

UNITED STATES DISTRICT COURT

DISTRICT OF MASSACHUSETTS

Civil Action
No. 82-1672-S

SKINNER, D. J.
and a Jury

ANNE ANDERSON, ET AL

V.

W. R. GRACE & CO., ET AL

Forty-Ninth Day of Trial

APPEARANCES:

Schlichtmann, Conway & Crowley (by Jan Richard Schlichtmann, Esq., Kevin P. Conway, Esq., and William J. Crowley, III, Esq.) on behalf of the Plaintiffs.

Charles R. Nesson, Esquire, on behalf of the Plaintiffs.

Herlihy & O'Brien (by Thomas M. Kiley, Esq.) on behalf of the Plaintiffs.

Hale & Dorr (by Jerome P. Facher, Esq., Neil Jacobs, Esq., Donald R. Frederico, Esq., and Deborah P. Fawcett, Esq.) on behalf of Beatrice Foods.

Foley, Hoag & Eliot (by Michael B. Keating, Esq., Sandra Lynch, Esq., William Cheeseman, Esq., and Marc K. Temin, Esq.) on behalf of W. R. Grace & Co.

Courtroom No. 6
Federal Building
Boston, MA 02109
9:00 a.m., Thursday
May 22, 1986

Marie L. Cloonan
Court Reporter
1690 U.S.P.O. & Courthouse
Boston, MA 02109

P R O C E E D I N G S

THE COURT: All right. Recross by
Mr. Facher.

GEORGE S. PINDER, Resumed

RECROSS-EXAMINATION BY MR. FACHER, Continued

Q Dr. Pinder, are there any corrections that you wish to make to any part of your testimony or to any of the exhibits this morning, please?

A Not to my knowledge.

Q Can you tell me, sir, have you now changed your earlier testimony that the pump tests that were carried out between December 4th and January 3rd were supposed to recreate the historical pumping conditions under which Wells G and H pumped during the period 1964 to 1979?

A I think that was the original intent of the decision to pump those wells at their capacities.

Q So it is now your opinion that the pump test that was carried out between December 4th and January 3rd, did not simulate the historic pumping conditions during that period, 1964 to 1979, except perhaps with two or three percent of the time when Wells G and H were pumping full time together?

A If we exclude the step test before the long-term

1 what was happening in the sixties and seventies, but Wells G
2 and H were not because they were going at full steam all
3 the time, right?

4 A I think we agreed that G and H at pumping full
5 capacity represents a small portion of the entire historical
6 record.

7 Q Now, you say you looked at the Woodward-Clyde report.
8 You said yesterday you looked at the Woodward-Clyde report
9 to find out about information or get some information about
10 the Riley well. Do you remember saying that?

11 A Yes, sir.

12 Q And the Woodward-Clyde report is in evidence as
13 Exhibit 679, and were you able to tell what gallonage they
14 were pumping at, the so-called -- that's what they call the
15 production well, is what these Riley pumping wells --
16 Were you able to tell what they were pumping at?

17 A Well, the report that you have in your hand is probably --

18 Q It says up to 800 gallons per minute, as I read it.

19 A Yes, but they actually quote historical pumping from
20 the other document where they tell you that the --

21 Q Which other document?

22 A There's a Woodward-Clyde report where they report 325,000
23 gallons per day pumped on the average and --

24 Q Which other document are you talking about, some other
25 document that you weren't referring to?

1 A It may be in front of this.

2 Q In any event, sir -- I'll take your word for it.

3 In any event, sir, the two wells were on at what you
4 thought was historic pumping, and these were not on at
5 historic pumping rates. And do you know whether the
6 Riley wells were on during the step test or not?

7 A No, sir, I don't have knowledge of that.

8 Q Well, now, the Woodward-Clyde -- You said you reviewed
9 the Woodward-Clyde report. The Woodward-Clyde report said,
10 at Page 13, referring to the conditions when the well was
11 on, under the Woodward-Clyde report, "Nothing observed during
12 this test, or an analysis of the data supports a conclusion
13 that a cone of depression could propagate under the Aberjona
14 River system."

15 You saw that in the Woodward-Clyde report
16 when you were reviewing it, did you not?

17 A Unless I am mistaken, sir, I believe they are talking
18 about the cone of depression that they created during
19 their pumping test.

20 Q Of the Riley well?

21 A Yes, and I don't think that is the issue.

22 Q And the -- You also observed that the influence
23 of the Riley well, according to Woodward-Clyde, drew the
24 contaminants from the Beatrice site?

25 A I think that my testimony reads that --

1 Q Did you observe that?

2 A -- that the cone of depression of the pumping test
3 conducted by this organization --

4 Q And you know the organization?

5 A Woodward-Clyde.

6 -- drew some contaminants to the well.

7 I have no problem with that.

8 Q Well, it says, does it not, sir, that -- You want to
9 look at it with me -- that "The sources of groundwater
10 contamination at the Riley site likely is due to on-site
11 and off-site sources. Well location 71 represented
12 up gradient conditions for the site.

13 The measured concentration of analyzed volatile compound
14 indicate the contaminated groundwater is entering the
15 site from one or more off-site sources located north or west
16 of the Riley property."

17 Did you see that?

18 A I think we read it together, sir.

19 Q All right.

20 I take it, sir, that that didn't change your
21 opinion at all about the source of contamination.

22 A No, sir, that doesn't change my opinion at all.

23 Q Well, now, this little squiggle up here, looking at
24 the Aberjona River, there's this little whatever it's called,
25 tributary, that's the little squiggle, if I can use that

1 word, that Mr. Keating was talking to you about yesterday
2 about the existence of chemicals on the Hemingway site.

3 MR. SCHLICHTMANN: Objection, your Honor.
4 Scope.

5 THE COURT: Excuse me?

6 MR. SCHLICHTMANN: Objection to the scope.

7 THE COURT: Scope?

8 MR. SCHLICHTMANN: Scope.

9 THE COURT: Can I have the question?

10 (Question read back.)

11 THE COURT: It's outside the scope of
12 redirect, but Mr. Facher is in a position to cross-examine
13 about matters raised by Mr. Keating. The redirect
14 examination, I see from the transcript, was a mere 20
15 pages, so that it's a very restricted -- I also see a --
16 Remind me at the recess to point out an error in the
17 transcription. I'm not sure.

18 Q That is more accurately pictured, that is, this blue
19 tributary more accurately pictured on it, what we'll call
20 the well location map, but it's the same location that
21 we're talking about because you understand it, that Mr.
22 Keating drew this rough diagram of?

23 A Yes, I think I understand what he's trying to draw
24 there.

25 Q And these concentrations -- So you would agree that

1 that's an off-site, that is off the Beatrice site, no
2 question about it?

3 A I believe we're talking about that being located up in
4 here.

5 Q I have it right in here.

6 A I have no problem with that.

7 Q No question it's north?

8 A No, sir.

9 Q No question under normal pumping conditions, north to
10 south is the general flow, north to southeast?

11 A North to southeast. I will buy that.

12 Q Well, now, were you aware of -- and these are soil
13 numbers, are they not, as you understood them?

14 A We're not quite sure yet, I think, what those numbers
15 mean. We know that they are concentrations in terms of
16 dry soil. I don't think we've any water quality samples
17 from the groundwater on that site.

18 Q That's what I said, I think they're soil.

19 A Whatever that means.

20 Q Well, do you know what an auger sample is?

21 A Yes, sir.

22 Q And do you know if the result of an auger sample says
23 3,000 parts per billion, what that means?

24 A If you just told me that, I wouldn't be able to get much
25 out of it unless they told me they took the sample and drained

1 water out of it or something like that.

2 Q No, did you know that Weston, Mr. Drobinski and
3 Weston Geophysical took 19 auger samples at the Beatrice
4 site?

5 MR. SCHLICHTMANN: Objection. Scope.

6 THE COURT: Sustained.

7 Q You said, sir, that you disagreed with the Woodward-
8 Clyde conclusion that you read about off-site contamination?

9 A I see no evidence, sir, that we've contamination moving
10 in from the north.

11 Q Have you compared the results of auger samples, the
12 evidence of the auger samples and their readings with the
13 evidence or with the assumed numbers that Mr. Keating showed
14 to you for these chemicals?

15 A The one set of samples that sticks in my mind had
16 concentrations that I think were in the order of a thousand
17 times higher than what you've drawn up there.

18 Q Have you -- I'll show you, sir, the results --

19 MR. SCHLICHTMANN: Your Honor, may we have
20 a side bar on this situation of scope?

21 THE COURT: No, I don't even have a question
22 before me.

23 Q Are you aware, sir -- Did you compare the evidence
24 of the 19 auger samples or not?

25 MR. SCHLICHTMANN: Objection, your Honor.

1 THE COURT: Sustained.

2 Q Were you aware, also, sir, in your testimony that
3 you didn't consider that that was an off-site source, that
4 there were drums found up there as well as soil contamination?

5 MR. SCHLICHTMANN: Objection.

6 THE COURT: Overruled.

7 A Was I aware of drums?

8 Q Yes, contents of drums, barrels, that had been tested
9 by the EPA?

10 A I don't think I had any knowledge of that.

11 Q Were you aware, sir, when you just testified about not
12 agreeing with the Woodward-Clyde conclusion, that TCE
13 has drum contents, was only 3,000 parts per billion, where-
14 as these numbers that Mr. Keating showed you showed TCE as
15 390,000? Were you aware of those two figures?

16 A Sir, they are two different measurements. We can't
17 compare apples and oranges. This is concentration per unit
18 of mass of volume and soil. The other is a unit per unit
19 of volume of water. If you look at the actual measurement,
20 you'll see the sensitivity on these numbers is like a thousand
21 times lower than what it is on the other numbers.

22 Q The auger sample would be --

23 A Auger samples, if they were both the same units of
24 measurement, would be comparable.

25 Q And if I told you the auger samples at the site, the

1 highest auger sample reading was 32,000 parts per billion,
2 that would indicate that Hemingway was a more likely site
3 source of the contamination than Beatrice, would it not?

4 MR. SCHLICHTMANN: Objection, your Honor, one
5 on facts not in evidence, and two, the scope.

6 THE COURT: Where are you getting these
7 figures from, Mr. Facher?

8 MR. FACHER: The auger samples, I believe,
9 are in evidence. The figure I'm using is the one that
10 Mr. Keating used yesterday on his assumption.

11 THE COURT: Overruled.

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1 A Would you reask the question, please?

2 MR. FACHER: I will be glad to. May I
3 have it read back, your Honor?

4 THE COURT: Please read the question.

5 (Question read.)

6 THE WITNESS: If I assume --

7 MR. SCHLICHTMANN: May I just ask something?
8 Is he referring to the 32,000 as being a particular chemical?

9 MR. FACHER: Yes. The chemical is TCE.

10 MR. SCHLICHTMANN: Trichloroethylene?

11 MR. FACHER: Yes, sir.

12 THE COURT: You can answer the question.

13 THE WITNESS: If we assumed that that is all
14 of the information that we have and we ignore all the other
15 information about the site, absolutely everything else,
16 just having those two numbers, I would be willing to agree
17 that, if it was put in the ground at the same time, the
18 two sources would be equally likely.

19 Q Now, if we compared drum contents to drum contents,
20 that would be a fair measurement, wouldn't it, instead of
21 apples and oranges if I gave you two drum readings?

22 A At least we are working with the right unit.

23 Q Assume that the drum contents of Perc were found at
24 74,000 parts per billion at Hemingway or sometimes called
25 Olympia Trust, and the drum contents of Sample 3, which is

1 in evidence and the only drum contents which we have, showed
2 only 1400 parts per billion of drum contents, wouldn't that
3 fact suggest to you Hemingway was a more likely source?

4 A I assume that they are buried drums, are they, sir?

5 Q No. They are drums on the surface I would assume.

6 A I think it would not be relevant.

7 Q You don't know anything about drums buried at
8 Beatrice?

9 A No, sir.

10 If they are sitting on the surface, I would
11 not think that that was particularly relevant.

12 Q You can't tell much from a barrel sitting on the
13 surface, right?

14 A It depends on the barrel.

15 Q If the barrel --

16 A I haven't seen the barrel.

17 THE COURT: The point is if it is in the
18 barrel it is not in the ground.

19 THE WITNESS: That is the point I am trying
20 to make.

21 Q So if it was in the barrel at Beatrice or if it was
22 in the barrel at Hemingway, you still can't tell much from
23 it?

24 A Not in and of itself. I think having a barrel with
25 something in it, unless by inference you can get it in

1 (After recess.)

2 THE COURT: Last round.

3 MR. KEATING: Last round, your Honor.

4
5
6 RECROSS-EXAMINATION BY MR. KEATING

7 Q Dr. Pinder, do you recall yesterday when I asked you
8 how you arrived at the 75-foot-per-day figure for hydraulic
9 conductivity? Do you remember my asking you that?

10 A Yes, I remember that question, yes.

11 Q And you said at that time that you used values to
12 determine that conductivity, and I asked you, "Could you
13 tell me what the values were that you used?" and you said
14 that you'd thrown them out, or your words were, "It wasn't
15 something I saved."

16 A You mean the arithmetic calculations; is that what
17 you're referring to?

18 Q Yes, that's right.

19 MR. SCHLICHTMANN: Your Honor, is he going
20 to go over testimony?

21 MR. KEATING: I was just going to go
22 through some preliminary questions.

23 THE COURT: Yes, I gathered that.

24 Q Then I asked you how would we be able to test what
25 you had, the values that you had selected if you hadn't

1 saved them, and you -- I don't recall what your response
2 was to that.

3 Then Mr. Schlichtmann got up after I had
4 completed my examination, and on redirect he asked you
5 a question about how you determined the hydraulic
6 conductivity figure of 75 feet.

7 A I remember the redirect question. I don't remember
8 the other one.

9 Q Well, I'll get to that in a moment.

10 Now, yesterday, when I asked you a question,
11 you said, and I'll read you what your answer was to the
12 question, you said, "I did average specific values. I
13 don't happen to have the calculations with me, but I did
14 precisely what you said, and I took into consideration
15 each of the different materials and I did an average."

16 Now, today you were asked by Mr. Facher
17 how you arrived at conductivity figures. You said --
18 and he said, "Was it an average?"

19 You said, I believe, "No, it was a
20 representative value."

21 A That's correct, for Beatrice.

22 Q Now, which did you do? That's what I'm interested
23 in.

24 A Both statements are correct.

25 In the case of Beatrice, we basically have

1 one material that we're working with. So the number
2 that I prepared was based on my knowledge of that material
3 as a whole and I didn't go through some kind of arithmetic
4 computation.

5 In the case of Grace, as you're well aware
6 I'm sure, the material properties change as you go from the
7 Grace site down to the well field. Consequently, I
8 conceived, in different parts, I have a very permeable
9 bottom, I have a relatively highly permeable middle
10 section, and then the Grace site itself has a lower
11 permeability.

12 So in that sense, I'm combining information
13 on three different materials, and while I can't tell you
14 exactly how I came up with that number, I did some type
15 of averaging at least in my mind of those different values.

16 Q All right. In other words, you took a certain value
17 for a certain portion of the area between Grace and the
18 wells and you took another value for another portion and
19 a third or fourth value?

20 Do you know how many values you used?

21 A Well, as I tried to indicate, it's not a simple
22 arithmetic thing. It's a recognition that we have
23 changes from Grace down to the well field, and it's my
24 recollection that I was conceiving of the system as
25 basically three parts, as I've indicated, the less

1 permeable Grace area, the quite permeable intervening
2 area, and the extremely permeable bottom area.

3 Q And I take it that, as you testified yesterday, the
4 calculations that you did, the data that you used which
5 represents that activity that you just described as data,
6 that you did not keep?

7 A Well, I think that, if I represented my answer as
8 if I sat down and did an arithmetic calculation, that is
9 not in fact how it would go because it's really based on
10 judgment in the sense that you have to weight these values
11 in some way. It really doesn't reduce to a simple
12 arithmetic calculation at that level.

13 Now, it may happen at the level where I
14 am thinking about, for example, what's the most appropriate
15 value for the Grace site at that point. I may have done
16 some actual arithmetic averaging to come up with that,
17 but --

18 Q Otherwise it was done in your head, so to speak?
19 I mean, based on what you sort of feel for the situation?

20 A Yes, looking at the numbers and looking at the
21 materials, interacting with other computations to bring
22 to bear everything that I think was relevant, that seemed
23 to me at that point in time to be a value that was
24 representative and yet conservative in the sense that it
25 was most --

1 Q Favorable to the defendants?

2 A Favorable to the defendants. I always do that.

3 Q I assumed that was what you were going to say.

4 A I'm quite sure it is.

5 Q Now, when Mr. Schlichtmann asked you about your --
6 about the method of your determining the hydraulic
7 conductivity, this is what you said, you said:

8 "Well, there is observations of the boring
9 logs that were prepared by whoever was on the site when the
10 drilling was done, and there is values of permeability that
11 were determined by slug tests on the Grace site, and there
12 is an understanding of the distribution of materials on
13 the site which is derived in substantial measure from an
14 understanding of the kinds of geologic processes that
15 occurred in that general location."

16 Do you remember saying that?

17 A Yes, that sounds like what I did indeed say.

18 Q Now, did you look at the boring logs to determine
19 a hydraulic conductivity figure for peat?

20 A I don't think that there was peat on the Grace site.

21 Q No, I'm not talking about the Grace site. I'm
22 talking about the area between the Grace site and the
23 well field.

24 MR. SCHLICHTMANN: I would object on the
25 scope of that.

1 MR. KEATING: Well, I'll tie it in if you
2 want, your Honor.

3 THE COURT: I'm overruling the objection.

4 Q The Court asked you, in fact yesterday afternoon,
5 about permeability and the relationship between historic
6 pumping and how it was affected by the river; and you
7 discussed factors such as permeability of various sections
8 of the aquifer and whatever. That's really what I'm
9 driving at.

10 A We did look at peat because, although it's not the
11 major impeding layer, it does constitute part of that
12 impeding layer with respect to the river. So, yes, we
13 considered that, the peat.

14 Q Well, did you use a hydraulic conductivity figure
15 for the peat? Do you have in mind a specific hydraulic
16 conductivity figure?

17 A Now, are we speaking to the travel from Grace to the
18 well field, sir?

19 Q Yes, sir, we are.

20 A Okay, in that particular travel line, I don't think
21 that the peat plays a role.

22 Q How about in terms of, did you look at boring logs,
23 and I direct your attention to the Court's inquiry
24 concerning how the historic pumping of Wells G and H are,
25 whether it was affected by the river and whether that

1 depended on factors such as the permeability of various
2 sections of the aquifer through, as the judge said, which
3 all this stuff is running.

4 Did you in that connection determine what
5 a hydraulic conductivity figure was for the peat that
6 lay between the river and the wells or in that general
7 vicinity?

8 A We, in all calculations, would use a value for the
9 entire section. That is, the section from the main
10 aquifer to the river. And in establishing that number,
11 we would be thinking about the properties of the silt --
12 I beg your pardon -- of the peat. I did not do any tests
13 to establish a particular value for that.

14 Q Well, when you testified, Dr. Pinder, you testified
15 that there was an envelope of peat that ran down the
16 river, as I understood it, at some point between Salem
17 Street and Olympia Avenue. And, somehow, that envelope
18 of peat acted in a way to retard or keep water from moving
19 from the river.

20 Do you remember testimony to that effect?

21 A You used two different words there and perhaps I'm
22 too specific, but retard I think is the appropriate word.

23 Q All right.

24 A Because I think that my understanding is that peat,
25 being a highly organic material, is much more effective in

1 retarding in the sense of true retardation of chemicals.

2 Q Let me interrupt you, and trust me, I'm trying to
3 get through this quickly, Doctor.

4 If you could keep your answers to a yes
5 or no, if possible, I'll appreciate it.

6 A All right.

7 Q Did you calculate a peat layer and then a hydraulic
8 conductivity figure?

9 And I guess you said you didn't for
10 hydraulic conductivity, but did you calculate a peat
11 layer between the river and Wells G and H?

12 And, if so, did you look at the boring
13 logs that Mr. Schlichtmann, you mentioned in response
14 to Mr. Schlichtmann's question on redirect examination?

15 A I looked at the boring logs and observed distribution
16 of peat in the area.

17 Q What did you conclude and what did you use having
18 looked at the boring logs about the peat? What did you
19 use? How much peat is in this area?

20 What did the boring logs tell you about
21 that?

22 THE COURT: One question at a time.

23 Q What did the boring logs tell you?

24 MR. KEATING: I'm sorry, I'm not making
25 this any quicker.

1 A The boring logs indicated that they were something
2 in the order of say three to seven feet of peat, and
3 various parts of the ~~valuable~~ ^{boreholes} ~~holes~~ had been put in place.

4 Q Now, Dr. Pinder, I want to give you the boring logs
5 for Wells 85, 87, 39, 8, 91, 40, 93, 96, 77, and 92.
6 I'll represent to you that in each of these separate
7 envelopes or folders are the boring logs for those
8 particular wells and I'm going to bring you --

9 A You'd like me to go through these?

10 Q I think I've highlighted them in yellow just to
11 make it quick.

12 I want you to tell us what was the peat
13 that those boring logs showed existed in those particular
14 wells which are in the well field of Wells G and H, and
15 I'd like you to start first with Well S-85, which is
16 approximately 300 feet north of Well H.

17 What does the boring log on Well S-85 tell
18 us about peat?

19 I'll make it even quicker. It says,
20 "There is no peat," isn't that true?

21 A Well, I was just checking through the ledger to get
22 it perfectly clear in my mind what this was all about, but
23 I think it's fair to say that they have not specified peat
24 explicitly in this S-85.

25 END h

lm/ez

1 Q How about S87, which is between S85 and Well 8, what
2 do they tell you about peat at that location?

3 A They say -- 87 says peat?

4 Q Yes, how much.

5 A One and a half feet.

6 Q It does not say less than one foot?

7 A Maybe you see something I don't see here. I mean,
8 that is how I read it. We can go through it together.

9 Q Where do you see one and a half feet?

10 A The scale over here. (Indicating.)

11 Q Would the peat be more like less than one foot on this
12 scale I have. This is one and a half feet.

13 A No, sir.

14 Q I will take -- What do you want to say?

15 A It is organic fine sand.

16 Q One and a half feet?

17 A We will take one and a half feet.

18 Q What do you have at S39?

19 A I would say three feet.

20 MR. NESSON: S37?

21 MR. KEATING: 39.

22 Q Moving down, what do you have at Well 569?

23 A I can guess about five feet. Is that fair to say?

24 Q Does it say one foot? Approximately one foot of peat
25 at that well?

1 A Not that I can see.

2 Q Doesn't it say trace peat at a depth of three feet and
3 then --

4 A No, sir.

5 Q -- and under that it says sandy peat?

6 A That is what it says. I don't know how you interpret
7 it. It means the guy who is on the well, who is looking
8 at the cuttings as they came out of the hole, noted peat
9 as part of the material coming from the hole.

10 Q At what elevation did he notice approximately a foot
11 of peat?

12 A Sir, as I see it, it is probably in the order of five
13 feet.

14 Q You say the reading at S68, Dr. Pinder, says five
15 feet of peat? Is that what your testimony is?

16 A My testimony is in looking at the document you have
17 put in front of me, there is a notation saying three to
18 five feet, which is the depth. To the right is a notation
19 saying sand, trace of peat. Sandy peat. That, to me,
20 means they were looking at a thickness to three or five
21 feet of peat or sandy peat.

22 Q Does it actually mean between five and three and --
23 depth of three and depth of five? There is a foot of
24 peat. Is that in fact what it means?

25 A No, not my interpretation.

1 Q How about going down to S8 --

2 A It is --

3 Q -- between Wells G and H, midway between G and H,
4 how much peat?

5 A (Pause.)

6 Q No peat?

7 A It had what they call fill. Exactly what that is,
8 I don't know.

9 Q What does it say about peat, Doctor?

10 A I don't think it had any notation for peat at all.

11 Q Let's keep moving down. How about S91, which is right
12 next to S8?

13 A It is difficult to read. Give me a second.

14 Q Take your time.

15 A It is a bit difficult to interpret. I would say it
16 is -- It will be less than a foot and a half.

17 Q All right.

18 A Beyond that, I can't really help you.

19 Q And how about S40?

20 A S40, that would be called topsoil. So it may or may
21 not be peat. Let's assume it is not.

22 Q It is not?

23 A Topsoil is not a geologic definition. Consequently,
24 I don't know what it constitutes.

25 Q S40 is Well G?

1 A It is two feet, whatever it is. S40 is no peat.

2 S40 is Well G, right.

3 Q No peat?

4 A Well, it depends on how you define topsoil. Let's
5 assume it is not peat.

6 Q S93, 180 feet west of Well G, what does it say about
7 peat?

8 A It says, I would interpret this to be about one and
9 a half feet.

10 Q How about S96, which is down south of, about 400 feet
11 south of Well G?

12 A Looks like about two feet.

13 Q Less than two feet?

14 A I would say less than two feet. It changes at two
15 feet.' I would say it is less than two.

16 Q Going down to S77, what do you have there for peat?

17 A I think this particular driller did not record any
18 peat in any of his logs actually, certainly not in this one.

19 Q I am asking about the log. That is the boring log you
20 referred to yesterday?

21 A Yes.

22 Q It shows no peat?

23 A It shows no peat.

24 Q Now, S93, S92 is located right here (indicating). What
25 does S92 say about peat?

1 A It looks like it is about a foot and a half. Well,
2 actually, hang on a moment.

3 My mistake. It looks like it goes down to
4 six.

5 Q That concludes them?

6 A Yes, sir.

7 Q Did you consider those boring logs, the ones that I
8 just referred you to, when you determined your permeability,
9 hydraulic conductivity figure for the areas around the
10 wells?

11 A In the sense of the 75 or 70-foot per day number?

12 Q Yes.

13 A No, they don't come into play.

14 Q Did you have those figures in mind when you considered
15 the effect of the peat on the water from the river leaving
16 the river and getting to the wells? In other words, when
17 you told us about the envelope that went down the river
18 and kept things away from the wells, were you considering
19 in that connection the boring logs that I just referred
20 you to?

information

21 A They were part of the / that I was working with.

22 Q But of all those wells I listed for you, which I think
23 covered most of the ones in this particular area and I
24 represent to you I didn't leave any out because they had high
25 numbers, we find one well, one well that appears to have as

1 much as six feet of peat; and most of them have either
2 no peat or one and a half feet or less than one foot; is
3 that true?

4 A I think that your observations and numbers put in there
5 are as you stated them. I think that you have to look at
6 these logs and see no peat because they happen to be
7 NUS logs and it may be this particular driller, for whatever
8 reason, had selected not to make that specific notation.
9 But physically, if you think about it physically, peat
10 is going to be a relatively continuous material geologically,
11 unless someone basically comes in and digs it out. So I
12 won't -- I would interpret on the basis of my understanding
13 of physical systems, if you were to put a hole anywhere in
14 the area that we have had peat indicated, it would, in
15 fact, be there or very near it.

16 Q But you have no -- You don't know who these diggers
17 were or what they did or, you have no idea whether they kept
18 peat in or kept peat out? You are relying upon this
19 form, these boring logs, and they're part of the 12,000
20 documents and all that? The document says, does it not,
21 peat, it says no peat? Is that -- Is there a question
22 in your mind about that?

23 A I think there is very much a question in my mind about
24 that. Because it does not say that, it does not mean that
25 is true. It may mean that particular individual sitting

1 on that particular well felt the notation of peat was not
2 of geological relevance.

3 Q What are we supposed to rely on?

4 A Experience, judgment, and understanding of the kinds
5 of logs that the drillers provide, and I have done that
6 for many, many years.

7 Q You have never done it in the Aberjona River Valley
8 for many, many years; is that true?

9 A It is a fairly consistent breed, whether in the
10 Aberjona River Valley or Muscadaba River Valley. I think
11 the reality of the situation is you have a relatively
12 continuous peat bounded along the valley sides. I think it
13 is geologically consistent and logical. I think there is
14 probably some excavation around the wells that have come out
15 in testimony here in the courtroom, but it would be my
16 best understanding that that peat is not going to be
17 splotchy, you will have some here and some here.

18 Q You have no other form on which you can base that
19 opinion, except for your education, your experience,
20 but nothing from this particular area between Olympia
21 Avenue and Salem Street, other than those documents which
22 I just put in front of you?

23 A Yes, sir, I think I have used those in a way that is
24 consistent in my opinion. I don't feel uncomfortable with
25 them. The two logs you pointed out happen to be devoid of

1 peat, if I am not mistaken, where the same driller, NUS
2 driller, he didn't say no peat; he just didn't record it.

3 Q He didn't say no oil, no diamonds, no anything? He
4 didn't list peat?

5 A That is where experience and judgment become important.

6 Q So I hope you are not suggesting whenever we have any
7 data from NUS, which comprises a great part of what that
8 information
9 in those boxes are, EPA review, geohydrologist lab or
10 whatever they're called, we have to look at that data
11 with great suspicion because maybe their people don't do
12 things the right way.

13 A I think when you look at any data, you have to look
14 at it in context. My feeling is, while I am prepared to
15 assume with you anything you wish, it would be my feeling
16 in this particular matter that these two logs that happen to
17 not indicate specifically peat, in fact, only one notation
18 for the first five feet, simply would be interpreted, to
19 me, if they were within that range of the area where
20 you found peat, in all likelihood, would have had some peat
21 at the well or very nearby.

22 Q You can point to no imperical, physical, scientific
23 data that supports the conclusion in the statement you
24 just made? It is something you devined?

25 A No, sir. I am afraid I don't agree with you at all.
When you have organic growth on an area of the same elevation

1 CONFERENCE AT THE BENCH AS FOLLOWS:

2 THE COURT: Mr. Facher, you had some
3 matter that you wanted to call to my attention.

4 MR. FACHER: Three matters that I think
5 we ought to talk about. Scheduling is one in terms of
6 witnesses.

7 THE COURT: Yes, Drobinski is next, is he?

8 MR. SCHLICHTMANN: Yes.

9 THE COURT: He'll take a couple days
10 probably?

11 MR. SCHLICHTMANN: I believe my direct will
12 be fairly short.

13 THE COURT: He's going to go around to the
14 sites, the Grace site and put his sniffer down there?

15 MR. NESSON: Show his film.

16 MR. KEATING: What was that last thing?

17 MR. SCHLICHTMANN: Show his film.

18 MR. KEATING: I haven't seen the new version.

19 MR. SCHLICHTMANN: I had it explicated as
20 instructed by the Court.

21 THE COURT: No sound?

22 MR. SCHLICHTMANN: No sound, and I tried
23 to incorporate all of the elements that you raised. I saw
24 the --

25 THE COURT: No sound and no you?

1 MR. SCHLICHTMANN: No me and no sound.

2 I saw the latest version. I think I have
3 to re-edit it a little more. I think they missed a couple
4 points. I can do that and I'll provide a copy.

5 MR. KEATING: Could I just see it ahead of
6 time?

7 MR. SCHLICHTMANN: Yes. So I will try to
8 get a finished version of that.

9 THE COURT: Do you think you'll finish up
10 on Wednesday or Thursday?

11 MR. SCHLICHTMANN: Yes, that's quite
12 possible.

13 MR. KEATING: Your Honor, may I make a
14 point on this, not really to make an argument, but we might
15 consider, there is a great deal of what Mr. Drobinski's
16 going to testify to which is going to be confirmed by our
17 own Drobinski-type when he goes on the stand. In other
18 words, I don't think it's -- I'm not trying to short-cut
19 Mr. Schlichtmann, but I just think that I want you to
20 know that what he has for water quality analyses will be
21 confirmed by some of our witnesses.

22 THE COURT: Why don't you put it in by
23 stipulation?

24 MR. KEATING: I was trying to think of
25 some way we could at least cut down on some of this.

1 I think for Mr. Schlichtmann, for dramatic reasons or
2 whatever for some of this, he may have used maximums and
3 our guy may have used an average, but there's no real
4 questions about the contamination being there, and so
5 maybe it's a little different than the Beatrice sites
6 where there was situations of was this barrel a barrel or
7 was this beer can a beer can or something. I don't think
8 that's going to be an issue too much with us. So I don't
9 know, there may be opportunities to cut it down.

10 I'll tell you one thing, there is no beer
11 can on the Grace site.

12 THE COURT: Well, if you can work it out
13 between you, I think that's fine.

14 So there is Drobinski. There is a
15 contractor?

16 MR. SCHLICHTMANN: Manzelli.

17 THE COURT: Who's going to come in and say
18 he did that job and give the date of it or something. He's
19 going to be on and off quicker than he's going to be able
20 to say Jack Robinson.

21 MR. FACHER: Are we going to have Harris or
22 not? I have a suspicion I'm never going to see Harris, which
23 is all right with me.

24 MR. SCHLICHTMANN: I'm going to be very
25 candid with the Court, the issue really comes down to

1 Dr. Harris would be testifying on state of knowledge or
2 state of art.

3 THE COURT: State of his knowledge.

4 MR. FACHER: No, it's state of
5 somebody else's knowledge.

6 MR. SCHLICHTMANN: I know Mr. Facher will
7 cross-examine and say, "You weren't alive in 1955," or
8 whatever.

9 THE COURT: Why, how old is he?

10 MR. SCHLICHTMANN: Well, he was six years
11 old then or whatever.

12 THE COURT: Well, the state of knowledge
13 of whom, I suppose, hydrologists and geologists or --

14 MR. SCHLICHTMANN: Yes, scientific in the
15 engineering community.

16 THE COURT: That's not going to help you
17 very much with respect to --

18 MR. FACHER: Riley?

19 THE COURT: -- Riley, is it?

20 MR. SCHLICHTMANN: No, I think what it
21 really comes down to is that we intend to put in various
22 rules and regulations and there are certain statutes, and
23 I think that that would again, in the sense of being
24 candid so we can talk about scheduling, is that depending
25 upon what happens with our ability to put in the rules and

1 regulations and statutes, will depend upon whether there
2 is really going to be a need, evidentiary need to bring
3 in Dr. Harris or perceive a need to do so.

4 So I think what I'm saying to the Court,
5 I know we have to give 48 hours' notice, but to be very
6 candid, to go to the rules and regulations and the statutes
7 on the issue of foreseeability and --

8 THE COURT: Doesn't go to foreseeability.

9 MR. SCHLICHTMANN: Under rules and
10 regulations. Foreseeability about injuring the public
11 health by engaging in certain kinds of conduct.

12 THE COURT: Doesn't go to foreseeability.

13 MR. SCHLICHTMANN: Well, our position then
14 in violation of the statutes --

15 THE COURT: Evidence of negligence, but
16 it doesn't go necessarily to foreseeability. The
17 question of foreseeability is, as I see it, is twofold
18 from -- if you're talking -- it's a one-dimensional
19 foreseeability for Grace. That is, was it foreseeable
20 that the stuff would escape and go somewhere where it would
21 poison people. There's a second element. Well, not
22 necessarily foreseeability. That's really not a complete
23 description of it, but on Riley's case, even assuming that
24 a careful person should have walked this property once in
25 a while and observed the debris piles which he says were

1 there a long time, and the barrels which he says he didn't
2 observe, how is he supposed to conclude from that that
3 there was pouring of liquids onto the ground? Because
4 as I get your testimony, and I think I was following it,
5 but a lot of times the diagram was faced towards the jury
6 and I didn't see it all, but I get it very clearly that the
7 sites of concentration of complaint chemicals on the Riley
8 land are not particularly at the barrel sites and not,
9 as a matter of fact, in the centers of the debris sites
10 but off to the side close to the debris sites but not
11 particularly related to the barrels, which suggests to me
12 that it's not there because barrels were placed there and
13 decayed, and this stuff fell out the bottom. But somebody
14 came along with barrels of or containers of this stuff in
15 some quantity, and we don't have any idea of quantifications,
16 which is disappointing, and just poured it on the ground.

END J
lm/ez

1 THE COURT: Assuming the jury finds a
2 prudent property owner at least walks up and down the place
3 once in a while and looks for what is going on, how is he
4 supposed to have known that this stuff was poured on
5 the ground?

6 MR. SCHLICHTMANN: I guess the issue is that
7 based upon what the jury knows about the state of the
8 property is a reasonable inference is this prudent property
9 owner, if he sees drums of materials on the ground and sees
10 sludge from the sixties --

11 MR. FACHER: I did want to --

12 THE COURT: This is really -- You have evidence
13 of gunk.

14 MR. SCHLICHTMANN: Sludge.

15 THE COURT: Not necessarily, not identified
16 in any way.

17 MR. SCHLICHTMANN: Things oozing from drums.

18 THE COURT: The point is the stuff that oozed
19 out of the drum is not identified with the stuff that
20 caused the harm in this case.

21 MR. SCHLICHTMANN: The issue is --

22 MR. FACHER: Nor is in the wells.

23 MR. SCHLICHTMANN: It comes down to what is
24 the reasonable inference the jury can take from the evidence
25 as to what a reasonable property owner should do when, one,

1 he is put on notice by the Department of Health that
2 industrial refuse, wastes should not be dumped on the ground
3 on that site because of danger of polluting the groundwater
4 is against the law and --

5 THE COURT: He didn't do that.

6 MR. SCHLICHTMANN: He is on notice he should
7 not do that.

8 THE COURT: He didn't do it. There is no
9 evidence he did do it.

10 MR. SCHLICHTMANN: Well, there is notice these
11 things took place.

12 THE COURT: He may be put on notice someone
13 did it. There is no evidence in the case any of this, at
14 least any of the -- there was any intentional placing
15 of industrial waste on this site.

16 MR. SCHLICHTMANN: By the tannery, I think
17 you are correct.

18 THE COURT: There may have been some
19 accidental spills from the sewer, the sewer splashed up,
20 a little bit of this.

21 MR. SCHLICHTMANN: Drainage from the --

22 THE COURT: Bovine dandruff.

23 MR. JACOBS: Buffing dust.

24 THE COURT: That is generated from the
25 process.

1 MR. SCHLICHTMANN: The latest results
2 from G and H do show buffing dust.

3 MR. FATCHER: I am sure John will work it in
4 somehow.

5 MR. SCHLICHTMANN: It had a buffing dust-
6 like smell.

7 MR. FACHER: It was not my intention to
8 give Mr. Schlichtmann a preview, only to --

9 THE COURT: You have hardly concealed your
10 strategy. And, indeed, it pops right up.

11 Unforeseeability on the water, the position
12 is reversed. At least a jury could find, I think, that
13 and these are tentative thoughts. You will have a chance
14 to argue.

15 Sometimes it is useful, I think, if the
16 judge, rather than sitting up with a grave stoneface, gives
17 an idea what he is thinking about. Obviously I have been
18 paying attention, trying to.

19 There is this one little scrap that
20 seems to me that may be putting Riley on notice, and that
21 is when the well digger, the fellow who maintains his
22 wells --

23 MR. SCHLICHTMANN: Maher.

24 THE COURT: -- Maher says the water table is
25 going down around here on your property because of those two

new wells that the town had put in over there.

Now, I suppose that is enough to go to the jury. The other part is here is the City of Woburn, who is, whose people are walking the Riley property every year or so to check, repairing the manhole covers and so on.

MR. SCHLICHTMANN: One would think that I were --

THE COURT: That must have been --

MR. SCHLICHTMANN: One would think that I did --

THE COURT: The manhole covers got repaired. We know that. There is evidence they overflowed and there was cleaning of the city sewers.

MR. SCHLICHTMANN: Mr. Riley did talk about that.

THE COURT: So city people were --

MR. FACHER: There was vandalism that was repaired.

THE COURT: I think it is clear the city still owns, that it was a fee. I think the deed is controlling on that point.

MR. SCHLICHTMANN: Part of that property, yes.

THE COURT: So there was the city knowing at least about the property, as Riley did, and they go over there and put these, they sink these two wells long after

1 whatever pollution is supposed to have occurred occurred,
2 which is --

3 MR. SCHLICHTMANN: Horrifying.

4 THE COURT: -- horrifying.

5 MR. SCHLICHTMANN: In addition to that --

6 THE COURT: If all of this was generally
7 available, if this knowledge is generally available, this
8 is the problem. They didn't have the gas/chro --

9 MR. FACHER: Gas chromatography and mass
10 spectrometer.

11 THE COURT: -- at that point, so apparently
12 there was no way.

13 And then the DEQE comes barreling in there
14 in '78 and says throw in another one, having already written
15 nasty letters to Riley.

16 MR. KEATING: I don't mean to argue, there is
17 in sixties, '68, '58 they said don't put it in there. It
18 may go flip flop.

19 THE COURT: So this is all jury stuff, as
20 far as I'm concerned.

21 Without doing some rather wild speculation,
22 you have to be prepared to tell me how it is that Riley
23 should have known, as a prudent person, that someone was
24 putting toxic material likely to travel on his land. And
25 I think that is the toughest problem.

1 I also think that probably as to Riley, this
2 is just a preliminary thought, you can tell me differently,
3 and I think this is different from Grace, too, that the
4 Rylands vs. Fletcher situation does not apply. It seems to
5 me the Rylands vs. Fletcher situation involves the purposeful
6 placing of something on the land that later escapes. I
7 think all of those cases, and this distinguishes these cases
8 from negligence -- there wasn't negligence; it was a
9 purposeful placing of something on the land which later
10 escaped for any reason at all.

11 MR. SCHLICHTMANN: Right.

12 THE COURT: And they don't -- and the land-
13 owner is liable.

14 That may be something that Grace will have
15 to worry about.

16 MR. KEATING: I am curious what is the dis-
17 tinction.

18 THE COURT: Purposeful placing.

19 MR. KEATING: I see.

20 MR. FACHER: Use of chemicals.

21 THE COURT: There is no question what you did
22 you did on purpose. You funnel it out and therein, splat,
23 in the ditch.

24 MR. SCHLICHTMANN: The standard is one of
25 benefit, benefit to land owners.

1 THE COURT: It may be, there had to be some
2 purposeful act. If there is benefit, there is no benefit
3 to Riley. So I am inclined to think if Riley goes to the
4 jury it will go on the negligence issue only or something.

5 MR. SCHLICHTMANN: Nuisance would always be
6 included.

7 MR. JACOBS: It is the same as negligence.

8 THE COURT: It is the same. It involves
9 failing to do something you ought to do. I don't see that
10 in terms of presentation of your case. It is different
11 from negligence as a practical matter. I must say I never
12 thoroughly understand all of the ramifications of nuisances,
13 private versus public, in Massachusetts law. I doubt that
14 I will understand it when I come to the end of this case.

15 MR. SCHLICHTMANN: Even with our help.

16 THE COURT: Even with your help.

17 MR. FACHER: Especially with our help.

18 MR. SCHLICHTMANN: Right.

19 THE COURT: I think there is an awful lot
20 of confusion about it. They say different things when
21 they're trying to accomplish different purposes. You want
22 to get into it, fine; but I don't see how you are improving
23 your lot any as far as making your case. The Rylands vs.
24 Fletcher situation and the Grace case are certainly a
25 matter that can be considered. I take it Grace is not

1 seriously considering a motion at this point.

2 MR. KEATING: Well, in fact, I can't say at
3 this point because I didn't hear Mr. Drobinski. But I think
4 there may be somewhat similar bases to what Mr. Facher
5 suggested.

6 THE COURT: So to get back to the question of
7 scheduling, which is what took me off on this toot --

8 MR. SCHLICHTMANN: It is all --

9 THE COURT: -- is the significance
10 of these ordinances and so on. Just going briefly through
11 the batch you have put into a binder for me, I think some
12 of them have to do with purposeful conduct and others may
13 be quite remote from the facts of the case. And I don't
14 know even, assuming that I permit them to become evidence
15 in the case, you may argue violations as evidence of
16 knowledge. It had to be some kind of causal relationship
17 connection. And I think there may be a problem. I don't
18 think they will carry you as far as foreseeability is con-
19 cerned. It seems to me they don't go to that point. So
20 that if you are relying heavily on those things, you might
21 want to think about that some more.

22 MR. SCHLICHTMANN: All right.

23 MR. FACHER: That leaves us in a quandry
24 about Dr. Harris. But are we safe from Dr. Harris for next
25 week or not?

1 matters I want to raise. I didn't know we were arguing
2 the motion for directed verdict.

3 MR. NESSON: I am anxious about what the judge
4 said.

5 MR. FACHER: You want something to illustrate
6 his testimony?

7 MR. NESSON: Am I right, what you are saying
8 is foreseeability, you have to say foreseeability as to
9 what. You can actually parcel that out. One element of
10 foreseeability is Riley foreseeing that someone was dumping
11 stuff on his land.

12 THE COURT: Bad stuff, something more than
13 old barrels.

14 MR. FACHER: Like what is in this case.

15 THE COURT: Like what is in this case, not
16 necessarily identical.

17 MR. NESSON: Someone is dumping bad stuff.

18 THE COURT: Liquid that will seep in, not just
19 old, empty barrels.

20 MR. NESSON: The statutes don't help at all.

21 The second thing would be once, if you get
22 over the first one, someone is dumping bad stuff on the land,
23 he then had to foresee that somehow bad stuff dumped on the
24 land could affect --

25 THE COURT: The public.

1 and think about it. Certainly, yesterday it would have
2 been a dramatic time to present it.

3 THE COURT: I was sitting here.

4 MR. FACHER: I did not --

5 THE COURT: I am waiting for a motion and I
6 waited for a while and I didn't hear one.

7 MR. FACHER: I didn't know you were there.

8 MR. SCHLICHTMANN: He was hidden by the chalk
9 you wanted to strike.

10 MR. FACHER: Right. I was behind it.

11 Anyway, since we have daily transcripts --

12 THE COURT: I was behind the door when the
13 motions were passed out.

14 MR. FACHER: I think that is still, whether
15 time passed or not, is still a viable matter --

16 THE COURT: Time does not pass.

17 MR. FACHER: -- to be working on that.

18 MR. KEATING: Could I say a word? My position
19 is the same. I wanted to wait to read the transcript.

20 MR. SCHLICHTMANN: We have no objection to a
21 time issue.

22 MR. FACHER: I didn't expect there was.

23 THE COURT: You can bring a motion when you
24 are ready.

25 MR. KEATING: Can I mention one other thing

1 related to that? I don't mean to cause a fuss over something.
2 Coming out of the Superior Court practice a little bit, I was
3 very surprised that anything was done, even if it could be
4 something undone with a document that had been used in the
5 courtroom --

6 THE COURT: So was I.

7 MR. KEATING: I can recognize you can undo
8 it. I know it was not permanent.

9 THE COURT: I made an order on that
10 yesterday.

11 MR. KEATING: I hope that we --

12 THE COURT: This is not to be altered.

13 MR. KEATING: That is all I want to say.

14 MR. SCHLICHTMANN: I appreciate your
15 concern. It was not in the spirit of altering.

16 THE COURT: I understand.

17 MR. KEATING: I think --

18 THE COURT: As a matter of practice, if
19 you are going to change something, make it in the form of
20 a motion and let us all know about it. If need be, be
21 done in front of the jury.

22 MR. SCHLICHTMANN: Counsel were fully aware.
23 It was happening in their presence, Mr. Facher actually
24 watched.

25 THE COURT: Of course, he did. He screamed

1 all over the place about it.

2 MR. FACHER: I did watch it.

3 That is all, I had a minor correction
4 that I saw if you want it. The witness's testimony, and
5 I don't think he said, "The other well is either of no
6 information or consistent with the breakwater level."
7 I think he must have said groundwater level.

8 Did he say breakwater?

9 MR. JACOBS: Breakwater is a new form of
10 dance.

11 MR. FACHER: It was in response to your
12 question. I suspect he said ground. I don't know why
13 "break" would be there.

14 MR. SCHLICHTMANN: I don't remember him
15 saying breakwater.

16 MR. FATCHER: It is the witness rather than
17 the Court. You were asking him what form --

18 THE COURT: Breakwater does not sound
19 like groundwater. What would breakwater be?

20 MR. KEATING: Should we keep pretty good
21 notes? I could ask -- I don't have the notes here.
22 We could --

23 THE COURT: Was the gradient level?

24 MR. FACHER: It is possible. He does not
25 speak that way. He never says level. Gradient is a --

1 he talks about gradient as a noun.

2 MR. KEATING: I would be happy to check our
3 notes.

4 MR. FACHER: It is not vital.

5 MR. SCHLICHTMANN: I could check with him,
6 too.

7 MR. FACHER: I think he meant groundwater.

8 THE COURT: He will be in Europe before then.

9 MR. SCHLICHTMANN: That is true.

10 MR. FACHER: He is halfway there already.
11 He knows what is good for him. He is gone.

12 THE COURT: Madam and gentlemen, have a
13 good weekend.

14 (Whereupon, the 49th day of trial was concluded.)
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