

Spencer depo. Detel case. Sept. 06
IN THE 16TH JUDICIAL CIRCUIT COURT
OF JACKSON COUNTY, MISSOURI

JUSTIN DETEL)
Plaintiff,) CASE NO.
vs.) 04-CV 207637
BP CORPORATION)
NORTH AMERICA, INC. ET AL.)
Defendants)
- - - - -

Pursuant to Notice, the deposition of JOHN SPENCER was taken on September 27, 2006, commencing at 10:00 a.m., at the BWI Marriott, West Nursery Road, Linthicum, Maryland 21090 before Victoria L. Birkett, court reporter and Notary Public.

♀ A P P E A R A N C E S

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REPORTED BY: Victoria L. Birkett

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September 27, 2006

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P R O C E E D I N G S

2 whereupon--
3 JOHN SPENCER
4 a witness, was called to testify, and having been
5 first duly sworn, was examined and testified as
6 follows:

DIRECT EXAMINATION

BY MR. WALTERS:

Q. Please state your name for the record.

A. John Spencer.

Q. And you've been identified as an expert witness for BP in the case of Detel vs. BP. Is that your understanding?

A. Yes.

Q. And have you been asked to formulate opinions in this case?

A. Yes.

Q. And are you prepared today to render those opinions for this case?

A. Yes.

Q. First off, I want to show you what has been

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marked Exhibit #1 which I pulled from your file. Does this document list for us all the things that you've reviewed for this case that you are relying on?

A. Yes, that I have reviewed specifically for this case, yes.

Q. And I understand from your involvement in previous Sugar Creek cases there may be additional documents that may be included in what you've reviewed in formulating your opinions. True?

A. Possibly, yes.

Q. Alright. Now I note in Exhibit #1 and also in Exhibit #3 a letter from Maron & Marvel that there was a CD sent to you relating to air monitoring in Sugar Creek. Is that true?

A. Yes.

Q. And -

A. Well, I'm sorry. I don't know if this is - It's not air monitoring in Sugar Creek. This was around Sugar Creek and generally I think throughout the state.

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Q. Documents on that CD related to air monitoring not only in Sugar Creek but around the state?

A. Yes.

Q. And you have that CD I think we discussed earlier available to you at your office?

A. Yes.

Q. And there wouldn't be any problem with you copying, burning a copy of that CD for me?

A. No.

Q. I just would make a request on the record, Robin, for a copy of that CD.

MR. WEAVER: Sure.

BY MR. WALTERS:

Q. Now is there anything that you reviewed and are relying on for this case that is not identified on Exhibit #1 that you can recall at this time?

A. No.

Q. Did you make any notes of any of your opinions or thoughts on this case?

A. I have made notes over different times

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1 looking at different documents.

2 Q. Have you I guess organized those notes or
3 thoughts in any type of report or letter or memo
4 that you've given to any of the lawyers in this
5 case?

6 A. No.

7 Q. And I recall from the Ryan case that you
8 actually performed some calculations that were part
9 of your opinions in that case. Have you formed any
10 calculations in this case?

11 A. No.

12 Q. Were you asked to do that in this case?

13 A. No.

14 Q. You haven't ran any type of models with
15 inputs of various data for this case. Would that
16 be true?

17 A. Correct.

18 Q. So at the time of trial you won't be
19 providing any testimony about any models, any type
20 of exposure estimates that you've run. Would that
21 be true?

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1 A. At this point in time I do not have a plan
2 to do that myself in regard to my own opinion, no.

3 Q. Exhibit #2. Would you describe what
4 Exhibit #2 is for the record?

5 A. It is just a summary of notes that comes
6 from Answers to Interrogatories and some
7 information from the testimony of the Detels.

8 Q. Alright. And Exhibit #4

9 A. And I'm sorry. There's also some notes
10 from Mr. Petty's deposition.

11 Q. Exhibit #4 is a folder that contains
12 several articles. Are those articles that you've
13 pulled and relied on for your opinions in this
14 case?

15 A. Yes.

16 Q. What were you asked to do in this case?

17 A. To evaluate the potential exposure to
18 benzene to young Detel as a result of his residence
19 in the Sugar Creek area from exposures potentially
20 resulting from the Amoco Sugar Creek facility.

21 Q. Alright. Anything else?

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1 A. No.

2 Q. And did you form opinions in that regard?

3 A. Yes.

4 Q. In your opinion was Justin Detel exposed to
5 benzene from the Sugar Creek refinery?

6 A. Well in my opinion I could not find where
7 he was exposed any more than anyone else in a
8 typical residence in this country.

9 Q. So in your opinion Justin Detel living and
10 playing near the Sugar Creek refinery was not
11 exposed to benzene in any greater quantity than any
12 household in the country that didn't set near a
13 refinery?

14 A. Based on the data I reviewed that is the
15 conclusion that I came to.

16 Q. And what specific data did you use to make
17 that conclusion?

18 A. Well there was data from the facility
19 itself, air monitoring data in residences at Sugar
20 Creek that were directly over the plume that were
21 collected in 1998. In this package of literature

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1 there is also studies that discuss exposure levels
2 for around operating refineries. There is data on
3 studies that have been collected of or from
4 residences and communities generally throughout the
5 United States. I guess I am also relying on the
6 opinions or the analysis conducted by the State of
7 Missouri and the ATSDR and their findings and
8 conclusions that there was no significant levels.

9 Q. When was Justin Detel born?

10 A. In 1987?

11 Q. Okay, and do you know when he was diagnosed
12 with his illness?

13 A. I believe in 1997.

14 Q. So the air monitoring data you were relying
15 on was in 1998, correct?

16 A. That was one set of data that I utilized,
17 yes.

18 Q. Do you know when the Missouri Department of
19 Health and the ATSDR conclusions were reached?
20 What year? Years?

21 A. Well, their reports of the investigations

- 10 -

1 are-- Here is one from 2000. What I am not certain
2 about is when they started the investigation. I'd
3 have to review the document to give you an accurate
4 answer.

5 Q. Would you agree that both of those
6 conclusions, the Missouri Department of Health and
7 the ATSDR were done after Justin Detel was
8 diagnosed?

9 A. I know the air monitoring data was, but as
10 I said I have to review these documents to
11 determine when they actually started their studies.

12 Q. Did you make any assumptions about whether
13 or not Justin Detel had any dermal exposure?

14 A. I considered that, yes.

15 Q. You're aware that there were time periods
16 during his childhood where he played in Sugar
17 Creek, true?

18 A. Yes. I recall there were a couple of
19 occasions, or a few occasions mentioned.

20 Q. And you're aware I'm sure from the
21 documents you've reviewed and also from the

- 11 -

1 testimony of various witnesses in this case and in
2 the Ryan case that there were times when there was
3 benzene in the creek, correct?

4 A. Well I don't know that I saw any data that
5 suggest there was benzene in the creek. I can't
6 cite you a specific document to corroborate that.

7 Q. Are you aware of any documentation that
8 there was petroleum products in the creek?

9 A. Yes.

10 Q. Alright. Petroleum products contain
11 benzene, correct?

12 A. Not always, but-- And if it is there
13 oftentimes it may not even be in detectable
14 concentrations.

15 Q. Premium gasoline contains benzine?

16 A. Generally yes, as a raw material and raw
17 product. Hard to say whether in fact benzine would
18 have been present as a result of moving through
19 soil.

20 Q. If there is premium gasoline in a creek,
21 would you agree that more likely than not that

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1 would contain benzine?

2 A. Again, it depends on the environmental fate
3 mechanisms to determine what the constituents are
4 in the parent product.

5 Q. Well you're aware that the ground water in
6 and around Sugar Creek contains benzine, true?

7 A. Yes. I have seen some of that data where
8 as I recall is in the part per billion level.

9 Q. Okay. Well have you seen data of over time
10 showing what the benzine levels were in the plume
11 in and around Sugar Creek?

12 A. Yes I have seen some of that data.

13 Q. Alright. So if we assume that that same
14 product that is in the ground water showing benzine
15 was also in the creek at various times, more likely
16 than not there would have been benzine in the
17 creek.

18 A. Well if it is the same and your
19 hypothetical is the same as in the groundwater then
20 yes there would be some part per billion level of
21 benzine a very small amount.

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1 Q. Would you agree then if Justin Detel spent
2 time in the creek and if in fact there was products
3 in the creek similar to what's in the groundwater,
4 he very well may have been exposed to benzine
5 dermally?

6 A. It is just difficult to say. Again, I saw
7 no evidence of benzine being present in the creek
8 and that exposure is determined based on the
9 concentration in the water of the creek, the
10 exposed surface area of the skin and the time of
11 exposure. And I just didn't see evidence that
12 indicates to me that there was some exposure of
13 consequence as a result.

14 Q. Right. But my question was if the same
15 products that we see in the groundwater that make
16 up the plume and around Sugar Creek that those same
17 products are flowing in the creek and Justin
18 Detel's in the creek than more likely than not he
19 may have been exposed to benzine while playing in
20 the creek. Dermal exposure.

21 A. Again, in an absolute term that sure

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1 there'd be some exposure if it was the same level.
2 But again given the concentrations that were even
3 in the groundwater in my view and looking at dermal
4 exposures it would have been an inconsequential
5 source of exposure to benzine.

6 Q. Now other than the opinion about Justin
7 Detel being exposed in a manner no different from
8 anyone else, did you formulate any other opinions
9 in this case about the operation of the refinery
10 specifically? Were you asked to do that?

11 A. No.

12 Q. You've reviewed Mr. Petty's report and
13 deposition. Correct?

14 A. Yes.

15 Q. Would you agree that the methodology he
16 used to estimate Justin's exposure is, and I'm just
17 talking methodology, is similar to what was used in
18 the Ryan case? Where I'm going with this is I took
19 your deposition as you know right here in this room
20 a couple hours on Ryan and we talked extensively
21 about methodology. I'm going to short circuit here

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1 to find out if you have any new opinions or
2 criticisms of the methodology and we'll talk about
3 that.

4 A. I don't think there is anything, any
5 criticisms of this methodology that are different.

6 Q. Now did you formulate any opinions or
7 criticisms of the input, the data that he used for
8 his estimate?

9 A. I think again no different from last time
10 we spoke, well, maybe not the last time but the
11 last deposition we spoke, precisely the same
12 issues.

13 Q. Okay. I want to ask you a little bit about
14 this distinction between odor thresholds and odor
15 values. There is a difference between what is
16 considered an odor threshold and an odor value on
17 some concentration.

18 A. I'm not certain what you mean by odor
19 value.

20 Q. Sure. If an individual smells something
21 and it is strong as opposed to just barely

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1 detecting it that would be different concentration
2 in an odor threshold.

3 A. So you're talking about the difference
4 between detection and recognition.

5 Q. That could be one thing.

6 A. That is true for many compounds, yes. I
7 can't say it is true for all.

8 Q. Now I was looking at a paper that I think
9 you gave to me last time. Odor Threshold and
10 Irritation Levels of Several Chemical Substances--A
11 Review By Ruth. Do you recall that paper?

12 A. Yes.

13 Q. I can let you look at it if you need to.
14 They define odor threshold as the minimum
15 concentration of an odorant. Do you agree with
16 that? They call it a classical definition. Do you
17 agree with that classical definition?

18 A. Yes, I don't have any-- I mean as you've
19 described it I don't have, take any issue with
20 that.

21 Q. So when we have a minimum concentration of

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1 odorant that is an odor threshold. True?

2 A. Yes but be careful. There is no bright
3 line as to what that threshold is.

4 Q. So if we have something above a minimum
5 concentration odor threshold, that value would not
6 apply, true?

7 A. I don't believe I follow-- I'm sorry. I'm
8 not following what you're

9 Q. Sure. If someone describes an odor as
10 being very strong, for example, and let's assume
11 that they're correct that there is a concentration
12 that is very strong. That concentration is going
13 to be significantly higher than the detection
14 level. True?

15 A. It depends on the individual. It depends
16 upon your test methodology. The odor is kind of in
17 the nose of the beholder.

18 Q. Okay.

19 A. So that's why I'm saying there is not a
20 bright line here.

21 Q. Well let's take gasoline for example. If

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1 someone barely detects the smell of gasoline. In
2 other words there is just a minimum concentration
3 of the odorant. And then there is a concentration
4 that is very strong, and let's assume that the
5 discriminating nose can tell that. The gasoline
6 ppm concentration would be higher than an odor
7 threshold.

8 A. Again, I can't really say that's the case.
9 Because it is a function of where you are smelling
10 it, when you are smelling it, who is smelling it
11 and under what conditions, what form of the product
12 it is in. Is it a vapor? Is it an aerosol? So it
13 depends on-- There is multi-factors that go into
14 making that determination.

15 Q. Alright. Are there times when someone
16 smells gasoline and it will be at a concentration
17 greater than the odor threshold for gasoline?

18 A. Sure.

19 Q. Okay. So when for example you look at a
20 concentration of gasoline if in fact someone
21 describes it as strong and they are accurate in

- 19 -

1 that description that would be a value above the
2 odor threshold?

3 A. I mean it is possible but it can also be at
4 the odor threshold. If somebody smells gasoline in
5 their bedroom then they would describe that as
6 strong. So it is a function of the environment and
7 the individual.

8 Q. Have you seen and is there in any of your
9 literature that we've marked as Exhibit #4 or any
10 of the body of literature that you're aware of
11 measurements of gasoline vapor concentrations
12 greater than the odor threshold?

13 A. Well, I'm sorry. You're talking about
14 total hydrocarbon levels being greater than what
15 the reported odor threshold? Yes.

16 Q. Well specifically with gasoline. Are there

17 papers that have measured concentrations of
18 gasoline above what you consider to be the odor
19 threshold?

20 A. Sure.

21 Q. And where does that information live?

- 20 -

1 A. There are papers-- where is my literature
2 here? There are studies in refineries. There are
3 studies of people removing underground storage
4 tanks that have leaked and there is gasoline
5 product in the ground. There is a study where they
6 were doing reclamation of a former refinery site
7 and they report the levels of total hydrocarbons,
8 actually gasoline, and those levels are well above
9 the odor threshold.

10 Q. What are some of those levels that you've
11 seen in reviewing the literature?

12 A. I mean they'll go anywhere from, you know,
13 one part per million to 300 parts per million. I
14 think the average of some of that data is probably
15 closer to ten parts per million. Of course those
16 are all above the odor threshold.

17 Q. We had some discussion at the Ryan trial
18 about cites and sources for odor thresholds. Do
19 you recall that?

20 A. Yes.

21 Q. And you identified that there is something

- 21 -

1 called the Amore study. A-M-O-R-E.

2 A. Yes.

3 Q. What is the Amore study?

4 A. They presented at the site of the
5 toxicology. I think it is Amore and Hotula, where
6 they evaluated gasoline odor thresholds in
7 particular and presented-- That data is also in a
8 toxicology update in the Journal for the Society of
9 Toxicology.

10 Q. Is that Amore study, is that in a published
11 peer review paper?

12 A. Yes.

13 Q. And do you have a copy of that?

14 A. Yes.

15 Q. Is that contained in Exhibit #4?

16 A. Yes.

17 Q. Could you pull that out for me and show me
18 which one that is? Alright. And was the
19 information-- was the testing done on human beings
20 in this study?

21 A. Yes.

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1 Q. How did they do that? Did they expose human
2 beings to gasoline vapors?

3 A. Yes.

4 Q. How was that done?

5 A. Gasoline vapor, regular unleaded gasoline
6 was evaporated and by fan was dispersed into a
7 sealed room producing a calculated concentration
8 that was confirmed by a combustible gas meter.
9 There were panels of untrained observers who
10 entered the room.

11 Q. What are you reading from? I'm sorry.
12 A. This is the abstract that was the basis for
13 the data that went into that paper by Amore and
14 Hotula.
15 Q. Alright. And is that contained in Exhibit
16 #4 as well?
17 A. Yes.
18 Q. Now you also talked in your testimony in
19 Ryan about some odor threshold on gasoline that was
20 done by API?
21 A. Yes.

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1 Q. That is the American Petroleum Institute?
2 A. Yes.
3 Q. And was that done on human beings?
4 A. Yes.
5 Q. And is that contained in Exhibit #4?
6 A. Yes it is.
7 Q. That paper also, did that contain MTBE?
8 A. Some of the forms of gasoline did and some
9 as best as I can tell did not.
10 Q. You would agree that the additive MTBE
11 would make the gasoline more sensitive to smell?
12 A. If you mean that we as humans, typical
13 human beings, can more readily smell it yes I would
14 agree with that.
15 Q. How was the API study done on human beings?
16 A. I'll have to look back in here to describe
17 the methodology. Air samples in various
18 concentrations were presented to panelists in a
19 series of increasing concentrations.
20 Q. What was the highest concentration?
21 A. It looks like the highest one was 1.33.

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1 Q. PPM?
2 A. Parts per million.
3 Q. Do you know what the highest concentration
4 was in the Amore study?
5 A. I believe it was 0.076. I mean, that is
6 from memory. I can look and be more specific if
7 you'd like.
8 Q. Were any of the subjects in either of these
9 studies trained to detect the odor of gasoline?
10 A. The Amore study were not. And I don't see
11 where it says whether they were or not.
12 Q. In either or both of those papers were the
13 investigators looking at odor detection or odor
14 recognition?
15 A. The Amore study as best I could tell it was
16 odor detection. In the ATI study it was detection
17 and recognition.
18 Q. So in the Amore study there is no odor
19 recognition testing done?
20 A. I believe what it said was they were aware
21 or they believed it had the odor of gasoline was

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1 the descriptive term.
2 Q. How about in the API? That was they did do
3 odor recognition?
4 A. Yes.

5 Q. Was there concentrations in that study in
6 which the subject recognized the odor of gasoline?

7 A. Yes.

8 Q. And what was that?

9 A. That was that highest number I gave you.
10 It varied. I think 1.33 and it was to less than
11 that number below one part per million.

12 Q. Why is it that you believe that these
13 studies are more representative, more reliable than
14 Drinker?

15 A. Well they comport with all the other
16 information that's out there from ATSDR, from Coast
17 Guard, from ACGIH. They comport with my own
18 experience in monitoring gasoline in a variety of
19 different settings, and Drinker was not a study
20 looking at odor thresholds. It was also a study
21 done in 1943 where they used methodology that was

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1 not capable of measuring down to these levels.

2 Q. It is also true that the Amore study and
3 the API would not be able to subject the test
4 subject to concentrations as they did in Drinker,
5 true? I mean that wouldn't be allowed in modern
6 scientific investigations?

7 A. Well no you still could. The occupational
8 health values for gasoline are 300 parts per
9 million. The Drinker study, while some were above
10 300 parts per million as reported in the study some
11 were less than that. So you could still do that,
12 but that study was not to determine odor. It was
13 to determine sensory facts that would determine
14 symptomatology.

15 Q. Now you would agree from your review of
16 Drinker that the values that Mr. Petty used for
17 calculating Justin Detel's exposure he used the low
18 end of the concentrations tested in Drinker, true?

19 A. No, I think there were actually some lower
20 numbers. I know there was one that was at 140. Of
21 course these were all given in percentages. That

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1 shows the insensitivity of the methodology of the
2 time. And they weren't given in parts per million
3 they were given in percentages.

4 Q. Well they state one point five parts in ten
5 thousand of air. That would be parts per million
6 wouldn't it?

7 A. Well you can convert it, yes, but my point
8 is there their methodologies were so insensitive
9 they were reporting it in percentages not parts per
10 million.

11 Q. But it is true, is it not, that Mr. Petty
12 used the low end, lower end, of the ranges that
13 Drinker exposed the subjects to of gasoline vapor.
14 True?

15 A. Well he used 150 parts per million but
16 there was one that was also 140.

17 Q. And at that lower end, 140 to 150, is it
18 not true that the complaints of the subjects were
19 slight? In other words, they didn't exhibit a lot
20 of physical complaints. Do you recall that?

21 A. Well they depended on the individual and

1 there was incredible individual variability. I
2 think that twenty percent of the subjects in that
3 particular experiment, or I'm sorry, eighty percent
4 complained and twenty percent did not. There was
5 differences and variations in 140 parts per million
6 and there were differences and variations of
7 similarities in the 900 parts per million study
8 they did the following day.

9 Q. I'm talking about at the lower end 140
10 parts per million. There were, and I'm just
11 reading here, no one had symptoms which were
12 persistent and progressive during the day. Do you
13 recall that?

14 A. What page is that?

15 Q. It's on page 229 of Drinker.

16 A. And let's see, I'm sorry, where are you
17 reading from?

18 Q. Under the summary on page 229.

19 A. First column?

20 Q. Yes.

21 A. This is for experiment four?

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1 Q. No one had symptoms which were persistent
2 and progressive during the day. True? Did I read
3 that correctly?

4 A. That is what that says, yes.

5 Q. Okay. And down at the bottom there were ten
6 subjects in this test, correct? In this
7 experiment?

8 A. Yes. This is the one where they identified
9 the odor as gasoline. Two thought it was some sort
10 of disinfectant.

11 Q. So at 140 parts per million the
12 concentration or the odor was apparently slight
13 enough that two of them couldn't even detect it as
14 gasoline, true?

15 A. No, they detected something.

16 Q. They couldn't identify it as gasoline,
17 right?

18 A. Well, I don't know that it actually was a
19 gasoline. This is a distillate. It is not a
20 gasoline as it was manufactured. They distilled
21 this product.

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1 Q. It is from commercial gasoline wasn't it?

2 A. Many things are similar to gasoline, but
3 they are different when you distill it, when you
4 alter it chemically.

5 Q. Well doesn't he state that eight correctly
6 identified the odor as gasoline?

7 A. As a gasoline odor, yes. It doesn't mean
8 it's gasoline.

9 Q. Well you said eight correctly identified
10 the odor as gasoline. Doesn't that imply what they
11 were smelling was gasoline?

12 A. An odor of gasoline doesn't mean that it is
13 gasoline. It is different. They changed in this
14 study.

15 Q. Well why would he say correctly? That they

16 were correct that this was an odor of gasoline?

17 A. Because that's what they believed it was.

18 An odor of gasoline, not gasoline.

19 Q. That's what Drinker believed it was,
20 correct?

21 A. Well, no.

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1 Q. Well he said correctly didn't he?

2 A. If you look, if you read in experiment four
3 it says test substance distillate from commercial
4 gasoline.

5 Q. But doesn't he say that eight correctly,
6 meaning that they were right this was the odor of
7 gasoline?

8 A. No, I agree with that. It was the odor of
9 gasoline. It doesn't mean it was gasoline.

10 Q. Now last paragraph under page 229 and again
11 we're looking at experiment four. Eighty percent
12 of the subjects declared that they would work
13 willingly in such an atmosphere. True?

14 A. Yes.

15 Q. Now the subjects were-- The test lasted for
16 eight hours. Is that correct? I'm looking at--
17 Under experiment number 4.

18 A. Yes.

19 Q. Do you know how

20 A. With one hour for lunch.

21 Q. Do you know how long the subjects in Amore

- 32 -

1 or API were subjected to gasoline vapors?

2 A. I don't know the specific time, just long
3 enough to determine whether they could smell it or
4 not. Uh-oh, this came off. This is from here?

5 Q. Yes, it's on the red. So it would be true
6 would it not that the subjects in Drinker were
7 tested at longer periods of time than the test
8 subjects in either Amore or the API?

9 A. Let me look. I don't know if it states a
10 time. Again they were two different types of
11 tests. Drinker was looking at, excuse me,
12 symptomatology toxicity of gasoline vapor not odor
13 thresholds. These other studies were looking at
14 odor thresholds. But yes I would agree with what
15 you just said.

16 Q. Now I know from reading some of your other
17 testimony that you have done medical or, not
18 medical, legal work for multiple oil companies.
19 Would that be true? For example, you've worked for
20 Exxon Mobil, provided consultation to them,
21 correct?

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1 A. Yes I've done industrial hygiene work. I
2 would not call it medical.

3 Q. You've done work in litigation for Exxon,
4 true?

5 A. Yes.

6 Q. You've done litigation work for Chevron?
7 True?

8 A. Yes.

9 Q. You've done litigation work for Unical?

10 A. I don't know that I've done litigation work
11 for them.
12 Q. Consulting work in general?
13 A. Yes.
14 Q. You've done work for Conoco Philips? True?
15 A. Yes.
16 Q. And of course you've done work for BP?
17 A. Yes.
18 Q. Have you done work for BP other than the
19 Detel case, the Ryan case and the Hazelton
20 litigation?
21 A. I looked at a silica issue for them. I
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1 think it was a silica or asbestos issue for BP for
2 another subsidiary company I think.
3 Q. Did you give any testimony in that case by
4 way of deposition or trial?
5 A. No.
6 Q. Have you worked with Maron & Marvel that
7 law firm on any other litigation other than Sugar
8 Creek and Hazelton?
9 A. Well it seems to me that it is possible
10 that I have. I cannot think of a particular case
11 though.
12 Q. How about the law firm, Mr. Weaver's firm,
13 Squire Sanders. Have you done work for them in the
14 past?
15 A. I may have at some time. I've worked with
16 different firms around the country, but I couldn't
17 tell you specifically what I did if I did anything.
18 Q. Are you currently doing any other work for
19 either Maron & Marvel or Squire Sanders law firms?
20 A. No.
21 Q. Were you involved in the Sugar Creek case
- 35 -

1 the Bonn case?
2 A. I may have talked to them about that. I
3 did not really do anything on that case.
4 Q. And I think I'm clear on this but I want to
5 make sure of it for the record. You didn't put
6 together any type of model estimating Justin
7 Detel's exposure in this case, correct?
8 A. Yes.
9 Q. And I assume that the reason that you did
10 not do that was similar to your reasons in Ryan
11 that you didn't feel like there was enough
12 information.
13 A. Well I felt like I had sufficient
14 information, I just feel like based on that
15 information there was just no exposure beyond
16 background.
17 Q. Okay. What is background?
18 A. It varies on household to household. And
19 I'm sorry you're talking about background for
20 benzine?
21 Q. Well what did you consider to be background
- 36 -

1 for your opinion that Justin wasn't exposed to
2 anything more than background levels?
3 A. The data I've seen is for benzine is up to
Page 13

4 approximately twenty parts per billion for the air.
5 Q. Have you ever reviewed any information on
6 dismantling of refineries and what type of
7 exposures there might be during dismantling?

8 A. No, I can't say it specifically that I've
9 seen-- I've seen data on different activities
10 removing equipment out of service but not on
11 dismantling a refinery. I have one of the studies
12 in here deals with the cleanup of contaminated
13 soils as part of a reclamation project from a
14 refinery.

15 Q. Would it make sense to you that there might
16 be elevated levels of benzene during a dismantling
17 of a refinery in other words taking down the tanks,
18 that sort of thing?

19 A. I certainly believe that there is a
20 potential for that. It depends on the SOPs for
21 cleaning and clearing equipment prior to that time,

- 37 -

1 but yes I would agree there is a potential for
2 that.

3 Q. Do you know from your review of the
4 information when the dismantling of the Sugar Creek
5 refinery was done and completed?

6 A. I don't necessarily dates, I thought it was
7 primarily it was done before the mid to late
8 eighties is my recollection. I do not recall the
9 specific date.

10 Q. Now the other oil company that I think I
11 did not mention that you've done work for in the
12 past is Shell Oil. Is that correct?

13 A. Yes.

14 Q. And you're aware are you not from
15 litigation involving Shell that they have maybe
16 more but they had at least two refineries or had
17 one in Deer Park and one in Wood River?

18 A. Right. Yes I am aware of that.

19 Q. And you are aware that in time they
20 performed studies of both of those refineries to
21 estimate the historic benzene exposure?

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1 A. Well, I don't know that I'd call it a
2 study. They had a group of health safety
3 professionals, medical professionals, interview
4 former workers there in an attempt to do a
5 retrospective assessment of the exposure levels.

6 Q. Okay and that was done at at least one of
7 their facilities Deer Park, correct?

8 A. And Wood River.

9 Q. Done at both facilities?

10 A. Yes.

11 Q. And have you reviewed those studies? Or
12 that study?

13 A. Again, I've reviewed what they called an
14 estimate, yes.

15 Q. I want to show you what I've marked as
16 Exhibit #5 and ask you if this is part of that
17 report and I'm just reading the heading here: Deer
18 Park Manufacturing Complex Benzene Exposure Study.
19 Do you see that?

20 A. Yes.

21 Q. And so they did refer to it as a study,

- 39 -

1 correct?

2 A. Yes.

3 Q. And it has some people here listed on the
4 front of the study, correct? Some individuals
5 involved?

6 A. Yes.

7 Q. And they were industrial hygienists, true?

8 A. Yes.

9 Q. Just like yourself, right?

10 A. Right.

11 Q. We have a senior industrial hygienist, a
12 corporate industrial hygienist, and an industrial
13 hygienist consultant, correct?

14 A. Yes.

15 Q. All in the same field that you are?

16 A. Yes.

17 Q. Do you know any of these people?

18 A. Yes.

19 Q. Do you find them to be good scientists in
20 the field of industrial hygiene?

21 A. Yes.

- 40 -

1 Q. I've got a highlighted copy of number five
2 so I'm going to hand you an un-highlighted copy of
3 number five and that should help us communicate a
4 little better. I'm going to mark as Exhibit #6
5 another section of that report and ask if you've
6 seen that section before. The Benzene Historical
7 Exposure Study Deer Park Manufacturing Complex.
8 Have you seen part of that study as well?
9 (Whereupon Exhibit #6 was marked for
10 identification.)

11 A. Yes, I have.

12 Q. Now, looking over-- I'm looking at the
13 first one, Exhibit #5, under initial assumptions.
14 It is true is it not that

15 A. I'm sorry. Oh, I've got it. Okay.

16 Q. It's true is it not that these scientists
17 in their attempt to estimate benzene exposure at
18 these refineries used odor?

19 A. They incorporated odor in the assessment
20 but that was by no means the only criteria that
21 they used.

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1 Q. The number one initial assumption says
2 ranges of exposure were identified based on
3 differences in odor perception which were reported.
4 Correct?

5 A. Now that's what that says, yes.

6 Q. And so what they did in calculating and
7 estimating benzene exposure was to use at least in
8 part odor perception from workers at the
9 facilities, true?

10 A. In part. They incorporated odor,
11 historical subjective recollections of odors, yes.

12 Q. Was this the first study that you had ever
13 seen that utilized odor as at least a partial basis
14 for a benzene exposure estimate?

15 A. Yes.
16 Q. Now over on page, I guess the following
17 page after the initial assumptions I'm looking at
18 adjustments made to those estimates. Do you see
19 that category?
20

21 A. Yes.

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1 Q. Number three olfactory fatigue.

2 A. Yes.

3 Q. Do you agree with what these scientists
4 identified that was recognized that olfactory
5 fatigue may have been important to perceived odor
6 levels in areas where benzene exposure was not well
7 controlled? Do you agree with that statement?

8 A. As a possibility, yes.

9 Q. And what I understand happens with
10 olfactory fatigue just in layman's terms is if
11 there is an odor that is constantly present it may
12 not be recognized by individuals because they've
13 been sort of dulled to it. Would that be a
14 layman's assessment?

15 A. Sure.

16 Q. And so what happens then if you have an
17 area that smells like benzene or smells like
18 gasoline continuously there may be a point where
19 the subject reports that they don't really smell it
20 anymore unless they leave the area and come back.

21 A. That's possible, yes.

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1 Q. So because of olfactory fatigue you could
2 have a situation where exposures are underestimated
3 because subjects don't report the full extent of
4 odors present.

5 A. For some substances that is true and for
6 high levels of exposure for extended periods of
7 time that can be true.

8 Q. Now I know from your deposition in the case
9 for this study was discussed that you don't have
10 any criticisms of the study itself, correct?

11 A. I don't have specific criticisms of what
12 they did. I think if you look at it in total it
13 was an attempt they made to define exposure values
14 historically. And they were using the best
15 information they had. I do have criticisms of I
16 don't believe data was properly calibrated with an
17 actual monitoring data sufficiently. I don't
18 believe that there was a robust enough statistical
19 analysis of the data such that it is reliable.

20 Q. Okay but what you said in your deposition
21 and I'll just quote it so we are accurate is, "I'm

- 44 -

1 not criticizing the study in terms of how it was
2 done." Right?

3 A. Yes.

4 Q. So you have no criticisms of the study in
5 terms of how it was done?

6 A. Well, no, I mean in terms of how it was
7 done

8 Q. Now I want to show you

9 MR. WEAVER: Did you finish your answer?
10 MR. SPENCER: Yes.
11 MR. WALTERS: I think he did.
12 BY MR. WALTERS:
13 Q. I want to show you what is marked as
14 Exhibit-- I've already showed you. Exhibit #6
15 which is more of the historical exposure study done
16 by Shell. And by the way they did this with in-
17 house people, correct?
18 A. There were some in-house people, yes.
19 Q. Alright. So there were Shell
20 representatives involved in this benzine exposure
21 assessment, right?

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1 A. Yes.
2 Q. Now summary of survey jobs. Do you see
3 page three there of Exhibit #6?
4 A. Yes.
5 Q. Exposure-- I'm reading the last sentence
6 and ask you if this is your understanding of how
7 this study was done. Exposure ranges highlighted
8 by an asterisk indicate that the dose calculated is
9 based on other than benzine odors. Is that what
10 they did in this study?
11 A. Well, that's what it says there, yes. I'm
12 presuming they did. I can't tell you that they
13 actually did that.
14 Q. Right. So as I read that, if there is an
15 asterisk by some of these work categories that
16 means that they didn't use odor. Right?
17 A. Benzine odor. That's correct.
18 Q. So when we review pages following that
19 statement there are multiple areas where they did
20 in fact use odor to calculate dose. Correct?
21 A. Again, that was only one of the components

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1 that they used to determine ultimately dose. There
2 were other parameters other than just odor and it
3 was also a panel of people who are sitting down and
4 interviewing this individual who were familiar with
5 the activities and operations.
6 Q. Alright. Well in the categories in the
7 pages after this summary of surveyed jobs there are
8 multiple categories, are there not, where an
9 asterisk doesn't appear which would mean that they
10 relied in part on odor.
11 A. Well all this is I think still based on
12 odor. It is just a function whether they say other
13 than benzine odors. So it may have been some other
14 hydrocarbon that they were using as a surrogate.
15 Q. They relied on multiple odors, did they
16 not? Not just benzine odors?
17 A. That is what they're saying, that they
18 relied on other than benzine odors.
19 Q. Okay.
20 A. Now that may mean they relied on other than
21 odors altogether. They relied on some other

- 47 -

1 criteria.
2 Q. Looking on again the assumption section
Page 17

3 which is a few pages over, assumptions made in
4 calculating benzine, do you see that page?

5 A. Yes.

6 Q. Number four. Does that indicate that in
7 estimating benzine exposures in this study they
8 relied at least in part on odors other than pure
9 benzine?

10 A. Yes.

11 Q. They state where the exposure reported
12 reflects the odor of materials other than benzine
13 and the highest odor exposure value reported for
14 each test is lower to the next category. True?

15 A. Yes.

16 Q. So there were multiple chemicals, compounds
17 that they were relying on the recollections the
18 odors of the workers in estimating benzine
19 exposure?

20 A. Again you've only given a portion of this.
21 They were not relying simply on odor. That was

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1 only one part of the analysis that they did.

2 Q. Is it true that they assigned ppm estimates
3 based on a description of an odor event?

4 A. No. They included odor but there was more
5 than just that.

6 Q. Alright. Well if we go -

7 A. They also based it on-- There was also they
8 were trying to calibrate it with actual data.

9 Q. Well if we look at the next page that has
10 the heading description of odor event, do you see
11 that?

12 A. Yes.

13 Q. Just looking at the first number A there.
14 If there is no liquid visible but odor of benzine
15 is detectible, then they assigned a ppm estimate to
16 be used. Correct?

17 A. Yes but again this is not based on just
18 odor.

19 Q. But the category says ppm estimate to be
20 used based on description of odor event. Correct?

21 A. It does, but it also says whether the

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1 liquid was visible or not and they are using these
2 people who, these industrial hygienists who were
3 involved in the study who had done actual air
4 monitoring to draw from their experience as to and
5 correlate that whether it was visible or not,
6 visible and with smells and correlate that with
7 existing data that they had.

8 Q. Okay but there is no question that at least
9 the basis in part for the estimate to be used was
10 an odor event.

11 A. That was a part of it yes. I would agree
12 that's what they did.

13 Q. Now are you-- Have you read the deposition
14 of one of the investigators in this case, Mr.
15 Tuznitz(phonetic)?

16 A. I've read it in the past, yes.

17 Q. Alright. And are you aware that he
18 referred to this study as state of the art?

19 A. I don't recall specifically what he said

20 but he may have said that.
21 Q. So this study that was developed to

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1 estimate benzine exposure at a refinery that used
2 odor was identified or described as a state of the
3 art study correct?

4 MR. WEAVER: Objection.

5 MR. SPENCER: I don't know. I don't recall
6 him saying that. I need to see that in the
7 testimony to verify that.

8 BY MR. WALTERS:

9 Q: Do you recall that he wrote a letter to
10 OSHA where he described the study as state of the
11 art? Do you recall that?

12 MR. WEAVER: Objection.

13 MR. SPENCER: No I do not.

14 BY MR. WALTERS:

15 Q. I can just show you. It is the highlighted
16 area on page eleven and twelve from his deposition
17 if you wanted to just give that a quick look.
18 Eleven and twelve. In a letter to OSHA did he
19 testify under oath that he described this study as
20 state of the art?
21

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1 MR. WEAVER: Objection.

2 MR. SPENCER: That the methods they used were
3 the highest state of the art.

4 BY MR. WALTERS:

5 Q. Okay. And at least one of the methods that
6 they used that were the highest state of the art
7 was odor.

8 MR. WEAVER: Objection to the form of the
9 question. He is not a witness in this case.

10 MR. SPENCER: No, in fact

11 BY MR. WALTERS:

12 Q. Did he testify to that? The author of this
13 study that the methods they used were the highest
14 state of the art?

15 MR. WEAVER: On another case.

16 MR. SPENCER: He is making a statement there
17 but I believe you are taking it somewhat out of
18 context. He is talking about this report that they
19 did and this assessment they did that did include
20 odor but it was odor that was related to air
21 monitoring data that was related to professional

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1 and personal experiences with operators in the
2 facility and with industrial hygienists who work in
3 that facility to correlate all that information
4 together. It wasn't simply standing on odor alone.

5 BY MR. WALTERS:

6 Q. Okay. I'm going to move to strike as non-
7 responsive. Maybe you didn't understand my
8 question. My question simply is this: Based on his
9 sworn testimony, did Mr. Tuznitz(phonetic) in a
10 letter to OSHA describe this study as quote: we
11 fully believe that the methods used to make the
12 estimates represent the maximum care and the
13 highest state of the art of such historic data

14 estimates.
15 MR. WEAVER: Objection.
16 BY MR. WALTERS:
17 Q. Is that what he testified to that he wrote
18 in a letter to OSHA?
19 MR. WEAVER: Objection.
20 MR. SPENCER: Based on my reading of that
21 testimony yes I would agree that is what he said.

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1 BY MR. WALTERS:
2 Q. Did he also testify, and I'm looking at
3 page 26, line 13 through 15, we developed our
4 benzine exposure data partly on odor and partly on
5 all the other items that I've cited.
6 MR. WEAVER: Objection.
7 MR. SPENCER: I won't disagree with that. It
8 is exactly what I'm saying. Partly on odor but
9 there were many other factors and experienced
10 people who worked in the refinery that developed
11 those numbers. And that is critical.
12 BY MR. WALTERS:
13 Q. When was the first time that you became
14 aware that Shell oil in estimating historic benzine
15 exposure had relied in part on odor? When did you
16 first become aware of that study?
17 A. I don't know if I can give you an accurate
18 answer. Within the last couple of years.
19 Q. Were you aware of that study then at the
20 time that you gave your testimony in the Ryan case?
21 A. I don't know that I was no. I mean again

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1 it is not in any peer reviewed literature. I think
2 it came out as the result of some litigation. It's
3 never been a validated peer review study. So
4 that's why I've never seen it except for in
5 litigation.
6 Q. When was the first litigation case with
7 Shell that this study surfaced and you became aware
8 of it?
9 A. I'm not certain. It was-- It has been a
10 year or two years ago. I don't specifically
11 recall.
12 Q. Do you keep a list of litigation cases that
13 you've been consulted on?
14 A. No.
15 Q. Do you keep a list of litigation cases that
16 you have given deposition testimony on?
17 A. I do yes. I have a list I guess for the
18 last four years.
19 Q. Alright. So we could look at that list and
20 determine which Shell case that you consulted on
21 and that would help us target a time period when

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1 you first became aware of this study?
2 A. I don't know if it would or not. I don't
3 know if looking at the case would tell me which,
4 whether it was a Shell case or some other case that
5 it came up in.
6 Q. Were you aware of this Shell study prior to
7 your testimony in the Stubbs Wilkinson case? Do

8 you recall that case?

9 A. Yes.

10 Q. You gave a deposition testimony in that
11 case I think in May of this year. True?

12 A. Yes.

13 Q. Were you aware of this study prior to that
14 case? Being consulted in that case?

15 A. Yes I believe I would have been.

16 Q. What are some of the names of the shell
17 cases that you've been consulted on?

18 A. I think I could tell you one. There hasn't
19 been that many. I don't know.

20 (Break -- Off the Record)

21 BY MR. WALTERS:

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1 Q. We covered this earlier and I think it is
2 on your CD as well. You're an industrial
3 hygienist, correct?

4 A. Yes.

5 Q. And in terms of your course work in
6 industrial hygiene I would assume had many courses
7 in industrial hygiene?

8 A. Yes.

9 Q. Do you know how many?

10 A. No. I mean, a lot, but no I don't know.

11 Q. If one were to look and get transcripts of
12 your course work in industrial hygiene where would
13 we look?

14 A. Oh, I'm sorry. Are you talking about
15 college courses or are you talking about
16 professional development courses?

17 Q. Any courses. Let's start with college
18 courses. Did you have college courses in
19 industrial hygiene?

20 A. Only at graduate level at George Washington
21 University I had one or two courses there. My

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1 course work is in environmental biology, general
2 biology, zoology. If you look on my C.V. it has a
3 listing of most of, not all, but most of the
4 professional development courses I've taken through
5 the years. But it doesn't list all of them.

6 Q. So in terms of your college courses in
7 industrial hygiene we would find one or two at--
8 Did you say George Washington?

9 A. George Washington, yes.

10 Q. Do you have graduate school hours? How
11 many graduate school hours do you have? Just in
12 general?

13 A. Are they credit hours? Is that what you're
14 asking?

15 Q. Correct.

16 A. I think in total thirty or forty credit
17 hours.

18 Q. And would those also be at George
19 Washington?

20 A. No they would be at University of Maryland,
21 George Washington and Hood College.

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1 Q. Where is Hood College?

2 A. Frederick, Maryland.
3 Q. Now I don't think I have a current C.V. but
4 I saw in your deposition this summer that you've
5 written a paper that was published in I think May
6 of this year. Is that right?
7 A. Back in May?
8 Q. I might have the date wrong. What is the
9 most recent paper you got published?
10 A. I thought it was this summer that it was
11 accepted by the publication.
12 Q. What is that paper?
13 A. It is on predictive modeling of solvent
14 exposures including benzene.
15 Q. And I'm assuming since you didn't prepare a
16 model for this case that there wouldn't be anything
17 in there specifically relating to models that you
18 are relying on for your opinions in this case?
19 A. Correct.
20 Q. Is that paper published yet?
21 A. Yes.

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1 Q. Where is it published?
2 A. It is in the Journal of Occupational and
3 Environmental Hygiene, the AIJ Journal.
4 Q. Did you write that paper at the request of
5 anyone?
6 A. No.
7 Q. Was that done based on any studies you had
8 done pursuant to any grants?
9 A. No.
10 Q. Did anybody pay you to write that paper?
11 A. No.
12 Q. Have you ever testified for a plaintiff in
13 any type of chemical exposure case?
14 A. Yes.
15 Q. How many occasions?
16 A. That I've actually testified?
17 Q. Correct.
18 A. I guess you mean by plaintiff not where I
19 testified for plaintiff's attorneys who were sued
20 by their clients?
21 Q. Yes, I'm excluding that.

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1 A. I've done that a few times. And I think
2 hopefully you'll never come back to me for that.
3 But I probably testified in deposition or trial in
4 three or four cases on behalf of plaintiffs in some
5 type of solvent exposure case.
6 Q. What would those solvents include?
7 A. One dealt with paints and involved a
8 variety of solvents. Xylene and benzene was
9 included in there, taluine(phonetic), MEK. Another
10 involved some various byproduct of combustion. And
11 I'm sorry you're talking about where I've actually
12 testified?
13 Q. Correct.
14 A. I know there's others but I can't think of
15 specifics right now.
16 Q. The ones that you recall did those involve
17 a plaintiff with some sort of cancer or
18 hematological problem that they were alleging the

19 chemical cause?
20 A. I'm not certain. In the one case there
21 were eight I believe like seven or eight plaintiffs

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1 in the case. I don't know that they were cancer or
2 neurological effects.
3 Q. There was a case that you testified in for
4 a plaintiff, Johnson vs. Volpe Nails. Do you
5 recall that?

6 A. No.
7 Q. Did you testify for a plaintiff or a guy
8 who ingested nail polish remover?

9 A. Oh yes. I generally remember that yes.
10 was that a child that ingested--

11 Q. It was a gentleman wasn't it that ingested
12 nail polish and it's hard on the esophagus.

13 A. It is a little tough going down. I don't
14 recall. I do remember that generally but
15 unfortunately I don't recall the specifics of that.

16 Q. I'm just looking at testimony that you gave
17 in a case in '93, Andorella(phonetic) vs. Humble
18 Sand where you describe the Volpe Nails case and it
19 says that you were asked to evaluate the warnings
20 on the product on behalf of a Mr. Johnson who drank
21 it.

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1 A. Okay.

2 Q. Does that ring a bell?

3 A. I'm sorry. The case sounds, the name
4 sounds familiar but I just do not remember the
5 details of it.

6 Q. And you found the warning on the bottle of
7 nail polish to be inadequate. Correct? That was
8 your testimony in that case?

9 A. Again, I just do not recall the specifics,
10 I'm sorry.

11 Q. If that is described on

12 A: How long ago was that?

13 Q. In your testimony in the
14 Andorella(phonetic) vs. Humble Sand case do you
15 have any reason to disagree with that? I can show
16 you a copy of this transcript.

17 A. I don't disagree. I'm just curious when
18 this was. It was '93. Holy smokes. Oh this was-
19 Okay.

20 Q. Do you have any reason to disagree with the
21 testimony that you gave in this case describing

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1 your work on the Johnson vs. Volpe Nails case?

2 A. No. I mean I hate to think I disagree with
3 my own testimony.

4 Q. That's all I have. Thanks.
5 (Whereupon the deposition concluded at 11:03
6 a.m.)
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STATE OF MARYLAND, to wit:

I, Victoria L. Birkett, the court reporter present at this deposition and Notary Public in and for the State of Maryland, Anne Arundel County, do hereby certify that the proceedings were recorded by me and this transcript is a true record.

I further certify that I am not of counsel to any of the parties, nor an employee of counsel, nor related to any of the parties, nor in any way interested in the outcome of this action.

As witness my hand and notarial seal this
day of

VICTORIA L. BIRKETT
Notary Public

MY COMMISSION EXPIRES: 8/01/10

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WITNESS: JOHN SPENCER

Please note any errors and the corrections thereof on this errata sheet. The rules require a reason for any change or correction. It may be general, such as "To correct stenographic error," or "To clarify the record," or "To conform with the facts."

PAGE	LINE	CORRECTION	REASON FOR CHANGE
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CERTIFICATE OF DEPONENT

I hereby certify that I have read and examined the foregoing transcript, and the same is a true and accurate record of the testimony given by me.

Any additions or corrections that I feel are necessary, I will attach on a separate sheet of paper to the original transcript.

JOHN SPENCER

I hereby certify that the individual representing himself/herself to be the above named individual, appeared before me this _____ day of _____, 2006, and executed the above certificate in my presence.

Spencer depo. Detel case. Sept. 06
NOTARY PUBLIC IN AND FOR

MY COMMISSION EXPIRES: - - - - -
- - - - -

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