 A. Yes.

12 Q. So you go to McGill. What did you study
13 at McGill?

14 A. My bachelor's degree is in civil
15 engineering. My master's and Ph.D. are
16 in geotechnical engineering.

17 Q. And did you get both of those degrees
18 from McGill as well?

19 A. Yes.

20 Q. Do you recall what year you were awarded
21 your bachelor's degree?

22 A. 1967.

23 Q. And your master's?

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1 A. 1969.

2 Q. And your Ph.D.?

3 A. 1973.

4 Q. Okay. And can you just tell me roughly
5 why it is that you ended up at McGill?
6 That is a little bit north of where you
7 went to --

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ABERNATHY 09-11-2001 Williams, Richard S.

8 A. My older brother was -- that is where he
9 went to college. I have no idea why he
10 elected to go there.

11 Q. well, I can't say anything. I followed
12 my older sister to college too.

13 what was your master's thesis on?

14 A. It dealt with the mobility of track
15 equipment, basically bulldozers.

16 Q. And when you say mobility were you
17 comparing one type of track to another
18 as far as performance?

19 A. Yes. I was looking at the geometry of
20 the individual track as to how that
21 developed its driving power.

22 Q. Okay. And your Ph.D. doctoral thesis
23 was on what?

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1 A. Again, it related to the mobility of
2 wheels on clay soils.

3 Q. And again, I'm assuming what you did was
4 take a particular tread pattern and tire
5 and compare one to another in an effort
6 to determine which provided the best
7 traction or power?

8 A. No. What I was looking at was more
9 fundamental research into how energy is
10 transferred from a wheel to a soil with

- 15 papers in referee journals.
- 16 Q. What sort of project was that?
- 17 A. We -- The company I worked for were
- 18 doing the geotechnical investigation for
- 19 foundation design. So it was a
- 20 geotechnical project.
- 21 Q. Okay. And what sort of scholarly
- 22 journals was that published in?
- 23 A. One was published in the Canadian

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- 1 Geotechnical Journal, which as I say is
- 2 a referee publication. The other was
- 3 published in Geotechnique, which is the
- 4 professional publication of the British
- 5 Geotechnical Society.
- 6 Q. More of an industry trade journal?
- 7 A. No, not quite. It is more of an
- 8 academic journal than anything.
- 9 Q. Okay. If we got a copy of your CV,
- 10 would it list these publications?
- 11 A. No. I don't think I've included them in
- 12 my current CV. I can certainly get the
- 13 citations for you if that is necessary.
- 14 Q. I can't fathom that they would have any
- 15 real bearing on the case and my
- 16 understanding.
- 17 Any other things that you have had

ABERNATHY 09-11-2001 Williams, Richard S.

22 seminar or classwork or hands-on work as
23 part of your education where you worked

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1 with PCBs and learned about how they
2 move through the open environment?
3 A. Yes. Certainly on I guess four of the
4 projects that I've worked on, those
5 projects have involved remediation of
6 PCBs.
7 Q. Okay.
8 A. And then as you say, as part of my
9 education, part of my education involved
10 looking at the physics and chemistry of
11 soils and groundwater, and that also
12 included considerations of chemical
13 transport, including PCBs.
14 Q. Do you believe that, therefore, prior to
15 1973 you actually had that come up in
16 your classwork?
17 A. I don't recall if PCBs came up per se,
18 you know, as an entity in and of itself.
19 Q. Might you have talked about a class of
20 compounds such as semivolatiles and how
21 semivolatiles might have moved through
22 soil?
23 A. I think we would have looked at it more

1 in terms of its solubility in
2 groundwater and its movement through
3 groundwater.
4 Q. Okay. You mentioned you had worked on
5 four projects in your professional
6 career where PCBs were a significant
7 issue.
8 A. Yes.
9 Q. That is my sense. Is that correct? You
10 said yes. Let's take those one at a
11 time, please, in whatever order is easy
12 for you to remember them, and tell me
13 some more detail, please, about those
14 projects.
15 A. Sure. The first one was a Superfund
16 site called the Waukegan Harbor
17 Superfund site. The company I worked
18 with was employed by Outboard Marine
19 Corporation, OMC, who were the
20 responsible party at that site.
21 Specifically we were employed to provide
22 planning and preliminary design purposes
23 -- information for the design of

1 containment cells at that site. The
2 only constituent of concern at that site
3 was PCBs.

4 Q. And was that a hydraulic fluid, the
5 source of the PCBs? Do you know what
6 the source of the PCBs was?

7 A. PCBs were used in hydraulic fluids, but
8 they were also used as coolants in die
9 casting.

10 Q. This is a die casting facility that made
11 outboard engines?

12 A. Yes.

13 Q. You say containment cells. Were you
14 working on a landfill site that y'all
15 were trying to get under control?

16 A. No. There were three containment cells
17 that we looked at that were eventually
18 constructed. Two of them were on shore
19 and involved slurry wall containments
20 with synthetic covers. The third, there
21 was a slip in Lake Michigan, immediately
22 adjacent to the facility, and that slip
23 was later converted into a containment

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1 cell, again by the construction of
2 slurry walls and synthetic covers.

3 Q. When you say construction of slurry

4 ABERNATHY 09-11-2001 Williams, Richard S.
4 walls, did you excavate down and then
5 construct a slurry wall that was
6 designed to impede the movement of PCBs
7 past that point?
8 A. That is correct.
9 Q. And then -- so the PCBs were left in
10 soil surrounded by this slurry wall, and
11 then you put a cap over top of that to
12 prevent downward migration of rain
13 water?
14 A. No. Well, the slip that was converted
15 into a cell, dredge material that had
16 been dredged out of the harbor was
17 deposited into that cell. And it was
18 converted. I guess it would be
19 analogous to a landfill.
20 Q. And what did you make these slurry walls
21 out of?
22 A. Cement and bentonite, a mixture of
23 cement and bentonite.

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1 Q. And I take it that --
2 A. Strike that. Soil and bentonite. That
3 is what I meant, soil and bentonite.
4 Q. Is that designed to give you a
5 relatively pervious substance once it is
6 mixed and put in place?
7 A. No. It is designed to give you a
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- 8 relatively impervious.
- 9 Q. I'm sorry. That is what I meant to say.
- 10 A nonporous substance?
- 11 A. That's correct.
- 12 Q. You said a synthetic cap. Roughly, if
- 13 you can tell me, what did that consist
- 14 of?
- 15 A. Yes. It consisted of high density
- 16 polyethylene. I don't remember the mil
- 17 thickness, although I think it was forty
- 18 mil. And I think it was a couple of
- 19 feet of soil cover.
- 20 Q. And do you have any recollection of the
- 21 kinds of concentrations of PCB in soil
- 22 that were contained in these cells?
- 23 A. The highest concentration in the slip

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- 1 was six hundred forty thousand parts per
- 2 million.
- 3 Q. Or in essence two-thirds PCB?
- 4 A. Sixty-four percent, yes.
- 5 Q. And what kind of bottom end were you
- 6 working with? At what point did you
- 7 say, "At this point we are going to cut
- 8 our trench and put in our slurry wall
- 9 because the PCB on the other side is too
- 10 low to worry about"?

ABERNATHY 09-11-2001 Williams, Richard S.

11 A. In the particular case of the slip, it
12 was confined because the slip was
13 confined by dredge. It was a dredged
14 slip, and it was confined by sheet
15 piles. The slurry wall was installed on
16 the outside of those sheet piles.

17 Q. But with respect to the other two cells,
18 which I perceive to have been soil that
19 was already contaminated, how did you
20 decide where to draw the line, so to
21 speak, around those cells?

22 A. Again, those two containment cells were
23 used to contain excavated material.

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1 Q. So in essence any contaminated soil of
2 any level was put in one of these three
3 cells?

4 A. No. I don't believe that's correct.
5 There was a cutoff, a lower cutoff
6 level. I just do not recall what it
7 was. That was a while ago.

8 Q. Was there any groundwater monitoring at
9 that site in an attempt to verify the
10 efficacy of these containment cells?

11 A. Not that I recall. There were
12 groundwater piezometers put into the
13 containment cells to determine whether
14 there was an -- whether they had created

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ABERNATHY 09-11-2001 Williams, Richard S.

15 an inward gradient. The design of the
16 cells called for pumping of the
17 groundwater over the -- You know, the
18 sediments were put in the cell. They
19 were wet. So those were pumped to
20 maintain the liquid levels or, if you
21 like, the groundwater levels within the
22 cells at a level that was lower than the
23 outside so there would be, as I say, an

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1 inward gradient.
2 Q. So I take it, then, that water that was
3 pumped out from within the cell was
4 never tested to determine if it had a
5 PCB content?
6 A. No. I believe it was treated.
7 Q. So they didn't even bother to test it,
8 just run it through, what, activated
9 carbon?
10 A. I wasn't involved in that. I don't
11 know.
12 Q. And roughly when did you work on that
13 project?
14 A. It would have been 1986, 1987, in that
15 time frame.
16 Q. Okay. And do you have an estimate that
17 you can give us for the size of these

18 ABERNATHY 09-11-2001 Williams, Richard S.
three cells?

19 A. I can't remember them. The slip to me,
20 my recollection of the slip is that it
21 was probably two or three hundred feet
22 long by maybe a hundred feet wide. The
23 on-shore containments I just can't

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1 remember.

2 Q. It sounds like maybe an acre? I think
3 an acre is roughly forty-two thousand
4 square feet. So if you have two to
5 three hundred feet long by a hundred
6 wide, you are not quite an acre?
7 A. Something in that range.
8 Q. Okay. And any recollection cost-wise of
9 how much was spent to build these slurry
10 walls and put this cap on these three
11 cells?

12 A. I believe at the end of the day the
13 total remediation cost to OMC was in the
14 range of twenty to twenty-five million
15 dollars.

16 Q. Okay. Let's go to number two, please.

17 A. The second site is the landfill I talked
18 about earlier in Waukegan in Illinois.

19 Q. Okay.

20 A. There were PCBs disposed of in the
21 landfill. Some of those PCBs -- or PCBs

ABERNATHY 09-11-2001 Williams, Richard S.

22 were detected in the creek which runs
23 through the landfill as well as the

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1 edges of wetland on one side of the
2 landfill.
3 Q. And if I might stop you. When you say
4 in the creek, this is aqueous phase? In
5 other words, it was a water sample that
6 tested positive for PCBs?
7 A. No, sediments.
8 Q. Okay. And when you say the wetland,
9 again, this is a soil sample?
10 A. Yes.
11 Q. Okay. I'm sorry. Go ahead. You were
12 representing who on this particular
13 project?
14 A. The potentially responsible group.
15 Q. That had theoretically sent the PCBs to
16 the landfill?
17 A. Well, the folks who sent the -- who
18 supposedly sent the PCBs to the landfill
19 were a member of the responsible party
20 group. They were one of the PRPs.
21 Again, this was a Superfund site or is a
22 Superfund site.
23 Q. What kind of levels of PCB are we

- 1 talking about in the sediment and in
2 this wetland?
- 3 A. In the wetland the highest level as I
4 recall was about two parts per million.
5 In the creek the highest level was
6 eighty or eighty-five parts per million
7 in the sediments.
- 8 Q. Okay. And what sort of remediation work
9 did you do at that site to deal with
10 these PCB impacts?
- 11 A. The remediation hasn't been completed.
12 A record of decision has been issued by
13 EPA. The record of decision requires --
14 It is a municipal landfill, and methane
15 migration is an issue. Therefore, it
16 requires an active gas collection system
17 around the landfill, and then it
18 requires a cover, a cap over the
19 landfill. It also requires excavation
20 of sediments in the creek and
21 consolidation of those sediments on top
22 of the landfill under the new cover.
- 23 Q. Got you. And let me take some of those

1 in order. It is my limited
2 understanding of RODs or records of
3 decision that typically there is a
4 discussion of remedial alternatives and
5 then a decision is made that this is the
6 alternative that will be the best thing
7 for us to do at this site.

8 A. Yes, that's correct.

9 Q. And the alternative that was selected by
10 the EPA in that case that you have just
11 described, is that consistent with the
12 recommendation which you made on behalf
13 of the PRP group or inconsistent with
14 the recommendation you made?

15 A. The EPA took our recommend -- or the
16 alternative that was recommended and
17 added an additional layer in the cover.
18 Other than that, it is what was
19 recommended by the PRP group.

20 Q. Got you. Let's talk about it a little
21 more. You talked about the active gas
22 collection. Tell me how you go about,
23 on a landfill that is already, I guess

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1 -- these particular cells are closed out
2 in the sense they are covered with soil
3 and vegetation, or is it active cells?

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4 A. No. It has been closed for many years.

5 Q. How does one put into place an active

6 gas collection system to a closed

7 landfill cell?

8 A. This particular landfill is different

9 from most landfills. Do you want me to

10 speak about this particular landfill?

11 As I say, it is different from most

12 landfills.

13 Q. Yes. Call me crazy. I'll bite.

14 A. In this particular -- Normally you would

15 put in wells through the waste and just

16 put a suction to the gas.

17 Q. Okay.

18 A. You extract gas with a suction. It's

19 as simple as that. In this particular

20 landfill the groundwater surface is very

21 close to the ground surface. The depth

22 to groundwater is small. Under those

23 circumstances gas extraction wells

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1 aren't very efficient unless they are

2 placed very close together, literally

3 within a couple to five feet.

4 Q. Okay.

5 A. This is a fifty-acre landfill, so you

6 would imagine that it is not an

7 efficient system. What was specified

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8 for this particular landfill was a
9 trench around the perimeter of the
10 landfill. And the gas would migrate to
11 the trench. The migration would be
12 accelerated by the application of a
13 vacuum to the trench. And as the gas
14 gets into the trench, it is collected in
15 the pipe, and the vacuum pulls it out,
16 and it will be flared, burnt.

17 Q. And I take it -- Are you expecting or
18 anticipating PCBs to be present in that
19 gas?

20 A. No.

21 Q. Okay. Let me -- Then what is the
22 mechanism by which you are attempting to
23 prevent additional movement of PCBs in

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1 to the sediment and the wetland?

2 A. The cover.

3 Q. And have you in fact analyzed the gas
4 coming off the landfill -- I guess that
5 system is not in place yet. You said
6 that.

7 A. That's correct.

8 Q. Is it anticipated that you will do any
9 sort of confirmatory sampling once that
10 system is in place to see what is coming

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 off in that gas?

13 A. Yeah. I'm sure that the final operation
14 and maintenance plan that is yet to be
15 written -- and that will be written
16 towards the end of the remedial
17 construction. But I'm sure that will
18 include some periodic monitoring of the
19 gas that comes off the system.

20 Q. Is the method for burning the gas that
21 comes off -- does it envision just
22 methane, which wouldn't take a very
23 fancy incineration system as I perceive
it, or is it one that anticipates

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1 burning more complex molecules like a
2 PCB molecule?

3 A. At this point it would be the simple
4 flare system. There is no reason to
5 expect PCBs. Because of their very low
6 vapor pressure, there is no reason to
7 expect PCBs would be a significant
8 component of the landfill gas.

9 Q. And what kind of level of PCB are you
10 finding in the ambient atmosphere when
11 you did the air testing there?

12 A. The ambient samples weren't analyzed for
13 PCBs. They were only analyzed for
14 volatile organic compounds.

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15 Q. okay. And then the cap that you are
16 going to put over this fifty-acre
17 landfill, can you tell me what you
18 recommended and then tell me the
19 additional layer the EPA has requested
20 in the ROD, please?

21 A. Our recommendation was that the cap
22 consist of -- starting from the bottom
23 up, there is an -- First off, I should

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1 say there is an existing clay cap on the
2 landfill. It was placed on there
3 twenty-odd years ago.

4 what we recommended was that a
5 gridding layer be placed over that cap.
6 The gridding layer would be constructed
7 so that the final cover would have
8 enough positive slope to allow a sheet
9 flow of rain water off the cap. The
10 gridding layer, the top six inches of
11 that gridding layer we specified to be
12 sand to act as a gas collection layer.

13 Gas will, you know, move upwards
14 through the waste. And most of this
15 landfill is below grade. So we needed a
16 mechanism for the gas to collect so we
17 could pick it up and draw it off the

18 ABERNATHY 09-11-2001 Williams, Richard S.
18 top, or in this case, conversely, take
19 it down to the sides to the trench.
20 Q. Got you.
21 A. The next layer we recommended was
22 synthetic membrane. On top of that we
23 recommended a synthetic drainage layer.

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1 Q. Now, let me get you to explain that. Up
2 to then I was following you. What was
3 envisioned as being a synthetic drainage
4 layer? What would that actually be?
5 A. It could take many forms. The most
6 common form that is used is a high
7 density polyethylene web, if you like.
8 It is almost like corrugated cardboard.
9 Q. Okay.
10 A. With the outside layers being a
11 geotextile filter fabric and the inside
12 being very similar to a thick corrugated
13 cardboard, except it is made of a high
14 density polyethylene. And the purpose
15 of that is for water, rain water, snow
16 melts, whatever which percolates through
17 the soils above that will collect in
18 that. It is highly transmissive. Once
19 it hits that, it will flow sideways
20 rather than pooling on top of the
21 geomembrane.

22 Q. And at the boundaries of the cell, I
23 take it, it has some sort of piping

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1 design to take that transmitted water
2 out, away from the cell?

3 A. Yes.

4 Q. Okay. So I cut you off at the synthetic
5 drainage layer. What is the next thing
6 above that?

7 A. Above that was two feet of fill soil to
8 act as frost protection, and then I
9 believe it was a further six inches of
10 topsoil. And that topsoil is intended
11 to be vegetative. That was what was
12 recommended.

13 Q. And what did the EPA, just to be ornery,
14 throw in on top of all that or somewhere
15 in the middle of all that?

16 A. They required the addition of what is
17 called a geocomposite layer below the
18 geomembrane, below the high density
19 polyethylene.

20 The geocomposite layer is
21 basically a very plastic clay called
22 bentonite that is enclosed between two
23 layers of geotextile filter fabric.

- 1 Bentonite when it is hydrated, when it
2 is wet, increases in volume several
3 hundred percent and becomes a very low
4 permeability material.
- 5 Q. The thought being that if a void or hole
6 arose in the membrane, water coming
7 through would hit this bentonite and it
8 would expand and basically fill that
9 gap?
- 10 A. That's correct.
- 11 Q. Do you have a ball park figure you can
12 share with us for what it will cost to
13 install this system over the fifty-acre
14 landfill cell we have talked about?
- 15 A. The estimated cost of the cover was
16 between ten and twelve million dollars.
17 And just to set the record, be clear on
18 the record, there are actually two
19 non-contiguous portions. One is about
20 fifty acres. The other is about twelve
21 acres. The ten to twelve million that I
22 just quoted was for both. So it is a
23 combined area of about sixty-two acres.

1 MR. COX: Can we take two minutes?

2 (A break was taken.)

3 Q. Okay. I think we beat to death the
4 waukegan site. Let's move on to number
5 three.

6 A. Okay. I had to stop and think. Number
7 three was another Superfund site. It
8 was called the Belvidere municipal
9 number one landfill. Again, it was an
10 old closed municipal landfill. The EPA
11 did the remedial investigation, detected
12 PCBs in the groundwater.

13 Also there was an area off the
14 landfill, on the side of the landfill
15 where drums containing PCBs had been
16 stored. They removed -- The EPA removed
17 the drums as an emergency removal
18 action.

19 There were soils -- The soils in
20 that area contained PCBs, and the
21 concentrations varied. None of them
22 were above fifty parts per million. But
23 many of the samples were above ten parts

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1 per million.

2 The record of decision for the
3 site -- well, the proposed plan, before

4 ABERNATHY 09-11-2001 Williams, Richard S.
5 I get to that, the proposed plan for the
6 site included groundwater extraction and
7 treatment, pretreatment and then
8 disposal at the publicly owned
9 treatment works. The pretreatment
10 required was for PCBs.

11 Q. And was that carbon filtration?

12 A. At the time of the proposed plan, the
13 details hadn't -- It was just treat the
14 water to remove the PCBs.

15 It also required the excavation of
16 the soil in the area where the PCBs --
17 where the drums were stored. It
18 required the excavation of the soils
19 down to a maximum concentration of ten
20 parts per million. The excavated soils
21 were to be carried and consolidated on
22 top of the landfill. And then the area
23 of the excavation was to be backfilled
with a minimum of ten inches of clean

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1 soil. So it was ten inches of clean
2 soil over a maximum concentration of ten
3 parts per million.

4 Q. Okay. That is backfilling on the sites
5 that had been excavated?

6 A. That's correct.

7 Q. Okay.

ABERNATHY 09-11-2001 Williams, Richard S.

8 A. So what was left in place was a maximum
9 of ten parts per million.

10 Q. Okay. I'm with you now. Sorry.

11 A. The landfill itself, a new cover was to
12 be constructed on the landfill. During
13 the public comment period we prepared
14 comments, and we analyzed the results of
15 the investigation. We also asked for an
16 extension of the public comment period,
17 which allowed to us go out and do some
18 sampling ourselves, of our own.

19 We did some very careful sampling
20 of the groundwater using quiescent
21 sampling techniques and other special
22 measures, including vigorous well
23 development and searching of the insides

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1 of the casing. Basically we took great
2 care to get as low turbidity as possible
3 in the samples.

4 By doing that, when we analyzed
5 the samples, there were no PCBs
6 detected, because we made the argument
7 that the PCBs were not in the aqueous
8 phase, that they were not dissolved in
9 the groundwater, that they were
10 suspended solids.

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 The sampling established that, and
13 because of that the ROD does not require
14 pretreatment or did not require
15 pretreatment.
16 It did require groundwater
17 extraction but for benzene. And the
18 extracted groundwater is piped directly
19 to the POTW without pretreatment.
20 Q. Okay. And what sort of cap are they
21 A. Construction is done. It was three feet
22 of clay compacted to a maximum
23 permeability of one by ten to the minus

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1 six centimeters per second.
2 Q. Okay.
3 A. And six inches of topsoil on top of
4 that.
5 Q. Were any residential areas impacted at
6 the Belvidere municipal one site?
7 A. No. There were some residences within
8 -- probably within a thousand feet.
9 There were no impacts there. The
10 landfill is in the middle of a
11 conservation park.
12 Q. In other words, the surface has been
13 turned into ball fields and playgrounds
14 and such?

15 A. Not on the landfill itself. But it is a
16 nature preserve.

17 Q. Okay. That reminds me. At the Waukegan
18 landfill site you said there had been an
19 impact to the wetland. Was there any
20 remediation undertaken in the wetland
21 itself?

22 A. No. It is not required. The level that
23 was set, the cleanup level that was set

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1 by the U.S. EPA in their ROD was higher
2 than the maximum concentration found in
3 the wetland.

4 Q. And I take it no residential areas were
5 impacted at that site?

6 A. Oh, yes. It was in the middle of the
7 city.

8 Q. Okay. So --

9 A. There are houses on three sides of the
10 landfill.

11 Q. So how many houses had PCBs present in
12 their yards?

13 A. The only place they found PCBs was in
14 the sump of one building.

15 Q. Okay.

16 A. That would be a nursing home. The
17 impacts to the surrounding houses were

18 ABERNATHY 09-11-2001 Williams, Richard S.
19 from landfill gas. And there was one
20 structure that the PRPs had to install
21 an air exchange and ventilation system
22 because of elevated gas concentrations
23 as well as elevated volatile organics,
 primarily vinyl chloride in basements.

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1 Q. So they did this in one house?
2 A. It was actually an apartment building,
3 so there were seven separate basement
4 units.
5 Q. Okay. And that was a piece of equipment
6 that would filter the air and exchange
7 fresh outside air?
8 A. Yeah. What it was is a whole new piping
9 system that pumped fresh air into the
10 basement and extracted the air out the
11 other side.
12 Q. And was there a fourth project?
13 A. Yes. Again, a Superfund project called
14 the Cross Pail recycling site.
15 Q. Can you spell that Cross Pail for me,
16 please?
17 A. Cross, C-r-o-s-s, and Pail, P-a-i-l, two
18 separates words.
19 Q. And where is that located?
20 A. Kankakee, Illinois, K-a-n-k-a-k-e-e.
21 Q. And what was the nature of the Cross
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22 Pail site?

23 A. This was individuals who accepted used,

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1 you know, discarded paint containers and
2 solvent containers for recycling. And
3 what he ended up doing was basically
4 emptying them on the ground. It was an
5 incredibly beautiful site. The dirt was
6 green and orange and blue.

7 There was one portion of it which
8 actually eventually EPA separated as a
9 separate operable unit. It was called
10 the PCB operable unit. PCBs were in the
11 soils to depths of -- I believe it was
12 about eight or ten feet.

13 Q. I beg your pardon?

14 A. I believe it was about eight or ten
15 feet, as I recall. And the specified
16 remedy for that was excavation and
17 off-site disposal. There was a cleanup
18 level, and I do not recall what it was.

19 Q. Do you recall whether it was an action
20 level based on kind of residential
21 assumptions of exposure or
22 commercial/industrial?

23 A. It was commercial/industrial.

- 1 Q. Okay. And --
- 2 A. I don't recall the PCB concentrations.
- 3 I know it was high enough that some
- 4 significant portion of the excavated
- 5 material was eventually incinerated.
- 6 Q. Do you know where that was done, that
- 7 incineration?
- 8 A. No, I can't remember.
- 9 Q. And do you have a rough idea of how much
- 10 volume we are talking about?
- 11 A. A couple of hundred cubic yards.
- 12 MR. COX: Total excavation or
- 13 incinerated?
- 14 THE WITNESS: Total excavation.
- 15 Incinerated, I can't
- 16 remember.
- 17 Q. And the balance that was excavated, if
- 18 it wasn't incinerated, do you know what
- 19 happened to the balance of it?
- 20 A. I believe it went to a Subtitle D
- 21 landfill.
- 22 Q. And do you recall what the cost of that
- 23 remediation was?

- 1 A. No, I don't.
- 2 Q. And who was covering the cost of that?
- 3 A. Again, the responsible parties.
- 4 Q. And do you recall what the source of the
- 5 PCBs was, what kind of PCB in use was
- 6 involved?
- 7 A. No, I don't.
- 8 Q. Do you recall how many dollars were
- 9 expended in that remediation project for
- 10 the PCB operable unit?
- 11 A. No. I mean, there wasn't a groundwater
- 12 operable unit. I believe the total cost
- 13 of the remedy was less than five million
- 14 dollars. But as to how much was for the
- 15 operable unit, the PCB operable unit, I
- 16 don't recall.
- 17 Q. Okay. And I guess I did not ask you
- 18 about the cost of the remediation at the
- 19 Belvidere site. Can you tell me what --
- 20 how much money was spent there?
- 21 A. About two and a half million dollars.
- 22 Q. Okay. So aside from what you have done
- 23 here at Anniston, those are the four

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- 1 projects you have worked on where there
- 2 was a significant concern regarding
- 3 PCBs?

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4 A. Yes, as far as I can recall.
5 Q. Okay. Let me ask you about your
6 referral library. Is there a journal to
7 which you subscribe that you believe to
8 be particularly informative in terms of
9 staying current on technology for
10 remediation of landfills?
11 A. The American Society of Civil Engineers
12 puts out a number of division journals.
13 One of them is put out by the
14 environmental division. It tends to be
15 very academic, but it does in my opinion
16 carry some very interesting articles.
17 Q. Is there something that is less
18 academic, perhaps more talking about how
19 we are going to move dirt around and lay
20 out these membranes and such that you
21 have found helpful in keeping you
22 current on the newest ideas?
23 A. There are a number of trade

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1 publications. I'm not sure I would
2 consider any one, you know, better than
3 another across the board.
4 Q. Are there any that you purchase year
5 after year?
6 A. Not currently, no.
7 Q. Any that your employer purchases and
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- 8 sends your way and says, "It might be
9 nice if you read this"?
- 10 A. Not my current -- I am my own current
11 employer.
- 12 Q. Okay. So you talk to the boss all the
13 time?
- 14 A. Yeah, right. He is a difficult fellow
15 to reason with.
- 16 Q. So you do not currently subscribe to any
17 journals. Do you get the ASCE --
- 18 A. Not any more.
- 19 Q. What about books? Is there a bookshelf
20 close to your desk and you find yourself
21 grabbing with some regularity a
22 particular --
- 23 A. Absolutely.

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- 1 Q. What would that be?
- 2 A. Most of the books I use frequently as
3 references relate to fatal transport of
4 organic chemicals. There are a number
5 of publications, a number of books that
6 I have used fairly recently that relate
7 to bioremediation. There is one
8 particular book that I use quite
9 frequently, and I'm sitting here drawing
10 a blank. However, it relates to the

ABERNATHY 09-11-2001 Williams, Richard S.

15 of your work experience just generally.

16 Did you have employment in your field

17 while you were still in school?

18 A. Other than summer jobs, no. That was
19 it.

20 Q. So what was the first job that you took
21 after you had your Ph.D.?

22 A. I worked for three years for a
23 consulting company in Trinidad called

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1 Trintoplan Consultants.

2 Q. And what was the nature of your work
3 there?

4 A. I was responsible for all of the
5 geotechnical input into their various
6 projects. They are a general
7 consultant. The projects I worked on
8 included highways, multi-lane divided
9 highways, arterial highways, water
10 supply systems including large dams,
11 water treatment plants, transmission
12 pipelines.

13 Q. And your job would be to evaluate the
14 soil in those areas and determine how
15 big footers might need to be, where
16 pilings might need to be driven, how to
17 install embankment walls, that sort of

18 ABERNATHY 09-11-2001 Williams, Richard S.
thing?
19 A. Yes.
20 Q. How much gravel or so to put under a
21 supply pipe so that it doesn't shift and
22 snap?
23 A. Correct.

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1 Q. Okay. And after three years of that,
2 what did you do?
3 A. I joined -- I moved to Canada. I went
4 back to Canada and joined a company
5 called Golder Associates, G-o-l-d-e-r,
6 in their Toronto offices.
7 Q. Now, if I do my math halfway decent,
8 that would be roughly the 1976 era?
9 A. Yeah, that would be right.
10 Q. What was the nature of Golder's
11 business?
12 A. They were specialist geotechnical
13 consultants dealing with soil and
14 groundwater.
15 Q. And how long did you work for Golder?
16 A. In Canada I worked for Golder from 1976
17 through 1985, and then I was transferred
18 from Canada to the United States to
19 Atlanta, still with Golder Associates.
20 Q. And how big an outfit is Golder
21 Associates?

22 A. Around the world they employ probably --
23 well, when I left them four years ago

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1 they were just on about I think eighteen
2 hundred to two thousand people at that
3 time. I believe they have grown since
4 then.

5 Q. I would think that is pretty big as
6 geotechnical consultants go.

7 A. Very large.

8 Q. In fact, is there a bigger company that
9 is specialized in geotechnical
10 consulting services than Golder?

11 A. There are certainly equals. There is --
12 Dames and Moore would be bigger.

13 Q. Now, I think of Dames and Moore as being
14 a little bit broader than just geotech.
15 Has Golder actually branched out into
16 other things?

17 A. Yeah. They have, but not to the same --
18 They don't offer the same -- as large a
19 suite of services as Dames and Moore
20 does, for instance. So they are still
21 relatively confined in the breadth of
22 services they offer, but they have
23 certainly gone beyond purely

- 1 geotechnical engineering and groundwater
2 supply.
- 3 Q. Got you. Give us some rough idea of the
4 kinds of projects you did for Golder and
5 the kinds of clients you had for Golder
6 in the nine or so years you were working
7 for them in Canada, please.
- 8 A. A number of large projects in Trinidad
9 that I worked on. They were primarily
10 foundation investigation design
11 projects. They were the foundations for
12 a steel making facility, electric, steel
13 making facility, an ammonia
14 manufacturing facility.
- 15 Q. I'm curious. Is there iron ore in
16 Trinidad?
- 17 A. No, but there is lots of natural gas.
18 what they are selling is the cheap
19 energy.
- 20 Q. Got you.
- 21 A. I did a large project throughout the
22 Caribbean that was funded by the
23 Canadian government for the

- 1 rehabilitation and upgrade of pavements
2 at I believe about twenty-two
3 airports --
4 Q. Okay.
5 A. -- throughout the Caribbean. I worked
6 some with the mining industry in siting
7 and design of tailing stems, basically
8 impoundments to store the mining wastes
9 the metal wastes.
10 Q. Basically to ensure that the embankments
11 or impoundments, dams were going to stay
12 put?
13 A. Yes.
14 Q. Okay.
15 A. There were a number of smaller projects.
16 Those were the major projects. A lot of
17 these projects tended to go on for two
18 or three years at the time. These were
19 large projects.
20 Q. Nothing in the list you just described
21 involved assessing landfills and how
22 water or gasses might move through or
23 from landfills. Did you, however, do

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- 1 some landfill projects in that time
2 frame?
3 A. Not significant, no. There were a

ABERNATHY 09-11-2001 Williams, Richard S.
4 couple of projects that that was
5 involved in, that involved construction
6 of landfills.
7 Q. Where it would be kind of important to
8 know if methane is going to come up
9 through the basement?
10 A. Correct.
11 Q. And did you design gas capture systems
12 underneath the structure to try to steer
13 that away?
14 A. In that case it wasn't necessary.
15 Q. And how did you determine it wasn't
16 going to be necessary?
17 A. Well, in one case it actually involved
18 more of a constructability problem than
19 gas migration. In the second case the
20 developer decided not to build.
21 Q. Okay. So you wind up in Atlanta in the
22 mid '80s?
23 A. Yes, sir, '85.

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1 Q. And what made you decide to transfer to
2 Atlanta, or did you have a choice?
3 A. Oh, sure, yeah. I was asked -- I was
4 given the choice -- well, I wasn't given
5 a choice. I was asked if I would be
6 interested in moving to the U.S. At the
7 time Golder was expanding quite rapidly
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ABERNATHY 09-11-2001 Williams, Richard S.

8 in the U.S. They were looking for
9 senior folks within the organization to
10 help manage that growth here in the U.S.
11 I was one of maybe a dozen folks that
12 over the course of, you know, a couple
13 of years were requested to consider
14 moving to the U.S. to help manage U.S.
15 growth.

16 Q. Where was Golder based? Where was
17 headquarters?

18 A. Toronto.

19 Q. So you were at headquarters?

20 A. Yes.

21 Q. Was the Atlanta office when you went
22 down there a new office?

23 A. No. At that point it was probably ten

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1 years old. But as I say, they were
2 expanding very rapidly.

3 Q. A lot of building took place in that
4 era?

5 A. No. Their expansion was primarily
6 fueled by environmental work.

7 Q. A lot of that going on too. So tell me
8 what kind of work you did in the Atlanta
9 office. Well, first off, when did you
10 leave the Atlanta office?

ABERNATHY 09-11-2001 Williams, Richard S.
11 A. 1988.
12 Q. Okay. And in that time frame until 1988
13 what sort of projects were you working
14 on?
15 A. From '85 to '88 in the Atlanta office?
16 Q. Yes.
17 A. Superfund sites. One site in
18 particular, the Pickettville Road
19 Landfill in Jacksonville Florida,
20 investigation and permitting for solid
21 waste landfills, subtitle D landfills.
22 Q. Which are the -- I call them municipal
23 landfills. They take municipal garbage

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1 and construction waste, that sort of
2 thing in general?
3 A. Yes, they do.
4 Q. Okay.
5 A. Design of a new disposal cell at I guess
6 it is two hazardous waste subtitle C
7 facilities.
8 Q. Which ones were those?
9 A. Emelle, Alabama and Lake Charles,
10 Louisiana.
11 Q. What sort of design components -- Let's
12 take the one at Emelle. What sort of
13 design components did you put in place
14 for the new cells at Emelle that were
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15 going to take hazardous waste?
16 A. All the cells that I was involved in
17 have -- the cells are lined with what
18 are called double composite liners,
19 meaning that there are two sets of
20 liners, one on top of the other. Each
21 set consists of compacted clay with a
22 maximum permeability of one by ten to
23 the minus seven centimeters per second.

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1 On top of the clay they placed a sixty
2 mil thick high density polyethylene
3 liner. So there are two of those
4 composite liner systems.
5 Q. So like four layers of plastic and two
6 layers of clay?
7 A. Two layers of clay and two layers of
8 plastic. And in between is a leachate
9 collection or leak detection system. At
10 Emelle, in addition to that, because the
11 cells were below the groundwater table,
12 a groundwater pressure relief system was
13 constructed. That is the first thing
14 that was put into the excavation, and
15 then the liners were constructed on top
16 of that.
17 Q. That is somewhat similar to what many

18 ABERNATHY 09-11-2001 Williams, Richard S.
18 houses have to keep water from coming up
19 in the basement that might come in?
20 A. Similar principle. It is kind of like a
21 sump.
22 Q. It is more complex, needless to say.
23 A. But similar principle. The groundwater

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1 will flow into this system, flow to the
2 sump in the system, and will be
3 extracted by -- and is extracted by a
4 pump.
5 Q. And what about on the top of these
6 cells? was there envisioned ultimately
7 that there will be some sort of a cover
8 or gas collection or monitoring system
9 on these cells?
10 A. Emelle does not require any gas
11 collection system because the waste --
12 They do not accept detritus waste. All
13 the waste is inert waste. The cover
14 therefore consists of two feet of
15 compacted clay, again compacted to
16 provide a maximum permeability of one by
17 ten to the minus seven centimeters per
18 second. A forty mil high density
19 polyethylene lining is placed on top of
20 that. A drainage layer is placed on top
21 of the HDP lining, and then two feet of
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22 soil including six inches of topsoil is
23 placed on top of the drainage layer.

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1 Q. Got you. All right. Let's move on,
2 then. Where did you go then after 1988?
3 A. Again, Golder asked me to move to
4 Chicago and open a new office for them,
5 which I agreed to do.
6 Q. Naperville I take it is essentially a
7 suburb of Chicago?
8 A. Yes.
9 Q. And your concept of suburban versus
10 Louisville's suburban is different, but
11 it is in that neck of the woods anyway.
12 A. Yeah. Naperville is about thirty miles
13 due west, at the lake.
14 Q. You have been there ever since, I take
15 it?
16 A. Yes, that's correct.
17 Q. But at some point, if I understand it,
18 you became self-employed, left Golder?
19 A. Yes. I left Golder towards the end of
20 1997.
21 Q. All right. Let's take the roughly nine
22 years that you were in the Chicago
23 office of Golder and tell me what sorts

- 1 of projects you worked on there.
- 2 A. Primarily Superfund projects and
- 3 landfill design projects. The Superfund
- 4 projects involved, you know, the full
- 5 range from starting at investigation
- 6 through the feasibility study through
- 7 remedial design, into the management of
- 8 the remedial construction. Obviously
- 9 not all of the projects -- I wasn't
- 10 involved through that full range of all
- 11 of the projects. Some of them went
- 12 through the full range, others just some
- 13 portion of that.
- 14 Q. Okay. And I'm presuming the Belvidere
- 15 site and the two Waukegan sites we
- 16 talked about in some detail and the
- 17 Cross Pail site you handled out of that
- 18 Chicago office?
- 19 A. The Waukegan Harbor site was handled --
- 20 I was in Atlanta at the time. The
- 21 others, yes. Between Atlanta and
- 22 Chicago I have worked on I think at last
- 23 count either fourteen or fifteen

- 1 Superfund sites and been involved in the
2 various aspects of design and permitting
3 and construction of I think either
4 twenty-three or twenty-four landfills.
- 5 Q. And how many of those landfills were
6 hazardous waste facilities?
- 7 A. Three of them.
- 8 Q. Emelle and Lake Charles, and what's the
9 third one?
- 10 A. The Adamsville landfill in Fort Wayne,
11 Indiana.
- 12 Q. And what sort of -- Was there any marked
13 difference between the design of the
14 cells at Lake Charles and Fort Wayne as
15 compared to what you described for us in
16 some detail at Emelle?
- 17 A. No. The lining systems were very
18 similar, you know. The scale of Emelle
19 is different. It is the largest
20 hazardous waste disposal facility
21 certainly in the country, maybe in the
22 world.
- 23 Q. It is the Big Kahuna?

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- 1 A. That's correct. Other than scale --
- 2 Q. The technology is the same?
- 3 A. Yes.

ABERNATHY 09-11-2001 Williams, Richard S.
4 Q. Okay. The other landfills you worked
5 on, I assume some of them are Sub D type
6 facilities. Were any RCRA facilities
7 involved? That is what I think of at
8 this Anniston landfill, as being a RCRA
9 landfill. It has hazardous waste, but
10 it is not a permitted hazardous waste
11 landfill like Emelle.
12 A. I'm sorry. There are four haz waste
13 landfills. One -- Well, Emelle is RCRA.
14 Lake Charles is a RCRA facility.
15 Q. Let me -- Okay. I don't think of --
16 They are not generating waste in those
17 spots, as I understand it. People are
18 shipping waste to them often under a
19 RCRA permit. But I'm talking about
20 places like Anniston where it was a
21 facility that had its ongoing RCRA
22 permit that included a permit waste
23 disposal, land disposal, SWMU.

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1 MR. COX: On-site disposal.
2 Q. So how many of those other than the
3 Anniston site have you worked on?
4 A. None that I can recall.
5 Q. And then you left Golder in '97 and are
6 you operating as -- under a business
7 name?

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- 8 A. Yes, incorporated company, R. S.
9 Williams and Associates.
10 Q. I've actually deposed people who did
11 business as so-and-so and associates,
12 and there aren't any. But are there any
13 associates in your business?
14 A. No. At this point there are two
15 employees, myself and my wife.
16 Q. Okay. Now, is your wife technically
17 trained?
18 A. No.
19 Q. She does -- She is like me, just does
20 the grunt work and you are the brains of
21 the outfit?
22 A. That's correct.
23 (Discussion held off record.)

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- 1 Q. All right. So tell me what made you
2 decide to become self-employed as
3 opposed to continuing your long
4 association with Golder Associates.
5 A. Golder decided to close the Chicago
6 office as part of, you know, their
7 business strategy. They basically gave
8 me a blank check and said, "You tell us
9 where you want to move, and we will move
10 you, but you must move." I said, "No.

15 the anticipated releases from facilities
16 they operate?

17 A. In one form or another. Some of them --
18 You know, BFI or Allied are the
19 plaintiffs either directly or through a
20 Superfund PRP group. And yes, most of
21 them involve looking at the history of
22 closed landfills and rendering opinions
23 as to, you know, if there are releases,

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1 when the releases occurred.

2 Q. Okay.

3 A. It involves -- They have a part of --
4 Several of the cases involve provision
5 of opinions related to the applicability
6 of various regulations. Under Superfund
7 there is a concept called ARARS,
8 applicable relevant and appropriate
9 regulations.

10 Q. Okay.

11 A. And that then involves, you know, the
12 opinion as to what regulations apply to
13 the selection of remedies at Superfund
14 sites. To give an example, if the
15 remedy is a cover or involves a cover,
16 under the principle of ARARS that cover
17 must satisfy the applicable relevant and

18 ABERNATHY 09-11-2001 Williams, Richard S.
19 appropriate regulations. In most cases
20 that would mean the cover must be built
21 to satisfy either Subtitle C or Subtitle
22 D regulations.
23 Q. okay. I'd like to talk to you briefly,
 before we get into the Anniston site,

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1 about preparation for today. I'm
2 certainly presuming that you spoke with
3 Mr. Cox, who advised us before we went
4 on the record that he represented you as
5 your personal attorney for purposes of
6 this deposition. But aside from talking
7 to Buddy or his colleagues, did you
8 speak to anyone else before you came
9 here today or within the last week or
10 two in anticipation of coming here
11 today?
12 A. No.
13 Q. Did you review anything?
14 A. Last night -- This morning I reviewed --
15 Yes, I reviewed one document. It is a
16 U.S. EPA document that was published I
17 believe back in 1982 called Treatability
18 Manual. I looked at a couple of
19 drawings from the work plan for the
20 on-site remedial investigation and
21 feasibility study.

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22 Q. okay.

23 A. I looked at the most recent semiannual

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1 groundwater monitoring report. That was
2 about it.

3 Q. Let me take those in order. The
4 Treatability Manual from '82, why did
5 you look at that?

6 A. I was interested in looking at what
7 could be potentially other sources of
8 PCBs. And in particular what I
9 wanted -- The Treatability Manual is a
10 manual which was compiled by EPA. It is
11 in five volumes, and what it did at that
12 time was reviewed a number -- a large
13 number of industrial processes used in
14 the United States that generated waste.
15 And they were principally interested in
16 water, waste water. They looked -- they
17 describe the process. They went out and
18 sampled the effluents, waste water
19 effluents, and had them analyzed for a
20 wide range of parameters. These are
21 reported as these are the typical
22 results for this type of industry.

23 Q. And I know in some permitting processes

1 you put down that your waste is an F015,
2 plating waste for instance, and EPA and
3 these manuals kind of describe the
4 typical constituents in that waste. Is
5 that what you are talking about?

6 A. No. The Treatability Manual is not that
7 type. It is in the sense that it
8 describes the typical constituents
9 associated with a particular
10 manufacturing process.

11 Q. Okay.

12 A. What I was looking at was the ferrous
13 foundry process this morning.

14 Q. What did you find if anything in the
15 1982 EPA Treatability Manual about
16 ferrous foundry wastes?

17 A. Of the plants or the facilities they
18 looked at in the United States -- I
19 believe they ended up taking about
20 fifteen samples -- they found that,
21 among other things, the waste water
22 stream contained PCBs. The average
23 concentrations of PCBs were in the range

1 of sixty to ninety parts per million --
2 I'm sorry -- parts per billion in water.
3 The total suspended, the average total
4 suspended solids content of the waste
5 water was, again, I believe fifteen
6 hundred to sixteen hundred parts per
7 million.

8 Q. Okay.

9 A. And those were, you know, the statistics
10 I was primarily interested in.

11 Q. Do you know when that sampling process
12 took place?

13 A. It would have been the late '70s, early
14 '80s that it was done for this
15 particular study that was prepared by
16 EPA.

17 Q. And why did you care what the level of
18 PCB in waste water effluent from
19 foundries around the United States was
20 in the late '70s and early '80s?

21 A. As I said, I was looking for potential
22 other sources of PCBs other than solutia
23 into places like snow Creek or into the

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1 drainage features around Anniston and
2 certainly looking -- You know, the kinds
3 of average values quoted by that

4 ABERNATHY 09-11-2001 Williams, Richard S.
publication could easily explain the
5 types of concentrations we are seeing in
6 the sediments.
7 Q. Okay. So are you going to testify in
8 this case that the PCBs that are seen in
9 the sediments of Snow Creek did not come
10 from Monsanto manufacturing processes or
11 their associated landfills but rather
12 came from the foundries in the area?
13 A. No, sir.
14 Q. Is that because they didn't, or you just
15 don't know?
16 A. I just don't know. They could have come
17 from the foundries, or the foundries
18 could be a source. That is the only
19 conclusion I'm prepared to draw on those
20 data.
21 Q. Have you done any sampling in an effort
22 to further explore this possibility?
23 A. A very limited amount of sampling of

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1 sediments upstream of the surface water
2 effluent or surface water discharge
3 point, if you like, from the solutia
4 plant. It is what is called the
5 Eleventh Street ditch. During the
6 off-site remedial facility
7 investigation, a limited number of
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ABERNATHY 09-11-2001 Williams, Richard S.

- 8 samples were taken upstream of that in
9 snow Creek, and low levels of PCBs were
10 found in those sediment samples.
- 11 Q. Are there foundries upstream of the site
12 where you took these samples?
- 13 A. There have been and still are some
14 today, yes.
- 15 Q. Did you actually personally collected
16 these samples?
- 17 A. No, I did not.
- 18 Q. You are just looking at data that
19 somebody else generated?
- 20 A. That's correct. They were working under
21 my general direction.
- 22 Q. And who would that have been?
- 23 A. The company that was responsible for

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- 1 collecting it was BBL.
- 2 Q. And why would you have told them to go
3 and collect these? Is that somehow
4 impacting your job that you are doing
5 for Monsanto, Solutia?
- 6 A. The investigation was designed to
7 describe the nature and extent of PCBs
8 in the sediment of snow Creek.
9 obviously that included the portion of
10 snow Creek downstream of the Eleventh

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 street ditch. But we decided, you know,
13 we would also look upstream to identify
14 if there were any past or present
15 ongoing sources other than what may be
16 coming off the Solutia facility.

16 Q. Did you see higher levels or lower
17 levels of PCB in the sediments of Snow
18 Creek downstream versus upstream of
19 where water -- surface water, for that
20 matter, groundwater would flow from the
21 Solutia site into Snow Creek?

22 MR. COX: Object to the form.

23 A. Surface water is what it was, where

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1 surface water flows from the facility.
2 Typically as a general comment, the
3 concentrations downstream tend to be
4 higher than the concentrations upstream.
5 But I preface that by saying we have
6 limited data upstream.

7 Q. Okay. Have you been forbidden from
8 collecting any data where you have
9 thought, well, it would be nice to go
10 out and do X but Monsanto or Solutia
11 said we are not going to do that?

12 A. No, sir.

13 Q. So if you have limited data, it is
14 because you haven't chosen to go get

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15 more data?
16 A. That's correct.
17 Q. Okay. Did the Treatability Manual have
18 anything about PCB production facilities
19 and what kinds of waste streams they
20 had?
21 A. No.
22 Q. Have you looked at any of the historical
23 documents --

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1 A. The reflection of that is that PCB
2 manufacturing was basically banned in
3 the United States.
4 Q. By that time?
5 A. By that time.
6 Q. Do you know historically what kind of
7 concentrations of PCB existed in the
8 waste water effluents of the Monsanto
9 Anniston facility as compared to the
10 eighty to ninety ppb reported for
11 ferrous foundries as an average by the
12 EPA?
13 A. Historically, no, I don't.
14 Q. Would that be important to you in trying
15 to assess this situation of where the
16 PCBs in the sediments of Snow Creek came
17 from?

18 ABERNATHY 09-11-2001 Williams, Richard S.
 MR. COX: Object to the form.

19 A. Yeah, it would be. But I don't think --
20 I mean, we are looking at potential
21 sources. And clearly the solutia
22 manufacturing facility in Anniston is a
23 potential source of PCBs. We are

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1 looking -- In the upstream samples we
2 were looking for current -- for evidence
3 of current releases upstream. Because
4 obviously that becomes important in the
5 sense of in terms that if you have to do
6 any remedial work, you don't want to be
7 remediating this piece of it and then --

8 Q. You want to do it once?

9 A. You want to do it once, exactly right.

10 Q. So if I was going to look for current
11 releases, I might be doing some aqueous
12 phase testing. Did you ever sample the
13 water of Snow Creek for PCBs?

14 A. No, we did not.

15 Q. Okay.

16 A. I don't -- I don't necessarily agree
17 with you that I would look for aqueous
18 phase. I would be doing aqueous phase
19 investigation if I was interested in PCB
20 transport.

21 Q. Well, you said you wondered about the
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22 current releases.

23 A. Well, current, yes. I did say that.

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1 Let me backtrack on that. What we are
2 looking at is not so much what is
3 currently coming out of a pipe. What we
4 are looking at is what is upstream that
5 can be mobilized and coming downstream,
6 not necessarily what was released today
7 or last week or last month but in terms
8 of what is in the sediment upstream that
9 can be mobilized to come downstream.

10 Q. Okay. I've got you. And have you
11 invited anybody else to the party, so to
12 speak? Have you sent a letter to a
13 foundry upstream and said, "Hey, we are
14 spending a lot of money cleaning up Snow
15 Creek, and we would like for you to
16 participate"?

17 A. Not to the best of my knowledge.

18 Q. But you wouldn't necessarily be the
19 author of that letter?

20 A. That's correct.

21 Q. Have you identified folks and turned it
22 over to your -- employer is the wrong
23 word -- to Solutia/Monsanto or their

- 1 counsel and said, "Here are people for
2 which there is some scientific basis to
3 believe they contributed to the PCB
4 loading of Snow Creek"?
- 5 A. No, I haven't done that.
- 6 Q. And isn't that because you have no
7 evidence that would support any such
8 recommendation?
- 9 A. No. It is just that it has not been an
10 issue to date.
- 11 Q. All right. I thought you said you were
12 curious about this stuff and other
13 sources. But you are saying it is just
14 an academic interest?
- 15 A. No. I'm saying it is a fairly recent
16 interest that started me looking at
17 potential other sources.
- 18 Q. But you have been working at the site
19 for four years now, right?
- 20 A. Yes.
- 21 Q. Is it safe to say a decent amount of
22 money has been spent out there on
23 remediation?

1 A. Yes.

2 Q. Isn't it fair to say that the question
3 of whether other people have been
4 contributing to that PCB loading has
5 been a question of great interest all
6 along?

7 MR. COX: Object to the form.

8 A. I think the emphasis to date has been on
9 the near-site environment. The bulk of
10 the expenditure has been on remedial
11 measures very close to the plant itself,
12 storm water control measures primarily.
13 It has only been within fairly recent
14 time that we have gotten out of that
15 near-plant environment, within the past
16 I guess two years where we did the
17 investigation in the creek.

18 Q. Aside from Snow Creek have you looked at
19 anything, be it a document like the
20 Treatability Manual or data, with an eye
21 towards trying to determine if there is
22 an alternative site -- or source,
23 rather, of PCBs that are being found in

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1 other locations, i.e., residential yards
2 near the site?

3 A. Yes.

- 4 Q. Tell me what you have done in that
5 regard.
- 6 A. Well, we have started doing a fair
7 amount of testing of residential
8 properties under an administrative order
9 of consent which Solutia entered into
10 with U.S. EPA. We have actually
11 remediated a removal, as defined by the
12 AOC on one property. The soil that was
13 removed from that property -- and as I
14 recall the results, the composite, there
15 was one composite sample taken in the
16 front yard. As I recall, the
17 concentration of PCBs was above fifty.
18 I stand to be corrected, but I'm
19 reasonably certain of that.
- 20 Q. You said above fifty?
- 21 A. Yes, parts per million. The soil that
22 was excavated was primarily foundry
23 sand. It was not naturally occurring

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- 1 soil. It was fill. The color was
2 characteristic of foundry sand. The
3 debris found within the fill was
4 characteristic of foundry waste. So
5 that clearly, you know, the foundry sand
6 was the source of the PCBs that were
7 detected on that property.

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- 8 Q. Okay. Let me stop you there for a
9 moment. Where is this property?
- 10 A. I believe the address is 717 Zinn
11 Parkway in Anniston.
- 12 Q. This is the one that is like two doors
13 from Lincoln Park?
- 14 MR. COX: It is within Lincoln
15 Park. Oh, you mean the park
16 itself?
- 17 MR. CUNNINGHAM: Yes
- 18 Q. That was the emergency cleanup?
- 19 A. Yes. It was done under the
20 administrative order of consent, which
21 is the removal.
- 22 Q. That was an interim measure, and at some
23 point a decision will be made about what

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- 1 the final remedy for that location will
2 have to be?
- 3 A. The EPA is -- will make -- Yes. The
4 cleanup level that was set under the
5 administrative order of consent, under
6 the removal action, is a short-term
7 chronic exposure level. The EPA will
8 make a decision as to what the long-term
9 -- not short-term chronic, short-term
10 acute level. But what the long-term

11 ABERNATHY 09-11-2001 Williams, Richard S.
chronic level will be, the EPA will make
12 that decision.
13 Q. Were you in charge of that remediation?
14 Let me put it differently. What role
15 were you playing in that remediation?
16 A. I was responsible for planning the work,
17 not necessarily for executing it.
18 Q. Where did you plan for them to take the
19 dirt when they dug it up?
20 A. It went to Emelle.
21 Q. Do you know how much it cost to clean
22 that site? You can give me a range if
23 you need to.

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1 A. Probably in the range of somewhere about
2 ten thousand dollars would be my best --
3 I haven't seen all of the bills.
4 Q. Okay. And I have seen the front yard of
5 that place. It is pretty small, smaller
6 than this room we are in. Did you do a
7 remediation of the backyard as well?
8 A. That wasn't required. The sample the
9 EPA took in the backyard was less than
10 the removal level of ten parts per
11 million.
12 Q. Do you have any information that would
13 suggest that the PCBs, assuming you are
14 correct in your belief they came to the
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15 site via some foundry waste or sands,
16 were manufactured by anyone other than
17 Monsanto or Solutia?

18 A. To the best of my knowledge Monsanto
19 didn't operate a foundry at the
20 facility.

21 MR. COX: He is talking about the
22 PCBs that ultimately ended up
23 in the foundry sand, where

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1 did that originate before
2 they got to the foundry sand.

3 A. That, I have no idea where they
4 originated from.

5 Q. In fact, you don't know what foundry
6 that stuff may have originated from?

7 A. That is correct.

8 Q. How do you know what foundry sand and
9 foundry waste looks like?

10 A. Past experience, having worked with it
11 at a number of landfills, both closed
12 superfund sites as well as operating
13 landfills.

14 Q. Was there -- Were you able to find a
15 layer of ordinary soil and a layer of
16 this foundry waste at this site, or was
17 it all intermingled?

ABERNATHY 09-11-2001 Williams, Richard S.
18 A. It was fairly well intermingled,
19 although the fill was fairly clearly
20 evident. And the fact there was fill
21 was fairly clear from the topography of
22 the site, in that, you know, the house
23 itself, the yard is fairly level. And

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1 then there is a fairly abrupt drop of a
2 couple of feet to the road. And that to
3 me, in any event, clearly indicates that
4 was fill since it is higher than the
5 surrounding ground.
6 Q. I guess what I'm mistified by is this
7 conclusion you then drew that the PCBs
8 must have come to the site on this fill.
9 A. Because they were in the fill. They
10 were primarily in the fill. As I said,
11 the fill --
12 Q. How do you know that?
13 A. The fill was clearly evident.
14 Q. But was it nothing but fill?
15 A. Samples were taken in the depth range of
16 zero to three inches.
17 Q. How do you know that?
18 A. That is what the EPA said they sampled.
19 Q. So there was nothing but fill in the
20 first three inches?
21 A. Not where they sampled, not as far as we

22 could see, no.

23 Q. So there wasn't even grass, just a big

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1 pile of fill?

2 A. Oh, no. There was grass.

3 Q. And the grass isn't going to grow on one
4 hundred percent foundry sand?

5 A. No. There would have been some soil in
6 there.

7 Q. So there is a mixture there of this
8 foundry waste/foundry sand and soil?

9 A. Yes.

10 Q. And my question to you is how can you
11 say that the PCBs that were found in
12 that top three inches got there via that
13 fill and not via some surface water
14 transport or via an air pathway?

15 A. I would find it difficult to reconcile
16 concentrations of greater than fifty
17 parts per million as being due to mere
18 transport. Water, surface water flow,
19 the property is higher than -- about two
20 feet higher than the ditches and the
21 street. The street would have to be
22 under at least two feet of water for
23 water to be the transport mechanism

- 1 accounting for the PCBs on that
2 property.
- 3 Q. But is it not true that dirt has been
4 found within walking distance of that
5 yard with no foundry sand or foundry
6 waste in it but more than fifty parts
7 per million of PCB in it?
- 8 A. I don't know. I wasn't there when they
9 sampled the other sites. I don't know
10 what was sampled.
- 11 Q. So you don't know that they have found
12 high levels of PCB in ditches and
13 sediments running from the south
14 landfill down towards Snow Creek,
15 through that neighborhood?
- 16 A. Sure, I know they found high -- but at
17 that particular -- You asked me about
18 that particular site and water
19 transport. I'm saying that site is at
20 least two feet above the drains and the
21 street outside. So for surface water to
22 inundate that property, the street would
23 have to be under at least two feet of

1 water. Maybe it happened. I don't
2 know. Given that slope, it would be
3 difficult for me to conceive of that.
4 Q. I guess what I'm getting at, you don't
5 know where the soil that was present
6 there came from either, do you?
7 A. No, I don't.
8 Q. And obviously if someone brought in
9 fill, they then had to put a little soil
10 on top of it to make grass grow?
11 A. Yes.
12 Q. And you don't know if that came from a
13 ditch in the neighborhood or where it
14 came from?
15 A. That's correct. That is one
16 circumstance. There are other instances
17 or other sites at the Oxford softball
18 fields and Oxford park. Again, PCBs
19 were detected in soils there. The soil
20 is clearly fill, including foundry sands
21 but including other soils. There is a
22 lot of debris that we found in the soils
23 when we excavated the softball fields,

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1 wire, pipe, rebar, reinforcing bar, a
2 concrete vault, all kinds of debris.
3 Some of the fill was, you know,

4 ABERNATHY 09-11-2001 Williams, Richard S.
characteristic of foundry sand, not all
5 of it, but some of it.
6 Q. Okay.
7 A. And I talked with a gentleman named Dale
8 Garrett, who is the director of public
9 works for the City of Anniston. And he
10 told me that, yes, it is fill, that the
11 whole area was filled. He personally
12 was involved in the reclamation of that
13 area that used to be a swamp. So he
14 corroborates our opinion that what was
15 there and what we were digging was not
16 natural soil but was fill.
17 Q. Now, this Oxford park, as I understand
18 it, it is a municipal park. People go
19 and take their kids and play on it?
20 A. Yes, sir.
21 Q. And they are not playing on rebar. They
22 are playing on soil. Again, there is
23 dirt there with this fill, correct?

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1 A. Yes. There was. The particular piece
2 of rebar that impressed itself on me was
3 no more than about three-quarters of an
4 inch below the ground surface.
5 Q. But the fact of the matter is there is
6 dirt there too?
7 A. Yes.

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- 8 Q. It didn't come from any foundry?
- 9 A. There was topsoil placed there. I don't
- 10 know where it came from.
- 11 Q. And you haven't -- Or tell me if you can
- 12 of any sampling you know of where
- 13 somebody took what looked to be almost
- 14 exclusively this fill that you referred
- 15 to coming from a foundry versus some of
- 16 the topsoil and tested the two to see
- 17 which if either contained PCBs.
- 18 A. Yes. At the expansion for the Oxford
- 19 mall, Quintard Mall. Some of the soil
- 20 excavated was pretty much all pure
- 21 foundry sand. And samples of that were
- 22 taken and analyzed for PCBs, and it did
- 23 contain PCBs.

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- 1 Q. At what kind of level?
- 2 A. I don't recall. I'm going to say I
- 3 recollect somewhere in the five to ten
- 4 ppm range. But it was a while ago since
- 5 I looked at that.
- 6 Q. When was that done?
- 7 A. 1999.
- 8 Q. And was that done under your direction?
- 9 A. I wasn't there when the samples were
- 10 taken, but yes.

ABERNATHY 09-11-2001 Williams, Richard S.
11 Q. I thought I had seen numbers quoted for
12 Quintard Mall soil that were a lot
13 higher than five to ten parts per
14 million.
15 A. Yes. There were sub-vein soils that
16 were excavated that were greater than
17 fifty parts per million. I think there
18 was about three or four hundred yards of
19 that material that was taken to Emelle
20 for disposal, correct.
21 Q. It would be an order of magnitude more
22 contaminated, if you will -- The
23 concentration of PCB in those soils was

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1 at least higher than what you just
2 described as foundry waste?
3 MR. COX: Object to the form.
4 A. Yes.
5 Q. And how far in a physical sense were
6 those kinds of soils or sediments was
7 this sample, for lack of a better word,
8 of pure foundry waste that you say
9 tested at five to ten parts per million?
10 A. Probably a couple of hundred feet away,
11 a hundred or more feet away from the
12 edge of the creek. The soils that were
13 excavated and sent to Emelle, the soils
14 which contained PCBs in concentrations
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ABERNATHY 09-11-2001 Williams, Richard S.

15 in excess of fifty parts per million
16 were pretty much all within the banks of
17 the creek.

18 Q. Okay. Was the sample, this foundry
19 fill, within the floodplain of the
20 creek?

21 A. Yes.

22 Q. And do you know how long it had been
23 there?

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1 A. No.

2 Q. Do you know how long the -- Did
3 Mr. Garrett tell you when he supervised
4 placement of fill in the swamp to create
5 Oxford park?

6 A. I think it was 1978, I believe, that it
7 was built.

8 Q. Okay. The second thing that you looked
9 at was the drawings for the on-site
10 RI/FS work plan?

11 A. Yes. RFI, not RI/FS, RFI.

12 Q. If you could, please tell me why you
13 looked at that and which drawings you
14 looked at.

15 A. Oh, the particular drawings I looked at
16 were related to the south landfill. And
17 the specific drawing I wanted to look at

18 ABERNATHY 09-11-2001 Williams, Richard S.
19 was the results of the surficial soil
20 testing on the top of the south
21 landfill.
21 Q. Okay. And what did you find?
22 A. That the -- There were surficial soils
23 which contained PCBs, had concentrations

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1 generally less than five part per
2 million; although, there were some
3 samples that contained between five and
4 ten parts per million, but that the
5 majority of the soil samples were less
6 than five parts per million across the
7 top. I just wanted to refresh my memory
8 on those results.
9 Q. And the south landfill is a big old
10 place. Can you tell me what portion of
11 the south landfill got tested?
12 A. All of it.
13 Q. Okay. The eastern cells and the western
14 cells?
15 A. Yes, sir.
16 Q. And how many samples are we talking
17 about for that many acres of land?
18 A. I didn't count them, but it had to be
19 fifty or more.
20 Q. Okay. And do you know when that
21 sampling took place?

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22 A. 1996 or 1997.

23 Q. okay. The planning you did for that

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1 property --

2 A. Excuse me. 1995 or 1996, one of the two
3 years.

4 Q. Going back here for just a moment to the
5 place on Zinn Parkway, you said you
6 planned that remedial work. How many
7 residential yards have you planned the
8 PCB remediation of?

9 A. That was the only one that we have
10 obtained access to thus far that
11 required remediation. We have an
12 overall work plan. We have a number of
13 work plans that have been approved by
14 U.S. EPA. One of the work plans, it
15 covers the removal action in residential
16 yards which contain PCBs more than ten
17 parts per million in the upper three
18 inches.

19 Q. I'm sorry. I didn't mean to limit it to
20 here in Anniston. I meant just anywhere
21 in your professional life. How many
22 other yards have you planned the PCB
23 remediation of?

- 1 A. That is the only one I've had to do.
- 2 Q. And the third thing I understand you
- 3 looked at was the most recent semiannual
- 4 groundwater testing report?
- 5 A. Monitoring report.
- 6 Q. And would you tell me, please, what you
- 7 recall and what you saw when you
- 8 reviewed that?
- 9 A. Again, what I was specifically
- 10 interested in were the groundwater
- 11 results for some of the wells in the
- 12 south landfill. Specifically I was
- 13 looking to see if PCBs had been detected
- 14 in any of them.
- 15 Q. And did you see any data that indicated
- 16 a positive hit for PCBs?
- 17 A. On one well during the remedial -- the
- 18 facility investigation, during the RFI,
- 19 and that well was pretty much directly
- 20 in line with the groundwater extraction
- 21 system. So even if it wasn't there, the
- 22 system was pulling it there. But that
- 23 was the only well that PCBs were

1 detected in downgradient of that
2 landfill.

3 Q. Do you know if the data, the samples
4 that you have looked at in that report
5 were filtered samples?

6 A. Both filtered and unfiltered.

7 Q. Okay. Had you ever done any work with
8 Monsanto before you came to Anniston and
9 started working on this project?

10 A. No.

11 Q. My colleague, Mr. Feld, tells me when he
12 took the deposition of an air monitoring
13 expert last week he talked about having
14 done some computer modeling or having a
15 colleague do some computer modeling for
16 that site and then they decided they
17 weren't going to continue with that
18 process. Is there any sort of sampling
19 program that you have undertaken here
20 where y'all started getting some results
21 and then just decided to stop that
22 particular effort?

23 MR. COX: Object to the form.

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1 A. No. And my understanding is that the
2 air modeling was discontinued because
3 the meteorological data that it is based

4 ABERNATHY 09-11-2001 Williams, Richard S.
on are not reliable.

5 Q. But that was only discovered recently?

6 A. Yes. We have a new consultant working
7 with us, and that was one of his initial
8 observations, was that the meth station
9 wasn't high enough to provide reliable
10 information about wind direction or wind
11 speed.

12 Q. Did you have some involvement in the
13 decision to do some air modeling?

14 A. No, not particularly. I was aware of
15 it. I was aware that the modeling was
16 going to be undertaken. But I have not
17 been particularly involved in the air
18 issues of the facility or to look at the
19 monitor or results as they come out.

20 Q. So you were not involved in any way in
21 this decision to consider, at least at
22 one point in time, a vapor flux
23 investigation of the south landfill and

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1 certain other areas?

2 A. I have been involved in discussions
3 about it, yes.

4 Q. What was the nature of your involvement
5 in those discussions?

6 A. Well, I ventured my thought that based
7 on what I understood them to be

8 proposing or to be requested -- what I
9 understood the agency to be requesting,
10 I questioned what the results would mean
11 and how the results would be
12 interpreted. I didn't see a whole lot
13 of value in generating a number if I
14 didn't know what the number would do or
15 if I didn't know what the number meant.
16 Q. Okay. In the sense that even if it
17 generated some PCB concentration level,
18 what would it mean or give the
19 parameters of, how this system was going
20 to be set up you could predict pretty
21 well it wasn't going to find a PCB
22 concentration?
23 A. No. I mean, since there are -- to the

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1 best of my knowledge there are no
2 established standards for airborne PCBs
3 other than those promulgated by OSHA --
4 Q. For workplace standards?
5 A. For workplace standards. I guess my
6 question is before I go out and generate
7 a measurement, what am I going to
8 compare that measurement to. I also
9 have some reservations about the
10 suitability of the test because I think

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 what you are going to find, what you are
13 going to measure is just ambient
14 concentrations. You can't see the
15 systems.
16 Q. You would truly get what is coming up
17 out of the dirt?
18 A. Yeah. I think all you are going to get
19 is the ambient concentration.
20 Q. You told me that Solutia is the
21 principal customer, if you will --
22 client may have been the word you used
23 -- for your business. And I don't want
to get, you know, the total dollar

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1 volume you do. But is it five figures
2 total gross receipts in 2000 or six
3 figures or --
4 A. Six.
5 Q. And what percentage of that number would
6 be gross receipts for work done on the
7 Monsanto/Solutia projects?
8 A. About eighty percent of it, ninety
9 maybe.
10 Q. And would I be safe in assuming that you
11 and your wife are the only people who
12 have a financial stake in Richards L.
13 Williams and Associates?
14 A. Yes. Richards S.

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- 15 Q. Do you have a Web site?
- 16 A. No.
- 17 Q. Okay. I'd like to start with your first
- 18 involvement with the site and have you
- 19 tell me what it was and how it came to
- 20 pass that you were working on it.
- 21 A. Yeah. In 1996 Monsanto -- At the time
- 22 it was Monsanto. That was prior to
- 23 Solutia. Golder Associates had been

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- 1 working at this facility for probably a
- 2 couple of years prior to my own personal
- 3 involvement. And sometime early in
- 4 1996, Golder Associates were selected to
- 5 be the consultant to implement the
- 6 on-site portion of the RFI. Monsanto
- 7 requested that Golder provide a very
- 8 senior project manager. At the time I
- 9 was a vice president of Golder
- 10 Associates and obviously had a lot of
- 11 remedial experience. And my name
- 12 together with two other employees,
- 13 senior employees, were provided.
- 14 Basically Golder sent Monsanto three
- 15 resumes. I was asked to come for an
- 16 interview in St. Louis. And on the
- 17 basis of that interview, they asked me

18 ABERNATHY 09-11-2001 Williams, Richard S.
to join the project.

19 Q. Okay. And were there other people with
20 Golder who were very involved with this
21 project?

22 A. Oh, sure. Golder at the time were doing
23 two tasks, two major tasks.

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1 Q. What were those?

2 A. One was the -- provide quality assurance
3 for the construction of the cover on the
4 west end landfill, and the second, as I
5 said, was to plan and execute the
6 on-site portion of their remedial
7 facility investigation. Each of those
8 major tasks has to have a project
9 manager from Golder.

10 Q. Which was not you?

11 A. Correct.

12 Q. But then you became the project manager
13 after this interview process?

14 A. Well, I became the overall project
15 manager. Those specific task managers
16 remained with what they were doing.

17 Q. Okay. And what portion of your
18 professional work time with Golder was
19 spent on this project as opposed to any
20 other project you had on your plate?

21 A. Once I started, it got to be about

22 sixty, maybe seventy percent of my time.

23 Q. Do you remember who you interviewed

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1 with?

2 A. Yes. A fellow called Alan Faust, who
3 was the Monsanto project manager -- I'm
4 sorry -- the Monsanto remedial manager,
5 and a woman called Jo Hanson, who was
6 the Monsanto project manager. I believe
7 those were the job titles that Monsanto
8 used at the time.

9 Q. Okay. And as you started work and spent
10 a good chunk of your time on this
11 project, did those two people remain the
12 folks you primarily dealt with on the
13 project?

14 A. Yes, until Jo left Monsanto in -- I
15 think it was May of 1997. I think it
16 was.

17 Q. Whenever.

18 A. Then Alan Faust moved back to St. Louis,
19 in -- Oh, I don't know. It was towards
20 the end of '99 I think. I think he was
21 replaced by Craig Branchfield, who is
22 the person that I currently report to.

23 Q. And is your principal task right now

1 still this on-site remedial facility
2 investigation, implementing that?
3 A. No. Even while Jo was still there my
4 role basically grew into being one of
5 the technical advisors to all aspects of
6 the project. So, you know, basically
7 anything associated with the remedial
8 project at Anniston that required
9 technical input, I was asked to provide
10 that technical input, involvement in
11 assisting with the selection of the
12 consultants who were actually to do the
13 work and setting the scope of work for
14 those consultants, reviewing the
15 technical work product. After Jo left I
16 also became involved to some extent in
17 the financial management of those
18 consulting projects. And today that
19 still remains my role.
20 Q. Well, let me start with some of the
21 components of that. Then we will come
22 back and try to get some more idea of
23 where that actually is hitting the road,

- 1 so to speak, out there. Let's start
2 with picking consultants. What kinds of
3 consultants have you had input in
4 selecting at that location?
5 A. What kinds of consultants?
6 Q. I mean, for instance, did you pick out
7 who was going to operate the bobcat that
8 picked soil up at that residential yard?
9 Did you pick the hazardous waste
10 landfill that it would go to? Did you
11 pick the laboratories to confirm the
12 level of contamination in the soil that
13 was left?
14 A. I was involved in the selection of all
15 of those things.
16 Q. Okay.
17 A. Contractors for the remedial work, lab.
18 The lab is a specific case in that
19 Monsanto and now Solutia really prefer
20 to do business with two laboratories in
21 the United States. And that is for
22 purposes of quality control. They have
23 spent an enormous amount of efforts

REGIONAL REPORTING SERVICE, INC.

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- 1 auditing these laboratory to be sure
2 their end product is reliable.
3 Q. Who are those?

ABERNATHY 09-11-2001 Williams, Richard S.
4 A. So to some extent we deal with those
5 labs.
6 Q. What are those two labs?
7 A. It is now called STL. It used to be
8 called Savannah before they were
9 acquired about a year ago, I guess. And
10 the second lab -- we have done very
11 limited business with them -- is a
12 company called Lancaster Laboratories in
13 Lancaster, Pennsylvania. We have not
14 sent any significant numbers of samples
15 to them. Most of the work we have done
16 -- Most of the analysis we have done has
17 been done by STL. Our groundwater
18 non-PCB groundwater analyses over the
19 past four years, three to four years has
20 been done by a third lab in Baton Rouge
21 called -- And I'm drawing a blank on
22 their name. They were audited as well
23 and were approved for non-PCB analyses.

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1 Q. When you say audited, you mean Monsanto
2 itself actually went in and looked at
3 this facility, sent them some samples,
4 said, "We know what is in here. You
5 tell us what is in here," that kind of
6 stuff?
7 A. Yes.

8 Q. Have they done that with places and not
9 liked what they found and said we are
10 not going to use you?

11 A. Not in my personal experience, but I'm
12 sure of it, which is the reason why they
13 only deal with these two or three
14 laboratories.

15 Q. And I take it this is just something you
16 have been told. You weren't involved in
17 that auditing process?

18 A. That's correct.

19 Q. For all you know, they sent stuff there
20 and they underreported what was there,
21 and they said, "This is great"?

22 MR. COX: Object to the form.

23 A. I don't know that. All I will say is as

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1 a routine QA measure, we currently
2 routinely send what we call planned
3 performance samples to the lab, which is
4 exactly what you are talking about. We
5 had an independent company make samples
6 with known concentrations of PCBs. We
7 routinely include the samples in
8 shipments to the lab. The lab is not
9 aware these are specific performance
10 samples. They report the results like

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 anybody else, and when we get that, we
13 are the only people who know the
14 identity of those samples and what the
15 assay concentrations are. And I will
16 also volunteer that the results are not
17 underreported.
18 Q. Another specific item that you mentioned
19 is that you started to become involved
20 with the financial management, if I
21 understood your testimony.
22 A. Yes, financial management of consulting
23 budgets.
24 Q. Do you have any role to play in the

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1 budgeting process where Monsanto/Solutia
2 has been trying to decide how much money
3 they are going to be spending out there?
4 A. No.
5 Q. Are you then, for instance, looking at
6 invoices that come from Savannah Labs or
7 STL nowadays and saying this looks
8 reasonable or this looks high?
9 A. That's correct. I get involved in the
10 front end by looking at -- requesting
11 proposals, reviewing the proposals,
12 which includes reviewing the cost
13 estimates, the budget estimates, any
14 negotiations that might be involved in
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ABERNATHY 09-11-2001 Williams, Richard S.

15 those budget estimates or the scope of
16 work. And then once the work is
17 initiated, yeah, reviewing their
18 invoices on a monthly bases.
19 Q. One issue of financial cost that is of a
20 particular interest to me and to my
21 clients is again the costs of
22 remediating residential properties. As
23 I recall, you said that the one property

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1 that you all had an opportunity to take
2 some action on, which was the one on
3 Zinn Parkway, had you think maybe a ten
4 thousand dollar price tag associated
5 with it.
6 A. Yeah, right.
7 Q. Do you have some kind of number that you
8 can share with me that you all -- by
9 that I mean the consultant you have
10 selected for Monsanto/Solutia to do this
11 kind of work, what this is costing you
12 on some kind of a per unit basis?
13 A. I'm not sure I understand your question,
14 what the consultants are costing?
15 Q. Right. Or do you have a price for what
16 it costs you to send a cubic yard of
17 dirt to Emelle or to the landfill up in

18 ABERNATHY 09-11-2001 Williams, Richard S.
18 Three Corners? Do you have a set price
19 of what it costs you to excavate a cubic
20 yard of soil? Do you have a unit price
21 for labor? I'm just trying to find out
22 if you just send them out there and they
23 send you a bill and you say, "This

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1 sounds about right," or do you have some
2 idea going in of what this is supposed
3 to cost?
4 A. We have some idea going in. As a part
5 of any one of our remedial construction
6 efforts -- certainly in the case of the
7 storm water control efforts, in the case
8 of the softball field reconstruction --
9 Quintard Mall was kind of a separate
10 deal. By and large wherever we have a
11 consultant doing any remedial design for
12 us, a part of that, his scope of work,
13 is to prepare a cost estimate. And we
14 call it an insurance estimate. So
15 either the consultant does that or the
16 construction manager. There are times
17 when the construction manager prepares
18 that engineer's estimate. So, yes, we
19 have an idea of what it should cost
20 going into it, before we solicit
21 proposals or bids from consultants

22 and/or contractors.

23 Q. I guess that is what I'm trying to find

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1 out. What is your sense of the costs
2 that are associated with cleaning
3 residential properties that are
4 contaminated with PCBs in the Anniston
5 area?

6 A. I don't think you can find one number
7 because it depends on -- It depends for
8 instance on the PCB concentrations. If
9 they are greater than fifty, then the
10 disposal costs are one number. If they
11 are less than fifty, the disposal costs
12 are a completely different number.

13 Q. Do you know what those numbers are in a
14 range?

15 A. In an approximate sense disposal of, you
16 know, greater than fifty material, it is
17 about a hundred and twenty-five to
18 hundred and fifty dollars a ton.

19 Q. Okay.

20 A. For material that is less than fifty
21 parts per million, it is varied
22 depending on the landfill we send it to.

23 Q. You have a few more options with that

- 1 stuff?
- 2 A. Right. And you know, it will range
- 3 between -- It has ranged between
- 4 twenty-five and fifty dollars a ton.
- 5 Q. Okay. And I know how to go to some
- 6 books and get a figure for what a cubic
- 7 foot or cubic yard of soil allegedly
- 8 weighs. But I'm not sure what foundry
- 9 sands and foundry waste weighs.
- 10 Ultimately that is what will have be dug
- 11 up and hauled off. Can you tell me how
- 12 many pounds -- You say -- How much is a
- 13 ton of this stuff in a dimensional
- 14 sense?
- 15 A. Well, I didn't say that this is mostly
- 16 foundry sands.
- 17 Q. I understand. And I'm certainly not
- 18 saying that either.
- 19 A. Okay. Good.
- 20 MR. COX: He can't help himself.
- 21 A. If you are looking for a sort of rule of
- 22 thumb conversion --
- 23 Q. That is exactly what I want.

- 1 A. Per cubic yard, the numbers we have
2 used, you won't be too far off by using
3 one cubic yard being equal to one point
4 five tons.
- 5 Q. Okay. And what about transportation
6 costs? What do you all find to be a
7 reasonable range of costs to anticipate
8 when you have to haul this stuff to one
9 of these places?
- 10 A. Those numbers include transportation.
- 11 Q. Do those numbers also include the labor,
12 material, and equipment, rather, to get
13 it off the grounds and into the truck?
- 14 A. No.
- 15 Q. What kind of numbers are you all finding
16 to be reasonably anticipated for that
17 kind of labor and equipment?
- 18 A. Excavation, again, that is going to be
19 widely variable. In the particular
20 instance of 711 Zinn, for instance --
21 717 Zinn on a per cubic yard basis, that
22 would be high because there was a
23 limited number of cubic yards, because

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- 1 of the space constraints. You know, we
2 used little -- almost toy equipment. An
3 average, average of five to six dollars

4 ABERNATHY 09-11-2001 Williams, Richard S.
per cubic yard is a reasonable number.

5 so that will translate to, what, about
6 four or five dollars a ton.

7 Q. And then what about backfilling, for
8 labor and materials, seeding?

9 A. Backfilling is again very variable
10 because it depends on the extent you
11 have to compact material. Structural
12 backfill, where you are going to build
13 something on top of it and you have to
14 carefully compact it -- and again, the
15 placement of structural backfill might
16 run probably -- I don't know -- three or
17 four dollars a cubic yard. The cost of
18 the material, the transport depends on
19 the location of the borrow pit.

20 we have found that, again, the --
21 I'm going to say that at the Oxford
22 fields, the softball fields, fill,
23 compacted fill in place, it is running

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1 us somewhere in the range of seven to
2 ten dollars a cubic yard. That includes
3 buying the material, transporting it,
4 putting it in place, compacting it.

5 Q. I guess I would not have anticipated
6 that you needed compacted backfill on a
7 ball park.

- 8 A. You have to have some degree of
9 compaction. You wouldn't have to
10 compact it the same way you would for a
11 building foundation. But there was some
12 degree of compacting required.
- 13 Q. If you left it too loose it would become
14 very uneven very quickly and unsuitable
15 for folks to run on?
- 16 A. Right.
- 17 Q. Do you know how deep they ended up
18 having to go at this particular yard
19 that we are talking about there on Zinn
20 Parkway in terms of how many inches of
21 soil they took out of the yard?
- 22 A. Twelve inches, one foot.
- 23 Q. Was that planned from the get-go, or did

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- 1 they start with three or six and have to
2 keep going?
- 3 A. No, that was planned from --
- 4 MR. COX: Let him finish.
- 5 Q. I was. I'm sorry.
- 6 A. That was planned from the beginning to
7 go do a depth of a foot.
- 8 Q. And I take it some sampling took place
9 after the first twelve inches was
10 removed to determine if there was a

11 ABERNATHY 09-11-2001 Williams, Richard S.
level above ten -- Actually, you tell
12 me. What did they look for when they
13 did this confirmatory sampling below
14 twelve inches?
15 A. The sampling was done prior to
16 excavation. It was done to a depth of
17 four feet. And under the terms of the
18 administrative order of consent, the
19 concentrations we found only required
20 the removal of the first foot of soil.
21 Under the terms of the AOC below a depth
22 -- you know, below a depth of a foot,
23 ten parts per million or greater can be

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1 left in place.
2 Q. Do you know if your samples beneath
3 twelve inches, lower than twelve inches
4 had any PCB detection at all?
5 A. I can't recall.
6 Q. And talking in terms of projects, you
7 have mentioned the Oxford ball park, the
8 Quintard Mall, the on-site
9 investigation. I get the sense, since
10 you talked about doing some stuff on
11 Snow Creek, that you are starting to get
12 involved in the off-site investigation
13 as well.
14 A. I have always been involved in it.

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15 Q. And these residential properties that
16 you are doing under the AOC with the
17 U.S. EPA, you are obviously very
18 involved in that.

19 A. Yes.

20 Q. Is there any remediation work taking
21 place out there that you know of that
22 Monsanto/Solutia are involved with that
23 you are not involved in providing

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1 technical consulting on?

2 A. Not -- of the work that was done since
3 1976 when I became involved in the
4 project --

5 MR. COX: '96.

6 A. '96, rather, when I became involved in
7 the project, I can't think of any where
8 I haven't been involved to some degree.

9 Q. And you were listed in this case as a
10 fact witness, which means that it is not
11 anticipated that your testimony will
12 involve rendering opinions but simply
13 talking about this is what I know about
14 what is going on out there. Do you have
15 any idea as you sit here today what
16 testimony you might be asked to provide
17 in the trial of this case?

ABERNATHY 09-11-2001 Williams, Richard S.
18 A. Not specifically, no, other than what
19 you just said, the facts associated with
20 any one of the particular remedial
21 projects.
22 Q. Are there any of the remedial projects
23 that you have been involved in providing

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1 technical oversight on to your knowledge
2 that been approved by any regulatory
3 agency as a final remedy for whatever it
4 was that that remediation was trying to
5 address?
6 A. Yes.
7 Q. Tell me about those, please, or it as
8 the case may be.
9 A. The one final remedy we have approval
10 for is for the work we propose to do at
11 what is called the Highway 21 bridge,
12 which is a new bridge that the Alabama
13 Department of Transportation intends to
14 construct over Choccolocco Creek on
15 Highway 21.
16 Q. How much PCB are you leaving in the
17 soils on the highway right-of-way on
18 that final remedy?
19 A. Of the soils that are excavated, all the
20 material greater than fifty will be --
21 fifty parts per million will be sent to
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ABERNATHY 09-11-2001 Williams, Richard S.

22 Emelle. The rest will be incorporated
23 into the roadway embankment.

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1 Q. Underneath the pavement ultimately or --
2 A. Yes.
3 Q. And I guess what I'm trying to find out
4 is, are you taking all of the
5 PCB-impacted soil that you can find and
6 putting it under what will eventually be
7 paved areas, or are there places where
8 there is soil that tests positive for
9 PCB, but you are leaving it there
10 because it is not enough to worry about?
11 A. No. The only thing we are putting under
12 the roadway embankment are soils that
13 are to be excavated as part of the
14 construction and which do not have PCBs
15 greater than fifty parts per million.
16 There are other parts of the site that
17 contain PCBs, but the soils do not
18 require excavation. As part of
19 construction they will be left in place.
20 Q. And has this actually taken place, or
21 have the plans just been approved?
22 A. The plan has been approved.
23 Construction has not yet taken place. I

1 should add, we are not just leaving it
2 in place. On the areas where we will
3 not be excavating, we will be putting a
4 cover, clean soil cover.
5 Q. Okay. Were you involved at all in the
6 sampling of some of the plaintiffs'
7 properties in May of 2000?
8 A. No.
9 Q. I took the deposition a couple of weeks
10 ago of a Mr. Price with Genesis Project.
11 Do you know him?
12 A. Yes, I know him.
13 Q. And we were talking -- They actually
14 came and picked up the dirt, the samples
15 from several of my clients' properties
16 back in the spring of 2000. And they
17 did not take those samples, as I
18 understand it, and have them analyzed by
19 Savannah Labs. They were analyzed by
20 somebody else. And when I asked him who
21 -- how did you pick this other outfit,
22 he said, I thought, that it was your
23 idea. But I could be wrong about that.

1 Does any of that make any sense to you
2 at all?

3 MR. COX: This is the sampling
4 that ESN was the laboratory?

5 MR. CUNNINGHAM: Yes.

6 Q. And it was a mobile lab. And my sense
7 is he said this Mr. Williams, who used
8 to work for Golder but who became a
9 private consultant for Solutia, said we
10 ought to try a mobile lab. And so if he
11 is fibbing I will go and get on him.
12 But if he is not, I would like to know
13 some details.

14 A. At the time that the sampling of the
15 plaintiffs' properties was about to
16 start, we were also about to start
17 investigating the Eleventh Street ditch,
18 sampling in the Eleventh Street ditch.
19 At that same time Savannah Laboratories
20 was inundated. Their response time had
21 become quite lengthy. They were
22 handling a lot of samples for Solutia,
23 but they also had a couple of other

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1 large projects, they tell me. I don't
2 know the details on it.

3 In any event, this -- our purpose

ABERNATHY 09-11-2001 Williams, Richard S.
4 -- Eleventh Street ditch was basically
5 to characterize the sediments in the
6 bottom of the ditch. And I was the one
7 who basically approved the use of a
8 mobile lab on the Eleventh Street ditch.

9 At that same time Mr. Cox was
10 kicking off the investigation of the
11 plaintiffs' properties, and he called me
12 and asked me if they could use the
13 mobile lab for that purpose. And
14 certainly, you know, I said, "Fine. By
15 all means, we have it on site, and if
16 you can make use of it, by all means,
17 let's do it."

18 Q. Now, how did you go about selecting this
19 ESN as the contractor to bring a lab
20 over and do that sampling?

21 A. The consultant we hired to do the
22 sampling had worked with this company
23 before and had some experience with them

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1 and recommended them. That was the
2 basis we hired them on.

3 Q. What contractor was that?

4 A. The consultants who we had hired to do
5 the sampling in the ditch.

6 Q. And again, who was that?

7 A. Oh, pardon me. A company called Roux

ABERNATHY 09-11-2001 Williams, Richard S.

8 Associates, R-o-u-x.

9 Q. Okay. And how did your experience with
10 ESN turn out?

11 A. For the purposes that we hired them for,
12 which is characterizing of the ditch, I
13 think they provided acceptable work.

14 Q. Did you report their work to EPA as what
15 you perceived to be valid data?

16 A. Yes.

17 Q. Am I correct in saying a certain
18 percentage of their samples went to a
19 fixed laboratory in Atlanta as kind of a
20 backup or quality control?

21 A. They went to Savannah.

22 Q. Do they have a fixed laboratory
23 somewhere?

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1 A. Yes, yes. Some of the samples did go to
2 their fixed based laboratory in Atlanta.
3 In addition to that, however, we took
4 some submitted samples and sent them to
5 Savannah Labs as well.

6 Q. Did you see any discrepancy in the
7 samples that they reported to you --
8 that ESN reported to you from the
9 Eleventh Street ditch sediments as
10 compared to samples reported to you by

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 their fixed lab or Savannah Labs for
13 sediments?

14 MR. COX: Object to the form.

15 A. There were obviously differences between
16 the results between Savannah and ESN.
17 But those differences were not anything
18 that would not be expected from soil
19 samples. I mean, you use the word
20 duplicate, but there is no such thing as
21 a duplicate. You are essentially
22 dealing with two separate samples. So
23 you would expect differences between the
two, just by the heterogenous nature of

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1 the soil. Those are the differences
2 that we saw. You know, there was
3 nothing to cause us to sit back and say
4 there is something wrong or these data
5 are suspect or there is something wrong
6 with this data set. As a matter of
7 fact, we reported both sets of data to
8 ADEM.

9 Q. All right. Now, let me take the data
10 set that these different labs generated
11 for the plaintiff properties. Did you
12 notice anything about any of that that
13 caused you concern?

14 MR. COX: Object to the form.
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- 15 A. I haven't seen that data set.
- 16 Q. Okay. Have you heard anything about how
- 17 that turned out?
- 18 A. No, other than, you know, I asked Mike.
- 19 He said they compared similar to what
- 20 they found in the Eleventh Street ditch.
- 21 That was the extent of the conversation.
- 22 Q. Would it be important to you as somebody
- 23 who is picking consultants for ongoing

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- 1 work projects to know whether or not the
- 2 mobile laboratory had performed
- 3 appropriately or adequately on the
- 4 samples taken from the plaintiff
- 5 properties?
- 6 MR. COX: Object to the form.
- 7 A. It is of interest, but I had a separate
- 8 set of data that I could compare from
- 9 the Eleventh Street ditch to make that
- 10 data evaluation that I was personally
- 11 involved.
- 12 Q. Okay. Let me talk to you for a moment
- 13 about the work that you're doing for the
- 14 off-site remedial investigation. Are
- 15 you helping to create a work plan for
- 16 cleaning up PCB contamination off site?
- 17 MR. COX: Object to the form.

ABERNATHY 09-11-2001 Williams, Richard S.
18 A. The only work plan that has been created
19 for off-site remediation -- Well, two of
20 them. One is for the Quintard Mall, and
21 the other is for Highway 21. I think
22 that's correct. I'm sorry. Strike
23 that. Oxford softball park. So there

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1 are three work plans. And yes, I was
2 involved in all of those.

3 MR. COX: I think he was using
4 work plan in a more generic
5 sense than just the specific
6 documents that have been
7 generated to date.

8 MR. CUNNINGHAM: Yes.

9 Q. Let me try to be less confusing in my
10 terminology. I take it that in addition
11 to those, did you have some input
12 into -- And maybe work plan is not the
13 term of art, but the protocol for how
14 these residential properties were going
15 to be cleaned under this consent
16 agreement with EPA?

17 A. Yes, I did have input to those.

18 Q. Okay. Just tell me, please, if you
19 would, how you had input and with whom
20 you shared that input.

21 A. I was involved in -- as part of a group
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ABERNATHY 09-11-2001 Williams, Richard S.

22 in developing the protocol. I was
23 involved -- I was one of the reviewers

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1 of the draft document. So that was how
2 I had input into the development of the
3 work plans.

4 Q. And that was something that was created
5 by Monsanto and tendered to EPA saying
6 here is what we propose to do?

7 A. Yes. They were work plans required
8 under the administrative order of
9 consent.

10 Q. Okay. Did you have any role to play in
11 selecting the action levels at which a
12 determination would be made that in a
13 particular yard, a, an immediate action
14 was necessary and, b, how much
15 excavation?

16 A. No. Those are specified in the
17 administrative order of consent.

18 Q. You took no position yea or nay about
19 what those should be?

20 A. No.

21 Q. Do you know who in Monsanto or on their
22 team, if you will, advocated what those
23 numbers should be?

1 MR. COX: Object to the form.

2 A. No, I wasn't present at the negotiations
3 of the consent decree, so I don't know
4 specifically who advocated what.

5 Q. And in fact you had zero experience in
6 setting or implementing action levels
7 for residential impacted soils?

8 MR. COX: Object to the form.

9 A. I certainly knew what the regulations
10 required for residential levels. I
11 certainly knew and was familiar with the
12 kinds of levels that the risk assessment
13 was producing. But, however, had I ever
14 excavated a residential yard before?
15 The answer is no.

16 Q. The regulations you speak of I assume
17 include this Mega Rule?

18 A. Yes.

19 Q. And does the Mega Rule as kind of a
20 default value suggest one part per
21 million as an action level in
22 residential soils?

23 MR. COX: Object to the form.

- 1 A. For unrestricted use as a long-term
2 cleanup level. Under the AOC, again, we
3 are dealing with short-term acute
4 exposure, not long-term exposure. Those
5 values, as you quite correctly pointed
6 out, are still to come.
- 7 Q. Have you said anything to your client,
8 Monsanto/Solutia, along the lines of,
9 you know, "It is really kind of crazy to
10 dig these yards up twice. Why don't we
11 just go ahead and clean it up? We
12 should clean it up the first time
13 through"?
- 14 A. No, I haven't, because I don't know what
15 the final answer -- I don't know what
16 the final cleanup level is going to be.
17 EPA has to set that. As you said, the
18 Mega Rule is a default value. The final
19 value may be different. It may be
20 greater, may be less.
- 21 Q. Let's assume for the sake of discussion
22 that you said, "Let's clean it up to
23 background." How much more soil would

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- 1 you have had to take out of the front
2 yard of 717 Zinn Parkway?
- 3 A. I don't know. We never made that

4 ABERNATHY 09-11-2001 Williams, Richard S.
determination.

5 Q. Was there ever any discussion about
6 doing that? They certainly weren't
7 going to set it at lower than background
8 as a final remedy, were they?

9 MR. COX: Object to the form.

10 A. Probably not, but I won't guarantee.

11 Q. So there was never any discussion about
12 maybe we ought to just go ahead and get
13 it all while we are here?

14 A. No.

15 Q. Can you and I agree that based upon the
16 data you have looked at there are a
17 number of residential yards in Anniston
18 that need attention, that need
19 remediation of some level to address PCB
20 impacts?

21 MR. COX: Object to the form.

22 A. Thus far, I believe there have been
23 either thirteen or -- somewhere between

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1 thirteen and fifteen properties that
2 have been identified where the surface
3 soils contain PCBs greater than ten
4 parts per million, and action is
5 required at those properties.

6 Q. okay. And if we were to presume the
7 default value of one part per million in
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8 the Mega Rule as an action level for
9 some phase of the remedy, interim or
10 final, the number of properties impacted
11 would be significantly larger than
12 thirteen or fifteen, correct?

13 MR. COX: Object to the form.

14 A. Based on that assumption, they would be
15 greater. Significantly or not, I don't
16 know. But they would be greater.

17 Q. You haven't done a census to try to
18 determine that?

19 A. That's correct.

20 Q. Have you actually gone out and
21 implemented any kind of a sampling
22 regime in residential areas yourself?
23 Have you suggested that and had that

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1 implemented?

2 MR. COX: I think --

3 Q. Other than the ones we talked about in
4 May of 2000 on some of my folks'
5 properties?

6 A. Well, certainly we are doing that now
7 under the AOC for conceivably what will
8 be a very large number of properties.

9 Q. So you all will go out and kind of do a
10 broad sampling of whole areas? Is that

11 ABERNATHY 09-11-2001 Williams, Richard S.
envisioned?

12 A. We are looking -- We will be going out
13 and sampling residential properties
14 within the floodplains, including the
15 tributary floodplains to Snow Creek.
16 where U.S. EPA hasn't done sampling, we
17 will go out and do the properties that
18 haven't been sampled to this point.

19 Q. Okay. And what other potentially
20 responsibility parties have you been
21 talking to about all this work, if any?

22 A. To the best of my knowledge, none. But
23 again, I would not necessarily be

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1 involved in those discussions. Those
2 don't require technical input at this
3 point.

4 Q. Well, they would if you were going to
5 try to convince somebody that they
6 should fork over some cash, would it
7 not?

8 A. Eventually they will require technical
9 input. But at this point if such
10 discussions are going on, I haven't been
11 involved.

12 Q. If you were testifying tomorrow under
13 oath in this case, you would have to say
14 that you haven't told Solutia based on

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15 the data I'm seeing, "Here is somebody
16 else you could invite to participate in
17 the financial aspects of this
18 remediation work"?
19 A. That's correct.
20 Q. Have you been involved in -- I know you
21 said you kind of reviewed some of the
22 air modeling. You knew it was done.
23 You looked at the vapor flux plan. You

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1 looked at the data. Are you involved as
2 a consultant with selecting the
3 methodology of air sampling or the
4 timing of it or the placement of the
5 monitors?
6 A. No, not in any meaningful way. As I
7 say, I reviewed the results. I have
8 been in discussions with a new
9 consultant Solutia recently hired.
10 Q. Mr. Hoffnagle?
11 A. Yes. I have been in meetings with him
12 as part of the selection process in
13 which he was hired.
14 Q. Did you actually select Mr. Hoffnagle or
15 recommend him I guess would be a better
16 word?
17 A. I was one of three or four people that

ABERNATHY 09-11-2001 Williams, Richard S.

22 well as background levels that were
23 established for this particular

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1 facility. Certainly one monitoring
2 station and at times two have shown
3 elevated levels above that background.

4 However, the data that I have seen
5 also tells me that the concentrations
6 are not sufficiently high as to cause
7 concerns about -- you know, health
8 concerns, exposure concerns.

9 You know, there are orders of
10 magnitude below any published level,
11 which as we talked about earlier, the
12 occupational levels. But even if you
13 adjust -- attempt to adjust those
14 occupational levels for increased
15 exposure conditions for, you know,
16 non-occupational levels, basically try
17 to translate from an eight-hour exposure
18 to a twenty-four-hour exposure, they
19 still order -- the regulatory levels
20 would still be orders of magnitude
21 higher than the maximum levels that
22 we're measuring in ambient air around
23 the facility, and certain even much

- 1 higher than average levels we are
2 measuring around the facility.
- 3 Q. And am I correct in recalling your
4 testimony -- we talked about the vapor
5 flux study -- that you don't know of a
6 concentration that is out there as a
7 benchmark as an acceptable level for PCB
8 concentration in ambient air?
- 9 A. Not as a regulatory level, no. That is
10 what I said.
- 11 Q. As contrasted with workplace standards,
12 or I have seen levels for water, warm
13 water aquatic habitat standards measured
14 in parts per trillion of what you want
15 to have in the water, what you want to
16 have in fish before the FDA actions
17 levels, but you are just not aware of
18 one in air?
- 19 A. That is correct. As I just stated, the
20 closest we can come is try to make an
21 adjustment to the occupational levels to
22 account for the higher exposure.
- 23 Q. Got you. Are you aware from the work

1 that you have done that there are a
2 number of individuals in the area,
3 residents of the area who have been
4 tested for PCB body burdens and found to
5 have a PCB body burden that appears to
6 be higher than would be expected?

7 MR. COX: Object to the form.

8 A. What I've seen in the newspapers, what
9 I've seen perhaps in some ATSDR reports,
10 that is the extent. I have not seen the
11 data set.

12 Q. In any of the other sites where you have
13 worked on PCB remediation -- And I guess
14 some of them involved tens of millions
15 of dollars of work being done. In any
16 of those sites do you recall there being
17 instances of individuals with
18 demonstrated body burdens of PCB?

19 A. Not as far as I recollect, no.

20 Q. Let me talk to you for a moment about
21 the geology of the site. Do you have
22 any information to suggest that there is
23 coarse terrain underlying any of the

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1 site? When I say site, let's talk about
2 the south landfill, the west land fill,
3 and the production facility itself.

ABERNATHY 09-11-2001 Williams, Richard S.
4 A. All of the information we have indicates
5 that there is no -- there are no coarse
6 features below any portion of the site.
7 or if there are coarse features, they
8 are sufficiently deep and have a
9 sufficient thickness of low permeability
10 over burdened soils that they are not in
11 any way, shape, or form influencing
12 groundwater flow at the site.

13 If I had been asked back in 1996,
14 prior to coming to the site and starting
15 to look at data, to prepare, to just
16 sketch a potential metric map
17 physically, contours of what the
18 groundwater surface would look like for
19 the site, what I would have sketched
20 would be very similar to what we have
21 today on the basis of measurements. The
22 only piece of information I would not
23 have been able to put on that sketch

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1 would have been the depth of the water.

2 But the only -- If I had been
3 given the surface topography and
4 somebody said, "Kind of draw me what you
5 think the water table would look like,"
6 what I would have drawn would have been
7 actually remarkably similar to what we

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8 have there.

9 By and large the groundwater table
10 mimics the ground surface in most places
11 across the United States. Where it does
12 not mimic the ground surface, those are
13 the areas you would look to see why,
14 because it is a departure from the norm.

15 What we have in Anniston, the
16 groundwater surface by and large mimics
17 the topography. You have high
18 gradients, steep groundwater surface
19 coming down the side of the mountain.
20 The gradient is higher. Then you get on
21 to the flat portion below the toe of the
22 mountain, where the plant itself is.
23 The gradient flattens out. And you see

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1 that in terms of -- in the shape of the
2 groundwater surface. And so that tells
3 me that there is nothing below the
4 ground that is causing the groundwater
5 to behave abnormally.

6 Q. well, let me give you my personal
7 definition of coarse flow, which sounds
8 slightly different from what you have
9 described, and let's talk about it from
10 that perspective. When I think of

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 coarse flow, I think of flow that, as
13 opposed to being laminar through an
14 aquifer, that you have conduit flow.
15 And that conduit flow can be -- based
16 upon how the rock has been weathered and
17 channelized, can be other than what you
18 would expect from the potentiometric
19 surface of the aquifer. Do you
20 acknowledge that happens in certain
21 places in the world?
22 A. It happens, yes.
23 Q. Can you comfortably say there is nothing
underneath that south landfill in the

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1 way of a rock formation that could
2 constitute an area where there is flow
3 that is not laminar through the rock,
4 through the strata, but rather is more
5 of a channel flow?
6 A. Within the rock itself, bedrock flow,
7 there will be a weathered zone. And in
8 that weathered zone, certainly in the
9 top of the weathered zone, the highly
10 weathered zone will approximate what you
11 call laminal flow. As you get into the
12 less weathered zone you will tend to get
13 -- start getting more of -- I hate to
14 call it a fracture flow, on fractures,
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15 but it is less weathered. So if that is
16 what you are calling conduit flow, then,
17 yes, that will happen.

18 But the flow above that -- all
19 right -- is through overburdened soils.
20 All of the information we have says the
21 predominant gradients, hence the
22 predominant flux, the predominant volume
23 of groundwater flow across a plain is

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1 horizontal, not vertical. And so the
2 predominant groundwater flow is going
3 to, at least to be affected by the
4 landfill -- to the extent it is being
5 affected by the landfill, is going is
6 going to occur in the overburdened
7 soils.

8 Q. Have you seen any information about the
9 history of the south landfill area that
10 references ore pits?

11 A. Yes. I'm aware that at one time it was
12 -- all or a portion of the south
13 landfill was an iron mine.

14 Q. So do you presume from that that it is
15 likely or perhaps even probable that
16 some of the waste placed in the south
17 landfill was placed directly into rock

18 ABERNATHY 09-11-2001 Williams, Richard S.
19 without any soil between it and the
20 first layer of bedrock?
21 A. It is possible. I don't know that for a
22 fact. I haven't seen reports that say
23 one way or the other. The fact it was
 an abandoned iron mine or strip mine,

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1 you could say, yes, there are places
2 where the rock was probably exposed.
3 Q. Now, if one presumes that there was this
4 connection between the water that can
5 pool around the waste and is right on
6 some layer of rock down beneath, how,
7 if you know, that is not going fairly
8 deep and then heading for Coldwater
9 Spring?
10 A. Well, again, you specifically asked
11 about Coldwater Spring. Coldwater
12 Spring has been -- samples have been
13 obtained of Coldwater Spring for many
14 years. Currently I believe they are
15 sampled quarterly and analyzed for PCBs.
16 There has never been any detection.
17 Q. Do you know what the detection limits of
18 those samples have been?
19 A. I haven't looked at them, no. The fact
20 that they haven't been detected -- You
21 know, the lowest detection limit in

ABERNATHY 09-11-2001 Williams, Richard S.

22 water now routinely tends to be either
23 point five ppb or one ppb. More

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1 commonly point five ppb tends to be the
2 detection limit.

3 Q. Well, that is not the technological
4 limit of what they can look for. That
5 is what typically is reported for
6 municipal water samples?

7 A. Well, I don't know. According to U.S.
8 EPA, for six methods, point five parts
9 per billion is the -- you know, the
10 method -- is the required reporting
11 limit for that method. They can get
12 below that, and it certainly isn't a
13 method detection limit. A method
14 detection limit is not the reliable
15 quantitation limit. It can be reliably
16 replicated in a number of samples. That
17 is the instrument limit.

18 Q. So you were saying in part because you
19 don't see it in Coldwater Spring --

20 A. We have not seen it in Coldwater Spring.
21 And again, I repeat that, based on all
22 the gradients we have, based on all the
23 flow we have, based on the monitoring

- 1 data we have, which the monitoring wells
2 on the south landfill, certainly on the
3 eastern half of the south landfill are
4 in bedrock.
- 5 Q. How far down into the rock do they go?
- 6 A. I can't recall exactly how far down into
7 the rock they go. There are no PCB hits
8 in any of those wells. So all of the
9 evidence that we have says that
10 groundwater is flowing in the
11 overburdened, is flowing primarily
12 horizontally, and that the landfills are
13 not releasing PCBs.
- 14 Q. Okay. And do you feel that if there was
15 a plume in the rock, in the deep
16 aquifer, that plume should have reached
17 Coldwater Spring and should be in a
18 concentration where it would be picked
19 up?
- 20 A. Yeah. Given that PCBs were placed there
21 forty-something years ago, if it was
22 going to leak, I would assume,
23 particularly if the transport mechanism

- 1 is as you described it, more a conduit
2 mechanism. Then groundwater flow
3 velocities within those conduits, I
4 would expect them to be relatively high,
5 higher certainly than what you call
6 laminar flow through the porous medium.
- 7 Q. You haven't seen any dye test results, I
8 trust, in terms of anybody putting --
9 trying to pump some dye down into the
10 landfill cells and then monitor springs
11 and streams in the vicinity for the
12 presence of the dye?
- 13 A. No.
- 14 Q. I'm sorry. I don't remember if I asked
15 you if you all had done any aqueous
16 phase testing for PCBs in Snow Creek.
- 17 A. No, we have not.
- 18 Q. Would it surprise you if someone tested
19 Snow Creek for PCBs and found it in the
20 aqueous phase?
- 21 A. If it was truly in the aqueous phase, in
22 other words, if it was dissolved, then,
23 yes, I would be surprised, given the

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- 1 very low solubility of PCBs,
2 particularly the Aroclors that we are
3 finding in the soils which tend to be

4 ABERNATHY 09-11-2001 Williams, Richard S.
5 the more chlorinated Aroclors with the
6 lower solubilities. My first -- My
7 first impression -- My first question
8 would be then to look at any
9 corresponding total suspended solids
10 measurements that remained in those same
11 samples, because -- and I would go so
12 far as to then filter the samples and
13 try to collect enough filtrate, the
14 suspended matter, and test that
15 suspended matter. Because my belief is
16 that what you are finding would be not
17 truly aqueous phase PCBs but in fact
18 PCBs associated with suspended solids.
19 Q. Okay. Have you seen any data on that,
20 i.e., the PCB concentration in suspended
21 solids pulled from or filtered from a
22 Snow Creek sample?
23 A. Yes.
24 Q. And who did that sampling, and what did

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1 the data show?
2 A. BBL did the sampling as part of the
3 first phase of the off-site RFI. The
4 PCB concentrations on the solid matter
5 in Snow Creek, I'm going to say it was
6 in the four to eight parts per million
7 range. But again, I stand to be
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8 corrected. I have not looked at those
9 data. The data was certainly reported
10 to ADEM.

11 MR. COX: It is in the June 2000
12 off-site report, if that
13 helps, Charlie.

14 MR. CUNNINGHAM: It probably does,
15 but --

16 MR. COX: It is the first BBL
17 report that reported sampling
18 for the off-site --

19 THE WITNESS: The procedure that
20 was used there was we
21 collected water samples, what
22 we call whole water samples,
23 and then filtered those

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1 samples and submitted the
2 filters to the lab for
3 analysis.

4 Q. And just threw the water away?

5 A. Yes.

6 Q. Didn't have that looked at?

7 A. No.

8 Q. As someone whose job it is at this site
9 to provide remediation technical advice,
10 would you agree that one of the things

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 that is going to have to be done is
13 remediate somewhere, somehow, in a
14 fashion that will get that number down
lower?

15 MR. COX: Object to the form.

16 A. Get the number --

17 Q. Is that a number that tells you we are
18 going to have to -- If that number
19 doesn't come down with all the other
20 work we are doing, if it is still there,
21 then we are going to have to do
22 something in Snow Creek?

23 A. Yes. It is just to me -- What that

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1 something is, I don't know. But it is
2 -- Snow Creek is an area that we have
3 definitely -- As a matter of fact in
4 that same June 2000 report, one of our
5 recommendations to ADEM was that we go
6 in the upper portion of Snow Creek,
7 which is where we found the elevated
8 PCBs or the higher PCBs in the
9 sediments. We recommended to ADEM that
10 we do a corrective measure study there
11 now. That corrective measure study is
12 the mechanism by which you compare the
13 alternatives and come up with the
14 selected or recommended remedial

- 15 actions.
- 16 Q. And you are still in the process of
- 17 trying to devise what that recommended
- 18 action will be?
- 19 A. The report is still with ADEM. It is a
- 20 recommendation that we do the study.
- 21 ADEM has not given us the approval at
- 22 this point to do that study.
- 23 Q. All you did was say, "We would like to

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- 1 try to investigate this further," and
- 2 ADEM hasn't given the green light for
- 3 that?
- 4 A. No. We would like to come out and
- 5 actually do the study to select the
- 6 remedial alternative, not investigate
- 7 further.
- 8 Q. Right. And you are going to go out and
- 9 look at things and take more samples and
- 10 say, "Here is where we think we need to
- 11 do something, and here is how we propose
- 12 to do it"?
- 13 A. Yeah, in essence, yes.
- 14 MR. COX: Off the record.
- 15 (Discussion held off record.)
- 16 Q. Are you presently doing anything with
- 17 respect to the south landfill or the

18 ABERNATHY 09-11-2001 Williams, Richard S.
west landfill?

19 A. No. Other than monitoring groundwater,
20 that is about it. Routine operation
21 maintenance, cut grass, inspect it
22 quarterly I think is what the schedule
23 calls for, that kind of stuff.

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1 Q. When you do these work plans -- you
2 described doing one for Quintard Mall,
3 one for the Highway 21 bridge, and you
4 have been involved in doing the planning
5 for the residential cleanup in the
6 consent order -- are you also involved
7 in, as you generate those documents,
8 determining what personal protective
9 equipment the personnel doing --
10 implementing the project will have to
11 use?

12 A. Only in a very general sense. The
13 contractor or the consultant doing the
14 work -- It is Solutia's policy, and I
15 think most companies have the same
16 policy, that they -- I mean, the Solutia
17 plant has a certain safety program,
18 health and safety program. That is the
19 minimum that any contractor or
20 consultant must practice.

21 Greater levels of protection than
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22 are left to the individual consultant --
23 individual company to specify. So each

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1 company in -- Each company is
2 responsible for writing its own health
3 and safety plan to protect its workers.
4 Q. Are you at all involved in oversight of
5 that aspect to ensure that in fact they
6 do meet that Monsanto minimum?
7 A. In a very general sense, not in any
8 detail. Each contractor or consultant
9 that is asked to provide services, to
10 provide data, to provide a proposal,
11 must have satisfied Monsanto's
12 pre-qualification requirements. And in
13 those pre-qualification requirements are
14 spelled out things like minimum safety
15 records, you know, what the minimum
16 plant health and safety requirements
17 are. And that pre-qualification is
18 renewed, I believe, on an annual basis.
19 It is to ensure no contractor who hasn't
20 been pre-qualified can work on the
21 project.
22 Q. Well, I realize you are in Naperville,
23 but I'm assuming you have spent a fair

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- 1 number of days in Anniston, maybe like
2 me, earned a few free flights on
3 Southwest going from Midway to
4 Birmingham?
- 5 A. From time to time, yeah.
- 6 Q. As part of that do you actually go out
7 and, if somebody is digging stuff up,
8 you will actually go eyeball what they
9 are doing?
- 10 A. Yes.
- 11 Q. If you went out there and somebody was
12 remediating a PCB-impacted area and they
13 had mud all over their hands and they
14 weren't wearing gloves, had sandals on,
15 you would feel constrained to say
16 something, I presume?
- 17 A. Yes.
- 18 Q. Because that would be inappropriate?
- 19 A. Correct.
- 20 Q. What about medical monitoring? Is that
21 part of your -- Does that get
22 incorporated in these work documents as
23 well, that there be a baseline

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ABERNATHY 09-11-2001 Williams, Richard S.

1 examination of any personnel and then
2 some kind of followup?

3 MR. COX: Object to the form.

4 A. That's part of the pre-qualification,
5 that the company must have a medical
6 monitoring program and a policy in
7 place.

8 Q. Okay.

9 A. Where there is baseline medical with
10 either annual or biannual updates for
11 certain people that are, you know,
12 exposed or out in the field.

13 Q. Got you. Have you had any role to play
14 in the Choccolocco Creek conservation
15 corridor plan?

16 A. Yes. Not a major role, but, yes, I have
17 been involved in that.

18 Q. What has been your involvement?

19 A. I was involved in the early stages of
20 sort of conceptualizing the plan. I
21 have been involved in providing
22 information to the consultants, to the
23 folks who were managing that effort.

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1 You know, we have a large database of
2 topograph information, land use type
3 information, that sort of thing, which

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8 discussed it with a group of folks in
9 Washington, D.C., called the
10 Conservation Fund. It wasn't -- It
11 didn't evolve -- it wasn't born as a
12 grand idea. It was one of those things
13 you talked about, and as you talked
14 about it, the concept developed.

15 Q. I take it you were being asked at some
16 point for technical advice on what are
17 we going to do with contaminated
18 floodplain soil and sediment on
19 Choccolocco Creek.

20 A. That was one of the -- certainly one of
21 the considerations, was if in fact we
22 have to provide institutional controls
23 to limit access to soils containing PCBs

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1 in the floodplain, what sort of
2 mechanism, short of going and buying the
3 floodplain and putting up a fence, how
4 else could you exercise institutional
5 controls.

6 Q. As an alternative to institutional
7 control, I assume one option perhaps
8 financially out of the question would be
9 to just remediate, correct?

10 A. If by remediate you mean dig it up,

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 yeah, that is one option.

13 Q. Was that option ever entertained in
14 these conversations you had with
15 Mr. Faust and his supervisor and BB&L?

16 A. Yeah. We discussed it, and -- you know,
17 potentially how major an undertaking
18 that would be and what were the
19 alternatives to it.

20 Q. And the conservation corridor and
21 institutional controls conceivably could
22 be a much less expensive alternative way
23 of dealing with that contamination?

A. Yeah. But it would have to satisfy, you

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1 know, the protection standards.
2 Basically it would have to be justified
3 by a risk assessment and have to be
4 protective to the satisfaction of ADEM
5 and U.S. EPA. So in and of itself, any
6 institutional control provided by the
7 conservation corridor isn't necessarily
8 going to be the final remediation.

9 Q. I've seen some discussion about waste
10 piles at the waste water treatment
11 facility, the Anniston waste water
12 treatment facility down in Oxford,
13 basically where Snow Creek empties into
14 Choccolocco Creek. Have you had any

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15 involvement in that?

16 A. Yes, I have been involved in that.

17 Q. What has been your role in that
18 situation?

19 A. Thus far we have produced two work
20 plans. We have produced one work plan
21 for characterizing the areas which
22 remain to be excavated for the
23 expansion. The water treatment plant as

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1 you may or may not know is expanding its
2 ability to handle storm water surges.

3 And to do that, part of that
4 involves the excavation of three basins.
5 They have excavated two of those basins.
6 The third one still remains to be
7 excavated.

8 We have prepared a work plan which
9 was accepted by ADEM and have actually
10 completed the characterization of the
11 soils at the site of the third basin, as
12 well as the soils associated with
13 pipeline corridors which remain to be
14 excavated.

15 We also prepared a separate work
16 plan to characterize the soils which
17 were excavated prior to our involvement

18 ABERNATHY 09-11-2001 Williams, Richard S.
19 with the site and which are currently
20 stockpiled on the east bank of Snow
21 Creek. We have not received any
22 comments from either on that work plan.
23 Q. Okay. Let me review a little bit more
 about what you have done at the Oxford

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1 park and Quintard Mall, and I think I'm
2 done.

3 Let's start with Oxford park. I
4 think you have told me basically what
5 you all's role was there. What happened
6 to the soil that you all took and picked
7 up, remediated?

8 A. Any soil that contained PCBs at
9 concentrations higher than fifty parts
10 per million were sent to Emelle.

11 Q. Okay.

12 A. I'm going to say it was maybe a thousand
13 yards or so that went to Emelle,
14 something of that order of magnitude.
15 It might have been fifteen hundred,
16 might have been two thousand, somewhere
17 in that range.

18 The rest of it is currently being
19 incorporated under a parking lot
20 adjacent to the softball fields, all the
21 soils with PCBs less than fifty parts

22 per million.

23 Q. And do you have an idea of what all that

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1 is going to cost?

2 A. Yeah. By the time it is done, including
3 investigation, design of the parking
4 lot, the excavation and reconstruction
5 of the softball fields, about a million
6 dollars, maybe a little bit more.

7 Q. And how much -- what's the action level?
8 At what point -- what concentration of
9 PCBs do you all agree -- did everyone
10 agree would be left there in the soil?

11 A. In areas where we detected greater than
12 ten parts per million, we excavated to a
13 depth of one foot. Everywhere else
14 where PCBs were at the -- surface
15 concentration of PCBs were less than ten
16 parts per million, we excavated the
17 upper three inches. Now, in reality,
18 construction equipment is such that that
19 three inches is probably closer to six
20 inches.

21 Q. Because I assume you would have them err
22 on the side of taking more?

23 A. Absolutely.

- 1 Q. So as far as you know there is no PCB
2 left on that park?
3 A. Not above one foot depth.
4 Q. Right. Do you have data to suggest that
5 there are PCBs there beneath one foot?
6 A. Yes, there are. We have test results
7 which show PCBs below a depth of one
8 foot.
9 Q. At what kinds of concentrations?
10 A. Some -- There are some samples that we
11 have that were greater than ten. None
12 were greater than fifty. Many of them
13 were less than ten.
14 Q. So is that -- I take it this is an
15 interim remedy, then?
16 A. Yes, it is an interim remedy.
17 Q. And in theory you might have to come
18 back and dig up even those deep PCBs?
19 A. Yes, it is possible.
20 Q. And do you know how long it took to
21 implement that process from
22 investigation to completion?
23 A. The softball fields, from the start of

- 1 the investigation until the time we
2 turned it back over to the city and they
3 used it, about a year. The parking lot,
4 we should finish construction this
5 month.
- 6 Q. All right. Now, let me go to the
7 Quintard Mall for a moment. And am I
8 correct in understanding some of that
9 impacted soil was taken to Emelle, again
10 anything above --
- 11 A. Fifty parts per million.
- 12 Q. And somebody may have suggested to me
13 that they actually used forty, just to
14 err again on the side of caution. Do
15 you recall anything like that?
- 16 A. I -- We used forty to the extent that if
17 we -- You know, if we were excavating
18 and there was a sampling point that came
19 back at forty, yeah, we took it and sent
20 it.
- 21 Q. Okay. And that which was beneath that
22 cutoff point and didn't have to go to
23 Emelle got put under the parking lot?

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- 1 A. Yes, that is correct. It was
2 incorporated under the parking lot.
3 Some of it was incorporated behind the

4 ABERNATHY 09-11-2001 Williams, Richard S.
lining of the Snow Creek channel itself.

5 Q. Which is concrete?

6 A. Yes.

7 Q. This too I guess in theory is an interim
8 measure, and in theory the regulators
9 could come back later and say, "Let's
10 dig it up and deal with it in some other
11 way"?

12 A. That is correct, yes.

13 Q. Have you -- Did you ever say to your
14 client, you know, "That is kind of
15 crazy. Let's just go ahead and put it
16 somewhere now where we know we are not
17 going to have to worry about it again"?

18 A. We talked about it, but, again -- well,
19 two things. One is that the exposure
20 scenario at the mall is such that what
21 was left in the ground there we feel --
22 or I feel comfortable that the risk
23 assessment will show it is adequately

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1 protective, given the cover that is
2 there and given the fact that it is out
3 in the parking lot. So the exposure is
4 such that -- you know, the frequency and
5 duration of exposure is such -- It is
6 not residential. It is what is called
7 low occupancy.

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- 8 So that together with the fact
9 that we have at this point no idea what
10 a final cleanup number is going to be,
11 you know, it doesn't make sense to do
12 anything to try to pursue something
13 that -- I mean, if we pick one, the
14 agency could come back and say, "No,
15 that is not protective enough. Dig it
16 up again."
17 Q. I thought I heard some references to
18 dirt having been taken from the Quintard
19 Mall and put in other residential areas,
20 sold as topsoil I guess. Have you heard
21 anything about that?
22 A. More than I care to, but, yes.
23 Q. Did that happen?

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- 1 A. Yes, it did. I don't know if it was
2 sold. I mean, this was done entirely
3 outside of our knowledge. And we found
4 out about it well after the fact, when
5 somebody called ADEM and said, "I have
6 dirt from Quintard Mall. Can you come
7 and test it?" They tested it. They
8 found low levels of PCBs and called us
9 at that point, and we became involved.
10 Q. Do you know how many yards, residences

11 ABERNATHY 09-11-2001 Williams, Richard S.
we are talking about?

12 A. Twenty-seven -- either twenty-seven or
13 twenty-eight.

14 Q. And could I be pretty confident in
15 assuming that if there were more you
16 would know about it, that you are kind
17 of very much in the loop on this?

18 A. Yes.

19 Q. And these twenty-seven or twenty-eight
20 properties, if -- were they pretty
21 scattered or pretty centralized around
22 the Quintard Mall?

23 A. They are pretty scattered. They go as

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1 far as Jacksonville.

2 Q. Oh, my. And these are the properties
3 that have all been tested and they have
4 all tested positive for PCB?

5 A. No. Some of them -- As a matter of
6 fact, I venture to say maybe half of
7 them were tested as being non-detect.
8 There was one property that tested
9 higher than twenty-five. There were
10 either two or -- No. I think there were
11 seven properties that tested higher than
12 ten. All the rest of them were below
13 ten parts per million. And of all of
14 the rest, some significant portion of

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15 those were non-detects. We have issued
16 a report. There is a report that has
17 been submitted to ADEM on the results of
18 the testing.
19 Q. So to your knowledge has any remediation
20 occurred on any of these properties?
21 A. Yes. On several of them -- and I can't
22 remember how many several is. We are
23 preparing a report on that now. Soil

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1 was removed from a number of them,
2 including some of the properties that
3 were tested -- where PCBs were not
4 detected in the piles. The owners
5 basically said, "Look, I don't care if
6 you found PCBs or not. I don't want the
7 dirt on my property." And we didn't
8 argue. We sent one of our contractors,
9 and we picked up the dirt.
10 Q. Did you have a particular contractor
11 that was involved in that work?
12 A. Yeah. All of that was done by a small
13 contractor we use at the plant for
14 incidental work called Hall Excavating.
15 Q. And any idea how much dirt we're talking
16 about that you all picked up so far from
17 these various sites?

ABERNATHY 09-11-2001 Williams, Richard S.
18 A. No. I mean, it has been probably a
19 couple of hundred cubic yards, would be
20 my guess, at least one roll-off, two
21 roll-offs gone to the landfill. That
22 would be at least a hundred yards.
23 Q. Do you know what you have spent so far

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1 on this?
2 A. No, I don't.
3 Q. Who is footing that bill?
4 A. Solutia is.
5 Q. And I take it, then, in those
6 residential properties there is not a
7 debate about whether or not there needs
8 to be action or whether there should be
9 some kind of interim action or not. If
10 that contaminated dirt is there, y'all
11 are just coming and getting it if the
12 people want it gone?
13 A. If the people request it be removed,
14 yes. In this particular instance we
15 have gone along with that and have
16 removed it.
17 Q. I said I was going to finish with that,
18 but I recall that I brought this
19 document which I'm going to label for
20 purposes of identification as Exhibit
21 Two to your deposition. Take a look at
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22 that, please. Have you seen this
23 document? This is an excerpt. This is

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1 not --

2 (Plaintiffs' Exhibit Number
3 Two was marked for
4 identification.)

5 MR. COX: I object to the extent
6 it is not complete.

7 MR. CUNNINGHAM: I knew he would
8 almost have it memorized so
9 it wouldn't be necessary to
10 bring the whole thing.

11 MR. COX: Not yet.

12 Q. You have reviewed this document before,
13 I presume?

14 A. Yes.

15 Q. And it is my understanding from reading
16 it that these folks came down and talked
17 to various people prior to preparing
18 this report. Were you perhaps one of
19 the people they talked to?

20 A. Yes.

21 Q. Do you remember a name of a particular
22 person or persons that you spoke to?

23 A. No, I don't. They were both employees

- 1 of Lockheed Martin as I recall. They
2 were contractors to U.S. EPA. There
3 were two of them that I spoke to. There
4 may have been others that came and met
5 with other people. There were just the
6 two that I talked to. One was called
7 Cavy, C-a-v-y, Chiu, C-h-i-u. I don't
8 recall the other person's name.
- 9 Q. What if anything do you recall about the
10 substance of that conversation?
- 11 A. The bulk of it was they wanted
12 information as to what we had done on
13 the south landfill in terms of storm
14 water control, the work we had done
15 there, the cover, the caps and covers
16 that we had built. I mean, that was
17 really the bulk of the conversation. We
18 talked a little bit about some of the
19 sampling we had done on the plant site
20 during the on-site RFI. We gave them --
21 There was a supplemental work plan that
22 we prepared for additional sampling that
23 they were not aware of. We provided

1 that to them. I think that was the bulk
2 of the conversation.

3 Q. I want to ask you about some of their
4 recommendations just to determine if any
5 action is being planned in light
6 thereof. One of those was stated that
7 -- and this isn't necessarily the
8 recommendation. It might be better
9 characterized as a conclusion. That
10 considering the volume of PCB waste
11 disposed of at the south landfill and
12 west landfill as well as the operation
13 duration of the two landfills, the
14 amount of analytical data on PCB
15 contamination in soil, groundwater,
16 surface water, and sediment and air for
17 the Solutia property appears to be
18 somewhat limited.

19 Have you made any recommendations
20 to your client about gathering
21 additional data to address what they
22 perceive to be a limited amount of data?

23 A. No, because I don't agree with them. I

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1 mean, as they point out in the report,
2 we only started doing PCB analyses in
3 1997. That is when the new RCRA permit

4 ABERNATHY 09-11-2001 Williams, Richard S.
was issued to the facility. And since
5 then we have been collecting and
6 analyzing media samples, certainly
7 groundwater samples on a semiannual
8 basis.

9 I'm not sure what more frequent
10 sampling would suggest because
11 groundwater, if you are talking about
12 groundwater, it moves so slowly that
13 more frequent sampling -- it is just
14 going to be another of the same number.
15 In terms of surface water sampling, we
16 do that quarterly as part of our NPDES
17 permit.

18 Q. Are you finding any PCB coming off the
19 landfills or the site?

20 A. Coming off the landfills, no. We have
21 tested water coming out of the lower
22 detention basin, which is where the
23 storm water off the south landfill goes.

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1 We have tested that particular effluent
2 stream on more than one occasion, and
3 every time it has been non-detect.

4 We recently -- recently being I
5 think two quarters ago, the first
6 quarter of this year, April, March or
7 April, somewhere in there. In that

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ABERNATHY 09-11-2001 Williams, Richard S.

8 sample, we detected very low levels of
9 PCBs, two parts per billion I think, in
10 the storm water effluent off the plant
11 site itself. And we can discriminate
12 the effluents because the way the system
13 has been designed is that each one is
14 contained in a separate pipe. So we
15 know where the water is coming from.
16 That water from that pipe is coming from
17 there.

18 Q. Go ahead.

19 A. We detected those, as I said, a very low
20 level in the water. And we implemented
21 a program of going upstream to see if we
22 could identify the source of that. What
23 we found was that there were some

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1 residual materials on the outside walls
2 of a warehouse in the plant which tested
3 -- We took samples and it contained high
4 concentrations of PCBs.

5 We submitted a work plan to ADEM
6 to characterize that warehouse. We have
7 done that. We have submitted the
8 results of the characterization and
9 submitted an interim measures plan
10 proposing to implement those measures

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 now. As a matter of fact, we haven't
13 heard back from ADEM. But we have
14 received bids from a contractor or
15 contractors last Friday.
16 Q. When I got to take a plant tour several
17 years ago, I only recall one warehouse
18 kind of in the middle of everything. Is
19 that --
20 A. No. There are two warehouses. There is
21 one warehouse adjacent to the plant
22 gate, not the main -- You know, you come
23 in off the road to the administration
building, and then there is a gate, a

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1 fence and a gate, which is accessing
2 into the plant. As soon as you go
3 through that gate, there is a warehouse
4 off to your right, which would be the
5 south side of the access road -- north
6 side. Sorry. It is sort of a tin
7 siding and roofing. That's the
8 warehouse I'm referring to.
9 Q. Okay. The next statement that is made
10 in here is that analytical data shows
11 that PCB-contaminated soil remains in
12 the manufacturing facility. Do you
13 agree or disagree with that statement?
14 A. Yes, it does. But it is covered by one
Page 172

- 15 type of cover or another.
- 16 Q. And they recommend that the extent of
- 17 that contamination should be
- 18 investigated one way or another. Do you
- 19 disagree with that conclusion?
- 20 A. Yes, by and large, because as I say, we
- 21 have a cover of one kind or another. It
- 22 is concrete, asphalt, gravel, or it is a
- 23 thick root mat.

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- 1 Q. Okay.
- 2 A. So I mean, I'm not sure why I need to go
- 3 defining the extent any more if I have
- 4 it under cover.
- 5 Q. All right. They talk also about some
- 6 cells in the former catchment basins in
- 7 the south landfill should be covered
- 8 with a composite geosynthetic cap or
- 9 diligently maintain the existing cover.
- 10 would you agree with that?
- 11 A. Yeah. We diligently -- The option being
- 12 to either put a new cover on or maintain
- 13 it. We have -- We have an operation
- 14 maintenance plan which has been approved
- 15 whereby we, you know, maintain the
- 16 landfill cover on the cells. So we are
- 17 comfortable that the cover is in good

18 ABERNATHY 09-11-2001 Williams, Richard S.
18 shape. And if in fact it becomes
19 eroded, we would identify the erosion
20 fairly early.
21 Q. It says it may be prudent to collect a
22 representative number of samples from
23 the uppermost soil of the cap to ensure

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1 the absence of PCBs. It seems to me
2 that is one of the things you looked at
3 before today, looked at data in that
4 regard. Do you know if that has been
5 looked as since the data you talked
6 about?

7 A. No, it hasn't.

8 Q. Do you --

9 MR. COX: Now, I think that is the
10 recommendation to vary the
11 source of the borrow
12 material.

13 THE WITNESS: Yeah. They are
14 talking about doing it on the
15 new cover.

16 Q. Right, the new cover. And I'm saying I
17 think that may postdate some of these
18 numbers -- some of the data you were
19 looking at.

20 A. Certainly. The data I was looking at
21 was prior to the construction of the new

22 cover.

23 Q. Do you envision going out and doing the

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1 kind of sampling they recommend to see
2 if there is PCB in that cap?

3 A. Again, I don't see the need for it. The
4 borrow materials came -- the borrow
5 materials in those landfills came from a
6 forty-foot deep pit, which was excavated
7 on soil that was never a part of the
8 manufacturing process, never anything
9 built on that area. If you go back and
10 look at the historical aerial
11 photographs, it was always heavily
12 forested and treed. So to the extent
13 there may have been PCBs, they would
14 have been near surface PCBs, and those
15 soils were, you know, stripped and
16 removed. The soils that we used, as I
17 say, in the cover came from forty feet
18 deep.

19 Q. okay.

20 A. And they are natural -- It is forty feet
21 deep natural soils, not fill. We didn't
22 find any foundry sands there.

23 Q. with all due respect, I'm guessing that

- 1 a year ago you wouldn't have envisioned
2 a need to clean up the side of the
3 warehouse either.
- 4 A. That's true.
- 5 Q. It says the vertical extent of PCB
6 contamination of the area adjacent to
7 the west end land fill requires
8 delineation. Do you agree or disagree
9 with that statement?
- 10 A. I disagree because I don't see what
11 purpose it would serve to develop that
12 information.
- 13 Q. In other words, as far as you are
14 concerned, whatever may be there, it
15 ain't going anywhere, so what difference
16 does it make?
- 17 A. That's exactly right.
- 18 Q. If the levels were really high, like --
19 you mentioned finding some stuff by the
20 slip there in Waukegan of basically
21 sixty-four percent PCBs. Have you seen
22 some of the early sampling data from
23 APCO where they found, again, percentage

1 PCB hits?

2 A. Yes, I'm aware of that.

3 Q. If you had levels like that beyond this
4 west end landfill, would that be
5 something that you felt should be dealt
6 with more strenuously than has been done
7 to this point in terms of what is
8 covering it?

9 A. No, sir, because, again, I look at what
10 the potential exposure routes are. It
11 is behind a fence, and it is on property
12 that is controlled and owned by Solutia.
13 Trespassing, you know, there are no
14 attractive nuisances that would
15 encourage people to climb the fence to
16 get out on the property. So
17 trespassing, to the extent you can
18 control trespassing, is minimum, or the
19 potential for trespassing. And you have
20 at least a foot of clean soil over the
21 top of it. Solutia will not be digging
22 in that area, nor will Solutia permit
23 anybody to dig in that area. So when

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1 you talk about risk, to have a completed
2 pathway -- to have completed exposure,
3 you to have a pathway, and that pathway

4 ABERNATHY 09-11-2001 Williams, Richard S.
isn't there.

5 Q. okay. The last sentence in that
6 paragraph reads sediments in the
7 drainage ditches, the sediment pond, and
8 silt-fenced areas in the west end
9 landfill should also be collected and
10 analyzed for PCBs. My sense there is we
11 are talking about more surficial soils,
12 and therefore a completed pathway is
13 more envisioned or hypothesized. So
14 would you agree with that statement?

15 A. I'm not sure what they are talking about
16 when they say the silt-fenced area of
17 the west end landfill. I mean, I read
18 it, but I don't know what they are
19 talking about.

20 Q. All right.

21 A. In the sedimentation pond itself, there
22 is always water in the pond.

23 Q. Well, there is always some water, but

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1 that level fluctuates, does it not?

2 A. Yes, it does. But the sediments in the
3 pond, at least the area where the fine
4 sediments settle out, pretty much is
5 always covered with water. It has been
6 for the past couple of years. And the
7 reason -- we basically manage the pond

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8 to maintain water in it as a wildlife
9 habitat.

10 Q. okay.

11 A. Now, the drainage ditch along 202, there
12 has been sediment that has collected in
13 there since we constructed it. I don't
14 know how -- the sediment that has
15 collected in the bottom, I don't know
16 how far it goes back. I know we have
17 removed sediments from the bottom of
18 that ditch probably three or four times
19 since we have -- since we lined the
20 ditch. So the sediment has been
21 removed.

22 Q. You are talking about what collects on
23 top of the concrete?

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1 A. Yeah. We have removed that.

2 Q. What was the PCB content?

3 A. We didn't test it. We just disposed of
4 it in a landfill.

5 Q. When we tested it, it tested positive
6 for PCBs.

7 A. Like I said, we just sent it --

8 Q. Just assumed it did?

9 A. Yes.

10 Q. Okay. Do you envision -- So you are not

11 ABERNATHY 09-11-2001 Williams, Richard S.
12 going to test it because you are always

13 going to take it to a landfill?

14 A. Yeah, clean it and send it. Now, I
15 won't say always. We did that because
16 at the time that -- you know, the time
17 the sediment was collecting -- Very
18 little sediment collects now. The time
19 of the sedimentation was fairly soon
20 after construction.

21 Now that we have a very healthy
22 vegetative cover on the landfill and the
23 areas around the landfill, to the extent
sediment is collecting now, I would

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1 advocate they test it rather than make
2 the decision to send it to a landfill,
3 because I believe enough time has gone
4 by that the vegetative cover we have has
5 stabilized it to the extent that I don't
6 think that sediment is going to test
7 positive. I mean, that is an opinion.
8 I -- You know, we may test it and may
9 find PCBs.

10 Q. And the fact that there is sediment
11 there suggests that the vegetative cover
12 -- to the extent that sediment came from
13 the cap area, that there is some erosion
14 going on?

15 A. Yeah. But as I say again, there is very
16 little.

17 Q. It is getting less and less?

18 A. Yeah.

19 (A break was taken.)

20 Q. Coming down in the next paragraph, PCB
21 contamination has been found in two
22 wells located on the buy-out property
23 across the railroad tracks from the

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1 manufacturing facility. Is that
2 consistent with your interpretation of
3 the data?

4 MR. COX: He skipped the part
5 about groundwater not being a
6 major pathway.

7 Q. Certainly compared to the amount of PCB
8 being spread from other pathways, it is
9 comparatively trivial. But if you are
10 drinking it, I don't think it is
11 trivial, but I don't think anybody is.

12 But does that statement that they
13 say -- is that consistent with your
14 interpretation of the data?

15 A. PCBs have been detected in samples from
16 those two wells. Looking at the
17 filtered data, again, I don't believe it

ABERNATHY 09-11-2001 Williams, Richard S.

22 the air pathway remains a major concern.
23 PCB-contaminated particulates can become

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1 airborne easily, and the nearby
2 residents can be exposed to
3 PCB-entrained particulates through
4 inhalation. Again, do you concur or
5 disagree with their conclusion that the
6 air pathway remains a major concern?
7 A. I disagree, because the monitoring
8 results we have, you know, based on all
9 the data that I seen, like we talked
10 about earlier, tells me that no, that is
11 not a major concern.
12 Q. Okay. And later in that paragraph it
13 says recent photograph documentation
14 shows that some areas near the Solutia
15 property are still subject to flooding.
16 Have you seen such photographic
17 documentation?
18 A. No, I haven't. When I read the full
19 report, I starred that statement because
20 I haven't seen any significant flooding
21 in the area. That doesn't mean it
22 doesn't happen.
23 Q. The next paragraph indicates that to

- 1 determine if PCBs are released to the
2 air from the Solutia property, it will
3 be necessary to conduct high volume
4 ambient air sampling at the two
5 landfills and at the manufacturing
6 facility. Is Solutia still conducting
7 high volume air sampling?
- 8 A. Yes, they are.
- 9 Q. Have you changed your regime in any way
10 since this report came out?
- 11 A. No.
- 12 Q. And if I understand correctly, you all
13 are still debating with ADEM exactly
14 what the final protocol will be for
15 trying to get a handle on where this
16 elevated PCB in air is coming from?
- 17 A. That's correct. At this point we had a
18 meeting fairly recently with ADEM, and
19 where we're at is we undertook to submit
20 a work plan to them outlining steps that
21 we propose or basically the scope of the
22 investigation that we propose.
- 23 Q. Okay. So you all are working up this

1 revised proposal?

2 A. That's correct.

3 MR. CUNNINGHAM: Okay. That's all

4 I have.

5

6 (The deposition concluded at

7 5:40 p.m.)

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1 I do hereby certify that the witness
2 whose attached deposition was taken before me
3 was by me first duly cautioned and sworn to

ABERNATHY 09-11-2001 Williams, Richard S.
4 tell nothing but the truth in the cause
5 aforesaid; that the testimony contained herein
6 was by me reduced to writing in the presence
7 of said witnesses by means of stenography and
8 afterwards transcribed by means of computer
9 aided transcription. The foregoing is a true
10 and accurate transcript of the whole of the
11 testimony given by said witness, as aforesaid.

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

17 IN WITNESS WHEREOF, I have hereunto set
18 my hand and affixed my notarial seal at
19 Gadsden, Alabama, County of Etowah, this 20th
20 day of September 2001.

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

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1 WITNESS' CERTIFICATE

2 I, the undersigned RICHARD S. WILLIAMS,
3 Ph.D., P.E., do hereby certify that I have
4 read the foregoing deposition transcript and
5 that to the best of my knowledge said
deposition is true and accurate with the
exception of the following corrections listed
below:

6	Page	Line	Reason for Change or Correction
7			

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