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NO. B-134,406

RAY WING, ET UX.

IN THE DISTRICT COURT OF

VS.

JEFFERSON COUNTY, TEXAS

SHELL OIL COMPANY,
ET AL. 60TH JUDICIAL DISTRICT

DEPOSITION OF
OTTO WONG, SC.D., F.A.C.E.
NOVEMBER 13, 1991

REPORTED BY:

KATHY SCHAEFER MILLER, CSR, RPR, CM
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5 WONG 45 Letter Dated-May 15,1991

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6 F.A.C.E. to Mr. John O.

Tyler, Jr. 25

7 WONG 46 Invoice from Applied Health

8 Sciences, Inc. to Mr. John O.

Tyler, Jr. 25

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NELL MC CALLUM & ASSOCIATES, INC.

8

1 APPEARANCES:

2

3 For the Plaintiffs:

4

5 Mr. J. Keith-Hyde

6 The Law Office of Herschel L. Hobson

7 2190 Harrison

8 Beaumont, Texas 77701

9

10 For the Defendants:

11

12 Mr. John O. Tyler, Jr. and

13 Mr. Micky Das

14 Tyler, Pearson & Sanders

15 1100 Milam, Suite 3100

16 Houston, Texas 77002

17 Attorney for Defendants,

18 Canadianoxy Offshore Production

19 Company, Citgo Petroleum

20 Corporation, Conoco, Inc., Oxy Oil

21 & Gas USA, Inc., and Shell Oil

22 Company

23

24

25

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9

APPEARANCES:

Mr. Wayne E. Revack

4 Benckenstein, Norvell, Bernsen &

5 Nathan

6 P. O. Box 551

7 Beaumont, Texas 77704

8 Attorney for Defendants, Allied

9 Chemical Corporation and Fina oil &

10 Chemical Company

11

12 Also Appearing:

13

14 Mr. Paul Robichau

15 Videographer

16

17

18

19

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1 DEPOSITION AND ANSWERS of OTTO WONG,
2 Sc.D., F.A.C.E., called as a witness by the
3 Plaintiffs, taken before Kathy Schaefer Miller,
4 Certified Shorthand Reporter in and for the State
5 of Texas, in the law offices of Tyler, Pearson &
6 Sanders, 1100 Milam, Suite 3100, Houston, Texas,
7 77002, on the 13th day of November, 1991, between
8 the hours of 9:15 a.m. and 4:30 p.m., pursuant to
9 the Texas Rules of Civil Procedure.

10 MR. HYDE: Let's go ahead and go on
11 the record. Go ahead and swear the witness in,
12 if you would.

13

14 (The instrument was marked for
15 identification as Wong Exhibit Number 1.)

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11

1 OTTO WONG, Sc.D., F.A.C.E.

2 was called as a witness by the Plaintiffs, and
3 being first duly sworn, testified as follows:

4

5 DIRECT EXAMINATION

6 QUESTIONS BY MR. HYDE:

7

8 Q. Dr. Wong, we will get into the
9 introductions and all in one second, but so that
10 Mr. Das may leave as quickly as possible, we
11 have -- I have had marked Deposition Exhibit 1,
12 Wong, or -- strike that.

13 Deposition Exhibit 1, which is Wong
14 Exhibit Number 1, is the notice of the
15 deposition, along with the subpoena duces tecum.
16 Did you get a copy of this notice?

17 A. Yes, I did.

18 Q. Okay. And did you bring any documents
19 that are responsive to this notice?

20 A. Yes, I have.

21 MR. HYDE: Okay. Can we go ahead
22 and go over these request by request?

23 MR. DAS: Sure.

24 MR. HYDE: Okay. Number -- the
25 Number 1 requests for you to bring any and all
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12

1 correspondence, pleadings, medical and/or
2 scientific articles, depositions, medical
3 records, written instructions, photographs,
4 videotapes, audio tapes and/or documents of any
5 kind which the witness has received from the
6 defendant, defendant's counsel or any employee,
7 agent or representative of defendant's counsel in
8 this case.

9 What documents do you have responsive to
10 that request?

11 MR. DAS: Keith, if I can
12 circumvent this.

13 MR. HYDE: Okay.

14 MR. DAS: Or just speed it, it will
15 help. We have got the same packet of medical
16 records Dr. Wong received that was sent to Ben
17 Thomas.

18 MR. HYDE: Okay. Are you telling
19 me that what we attached to Ben Thomas'
20 deposition as medical records are the exact same
21 documents that were sent to Dr. Wong?

22 MR. TYLER: He, I think, saw both a
23 full set and then the chronology that I did, that
24 we gave you a copy of.

25 MR. HYDE: That's the two-volume
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13

1 chronology?

2 MR. TYLER: Right. There is a

3 two-volume chronology but -

4 MR. HYDE: Plus all of the other

5 medical records?

6 MR. TYLER: I think so. Did you

7 receive -- can you describe the medical records

8 you received from us?

9 A. Yes, I did.

10 Q. (By Mr. Hyde) Okay. What were they that

11 you received?

12 A. I don't remember, but -

13 Q. Well, were they a big set of medical

14 records?

15 A. No. Just about -- I would say this

16 thick.

17 Q. In two volumes?

18 A. In two volumes.

19 MR. TYLER: That would be the same

20 set then that Dr. Thomas had.

21 MR. HYDE: Okay. So what Dr.

22 Thomas received and what Dr. Wong both received

23 are only the chronological medical records that

24 your office -

25 MR. TYLER: Right.

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14

1 MR. HYDE: -- put together?

2 MR. TYLER: Right.

3 MR. DAS: Okay.

4 MR. HYDE: Is that right, Dr.

5 Wong?

6 THE WITNESS: Yes.

7 MR. DAS: He also got, it's my

8 understanding, the deposition of Dr. Teitelbaum,

9 Dr. Savitz, Dr. Rose, James Hammond, and Frank

10 Gardner.

11 THE WITNESS: I only received a

12 summary of Dr. Gardner's deposition.

13 MR. DAS: I apologize, summary of

14 Dr. Gardner's deposition but the full depositions

15 of Teitelbaum, Savitz, Rose and Hammond?

16 THE WITNESS: That's correct.

17 MR. HYDE: Hold on.

18 MR. TYLER: All the experts except

19 Gardner, he got the full deposition on.

20 MR. HYDE: Okay.

21 MR. TYLER: With Dr. Gardner he was

22 given an abstract. We will be glad to give that

23 to you.

24 Q. (By Mr. Hyde) Were there any other

25 depositions that you received other than those?

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15

1 MR. DAS: Mr. Wing's deposition.

2 THE WITNESS: Right.

3 Q. (By Mr. Hyde) And anybody else?

4 A. No, that's it.

5 MR. HYDE: Okay.

6 MR. DAS: Okay. This is Mr. Wong's
7 file with regards to correspondence.

8 MR. HYDE: Okay.

9 MR. TYLER: Why don't we have each
10 of these marked just for housekeeping?

11 MR. HYDE: Okay. Yeah, let me
12 have -- what did you produce that is responsive
13 to Number 1? I mean you haven't produced
14 anything as far as medical records, because we're
15 not going to, but as far as correspondence
16 from -- from you all -

17 MR. DAS: Okay.

18 MR. HYDE: -- to -- to Dr. Wong.

19 MR. DAS: Here is that.

20 THE WITNESS: You have the file
21 there.

22 MR. HYDE: That correspondence?

23 Let's have this marked as -

24 MR. TYLER: I'll go get a stapler.

25 MR. DAS: Here we go. Here is a
NELL MC CALLUM 8 ASSOCIATES, INC.

16

1 paper clip.

2

3 (The instruments referred to by
4 counsel were marked for identification as
5 Wong Exhibit Numbers 2- and 3.)

6

7 Q. (By Mr. Hyde) Paper clip will work. In
8 globo, what we had marked as Deposition Exhibit
9 Number 2 is all the correspondence that you have
10 received from the law firm of Tyler, Pearson &
11 Sanders. Is that correct, Dr. Wong?

12 A. Let me take a look.

13 Q. Sure.

14 A. Yes.

15 Q. Is there anything else?

16 A. That's it.

17 Q. Okay. Now, Number 2 requests any and
18 all notes, memoranda, correspondence, reports
19 written opinions and/or documents of any kind
20 which you have provided to defendant, defendant's
21 counsel or any agent, employee or representative
22 of defendant's counsel in this case. What do we
23 have responsive to that?

24 MR. DAS: Okay. We have got Dr.

25 Wong's report and if you look back in -- if I
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17

1 could take a look at Exhibit 2, Dr. Wong, at our
2 request, provided us some documents to Sharlene
3 Tischler, who is a paralegal here, setting some
4 articles that were requested over the phone which
5 have been included in here-, except for the
6 Nakamura article -

7 THE WITNESS: Right.

8 MR. DAS: -- which we could not
9 find. But those were already included in here
10 and referenced in this letter here, Keith.

11 MR. HYDE: Okay.

12 MR. DAS: Okay?

13 Q. (By Mr. Hyde) Dr. Wong, is there
14 anything else you have responsive to Request
15 Number 2 other than what's been provided in
16 Deposition Exhibits 2 and 3?

17 A. I believe that's all.

18 Q. Okay. Number 3 requests any and all
19 notes, memoranda, reports, correspondence,
20 summaries and/or documents of any kind which
21 evidence or reflect the factual observations
22 and/or expert opinions in this case.
23 Obviously, your report which is
24 deposition number -- Exhibit Number 3, falls into
25 that category. What else do you have?

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18

1 MR. TYLER: Okay. Clip those
2 together and mark it.

3 MR. DAS: Yeah, let me -- these are
4 his notes that he has taken during various
5 conversations, and a summary, I guess that he
6 made of Mr. Wing's deposition right there.
7 That's a two-page deal. Those go together. And
8 that's just his file regarding his factual
9 observations and stuff like that. Off the
10 record.

11

12 (There was a discussion held off
13 the record.)

14

15 (The instrument was marked for
16 identification as Wong Exhibit Number 4.)

17

18 Q. (By Mr. Hyde) Okay. Back on the
19 record. Dr. Wong, what's been marked as
20 Deposition Exhibit 4, are these all the documents
21 that are responsive to Request Number 3 of
22 this -- of the notice and subpoena duces tecum?

23 A. Yes, sir.

24 Q. They represent all the notes you have
25 taken in this file?

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19

1 A. Yes.

2 Q. Is that right? Number 4 requests you to
3 bring all copies -- copies of any and all medical
4 or scientific books, articles, abstracts or
5 documents of any kind which form the basis in
6 whole or in part for any opinions you may render
7 in this case.

8 What did you bring responsive to that
9 request?

10 MR. DAS: Keith, if we -- I'm
11 sorry, if we can put four and five together,
12 which I just called scientific literature, okay.
13 We have got the bibliography which summarizes a
14 lot of it, but we have brought some specific
15 articles for you as well here. Okay? And I
16 don't know if we can mark these individually,
17 or -

18 MR. TYLER: Let's go ahead and mark
19 them individually.

20 MR. DAS: Okay.

21 MR. TYLER: I will go see if those
22 butadiene copies are made.

23 MR. HYDE: Do you want to mark
24 these individually?

25 MR. DAS: Yeah.

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20

1 MR. HYDE: Why don't you go ahead
2 and put those on there? Is that all right with
3 you?

4 THE COURT REPORTER: That's fine.

5 MR. HYDE: Let's go off the record,
6 too.

7 (There was a discussion held off
8 the record.)

9

10 (The instruments referred to by
11 counsel were marked for identification as
12 Wong Exhibit Numbers 5 through 43.)

13

14 MR. DAS: We have marked in toto
15 from exhibits, I take that back, 6 through
16 whichever additional ones you want to mark
17 there. Right now they are 6 through 35. Okay.

18 MR. TYLER: One, two, three, four,
19 five, six, seven, eight.

20 MR. DAS: Through 35.

21 MR. TYLER: Those are all done.

22 I've put some of these things at the top because
23 I -

24 THE COURT REPORTER: Okay.

25 MR. TYLER: -- don't want to cover
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21

1 them.

2 MR. DAS: We have marked
3 individually from Number 6 through, excuse me
4 now, 43 additional articles, some of which are
5 already referenced in Exhibit Number -- is it 5?

6 MR. HYDE: 5.

7 MR. DAS: 5. But these are some
8 individual articles that you had asked to be
9 copied, or just for your convenience. Okay?
10 Those are really going to be responsive to
11 Numbers 4 and 5.

12 There may be some articles in there that
13 deal with exposure. Okay? And those can be
14 covered later. But with regards to Exhibit
15 Number -- I mean Request Number 6, that would be
16 part of Mr. Wing's deposition as well -

17 MR. HYDE: Okay.

18 MR. DAS: -- which talks about the
19 practices.

20 MR. HYDE: Okay. Let's stop here
21 for a second. Pursuant to Request Number 4 and
22 5 -

23 THE VIDEOGRAPHER: Want to go back
24 on?

25 MR. HYDE: Yeah.

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22

1 Q. (By Mr. Hyde) Pursuant to Request 4 and
2 5 of the notice and subpoena are the documents
3 which have been marked as Depositions Exhibits 6
4 through 43, are these the documents that you feel
5 are responsive to those two requests?

6 A. Yes.

7 Q. Okay. Okay. Now, as it concerns

8 Request Number 6.

9 MR. DAS: Right. Number 6 would be

10 Mr. Wing's own deposition in which he talks about
11 his practices that we discussed in earlier
12 depositions, and there may be some additional
13 articles or documents there between that were
14 marked 6 through collectively -- is it 43,
15 Keith?

16 MR. HYDE: Yes.

17 MR. DAS: Okay. That may be also
18 responsive to levels of exposure.

19 Q. (By Mr. Hyde) Okay. Now, Dr. Wong,
20 Request Number 6 asks you to bring documents that
21 would demonstrate Mr. Wing's level of exposure to
22 benzene, butadiene and ethylene oxide. Other
23 than Mr. Wing's deposition, what other documents
24 in there will you rely upon to demonstrate
25 Mr. Wing's exposure level to benzene, butadiene
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23

1 and ethylene oxide?

2 A. I relied partially on one paper
3 describing a study done by the National Institute
4 of Occupational Safety and Health to estimate -
5 this is Exhibit 28 -- to estimate Mr. Wing's
6 exposure to benzene.

7 Q. Okay. Now, other than Mr. Wing's
8 deposition and Deposition Exhibit 28, do you have
9 any other specific documents, medical or
10 scientific, articles of any type, that would
11 demonstrate Mr. Wing's level of exposure to
12 benzene, butadiene or ethylene oxide other than
13 the two you have mentioned?

14 A No, I don't.

15 Q. Okay. The next one?

16 MR. DAS: 7 is Mr. Wong's C.V.,
17 mark that, I guess as 44.

18 MR. TYLER: Oh, I beg your pardon.

19 Want me to put 28 back in the -

20 MR. HYDE: Yeah, please. Would
21 you?

22

23 (The instrument was marked for
24 identification as Wong Exhibit Number 44.)

25

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24

1 Q. (By Mr. Hyde) Would you identify
2 Deposition Exhibit 44, please?

3 A. Exhibit 44 is my C.V.

4 Q. Okay. And do you have -- Request Number
5 8 requests you to bring your most recent
6 bibliography of studies involving leukemia. Did
7 you bring such a document? Or do you even have
8 one?

9 A. I don't have one.

10 MR. TYLER: The one that we
11 provided in a two-part deposition is the one
12 that's being provided for him.

13 MR. DAS: Yeah, which has been
14 marked as Exhibit 5.

15 MR. TYLER: There are many articles
16 on there, and what we have tried to do is in
17 addition to that, provide a copy for you today,
18 Keith, of the specific ones that are most
19 relevant.

20 Q. (By Mr. Hyde) Okay. Number 9 requests
21 you to bring your entire file concerning this
22 case and your work on this case, including any
23 retainer agreement you have with defendant or
24 defendant's counsel.

25 MR. DAS: We have provided you
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25

1 portions of the file already in response to
2 previous Request for Production but that right
3 there is the retainer agreement.

4

5 (The instrument was marked for
6 identification as Wong Exhibit Number 45.)

7

8 Q. (By Mr. Hyde) Would you identify
9 Deposition Exhibit Number 45, please?

10 A. Exhibit 45 is a signed agreement for a
11 retainer.

12 Q. Between -- between you, your firm, and
13 Mr. Tyler's firm; is that right?

14 A. Yes.

15 Q. Are there any other agreements, any kind
16 of oral agreements that you have with their firm
17 at all, of any type?

18 A. No.

19 Q. And Number 10 asks you to bring any and
20 all documents which evidence or reflect the
21 amount of time and expense you have incurred in
22 relation to your work in this case.

23

24 (The instrument was marked for
25 identification as Wong Exhibit Number 46.)

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26

1 Q. (By Mr. Hyde) Deposition Exhibit 46, is
2 that responsive to that request?

3 A. Yes, sir.

4 Q. Are there any other documents responsive
5 to that request that you have or know about?

6 A. Not at this point.

7 MR. DAS: Just for eleven which
8 asks for -- really asks for checks, I have
9 provided those to you. Those are attached to the
10 back of the other two, 45 and 46.

11 MR. HYDE: And we have agreed to
12 waive Request Number 12.

13 MR. DAS: Right. Thank you for
14 letting us do this first.

15 MR. HYDE: Why don't we go off the
16 record for one second and let me get these in
17 order?

18

19 (After a brief recess, the
20 deposition continued as follows:)

21

22 Q. (By Mr. Hyde) Sir, would you please
23 state your entire name for the record?

24 A. Otto Wong.

25 Q. It's Dr. Wong, isn't it?

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27

1 A. Yes.

2 Q. Dr. Wong, what is your present home
3 address?

4 A. 20 Santa Felecia, S-A-N-T-A

5 F-E-L-E-C-I-A, Court, Hillsborough, California,
6 94010.

7 Q. Is that in the San Francisco area?

8 A. It's in San Francisco Bay area.

9 Q. And what is your work address?

10 A. 181 Second Avenue, Suite 628, San Mateo,

11 S-A-N M-A-T-E-O, California, 94401.

12 Q. And what is your present business phone?

13 A. 415-347-7898.

14 Q. And your present home phone?

15 A. 415-572-1888.

16 Q. And how are you presently employed?

17 A. I am a principal of the Applied Health
18 Sciences in San Mateo.

19 Q. And how long have you been employed by
20 Applied Health Sciences?

21 A. I just started in January 1991.

22 Q. And you have maintained the same
23 position; i.e., a principal since that January of
24 '91? Is that right?

25 A. Yes, sir.

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28

1 Q. Dr. Wong, my name is Keith Hyde, and I
2 work with Herschel Hobson, and you understand
3 that we represent the plaintiffs in this lawsuit
4 against the various defendants that are
5 represented by Mr. Tyler's-firm, and also another
6 firm out of Beaumont? So you understand that I
7 do represent Mr. Wing. You understand that?

8 A. I do.

9 Q. And please don't attempt to answer any
10 question that you don't understand, and I'll try
11 to rephrase it because there is going to be some
12 areas that I am going to ask questions that it
13 may not be clear what the question is, and please
14 don't attempt to answer it. Would you -- would
15 you do that?

16 A. Right.

17 Q. And you understand today that you're
18 under oath, and it is just like you're in front
19 of a Judge and the Jury in Jefferson County,
20 Texas? Do you understand that?

21 A. Yes, I do.

22 Q. And obviously you're being videotaped
23 today and you understand that this video can be
24 shown and may be shown at the trial in Jefferson
25 County, Texas. Do you understand that?

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1 A. Yes.

2 Q. Do you understand that you have been
3 named as an expert in this case? You know that?

4 A. Yes, sir.

5 Q. What were your hi-red to do in this
6 lawsuit?

7 A. I was asked to offer an opinion on the
8 relationship between Mr. Wing's acute myeloid
9 leukemia and his exposure.

10 Q. Now, as far as Mr. Wing's acute myeloid
11 leukemia, you don't have any reason to believe
12 that that diagnosis is not correct?

13 A. That's correct.

14 Q I mean it -- you believe that it's AML;
15 is that right?

16 A. Yes.

17 Q. When were you first contacted in this
18 lawsuit?

19 A. Back in -

20 Q. Is it -

21 A. -- May, around that time, 1980 -- 1991.

22 MR. TYLER: Doctor, if it would
23 help you to look at the file, please feel free to
24 do so.

25 A. Yes. It's in May, 1991.

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1 Q. (By Mr. Hyde) May of '91?

2 A. Right.

3 Q. Who first contacted you?

4 A. Mr. Tyler.

5 Q. And how was that contact made? By

6 telephone, or in writing, or in person?

7 A. By telephone.

8 Q. And what were you told about the case at

9 that time?

10 A. I was given some basic information on

11 the case, and subsequently I was supplied with

12 transcripts of depositions, and copies of medical

13 records.

14 Q. What basic information were you given

15 during that first conversation with Mr. Tyler?

16 A. Basically, it would be some of the

17 workplaces that Mr. Wing worked at, some

18 demographic information, his age, and so on, and

19 also the diagnosis.

20 Q. Did you form an opinion after that first

21 conversation with Mr. Tyler?

22 A. Not right away.

23 Q. Okay. Thereafter, did you have any

24 meetings with Mr. Tyler before you wrote your

25 report in this matter?

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1 A. No.

2 Q. Did you have any conversations over the
3 telephone with Mr. Tyler prior to your writing
4 your report in this matter?

5 A. Not prior to writing the report.

6 Q. Other than the initial conversation?

7 A. That's correct.

8 Q. And at some point in time, Mr. Tyler, or
9 Mr. Das, or somebody from their firm informed you
10 that you needed to write a report in this case?

11 Is that correct?

12 A. Yes, sir.

13 Q. Who was it that told you you needed to
14 write a report?

15 A. I believe it's someone from Mr. Tyler's
16 office, Andrea Moore.

17 Q. And what did Ms. Moore tell you about
18 the contents of the report? What did she ask you
19 to put in that report?

20 A. In fact, I think I have made some notes
21 regarding that phone conversation. Basically, I
22 was told that I need to produce a report by May
23 20th. That's about it. And the report should be
24 fairly short.

25 Q. Do you have a propensity to make long
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1 reports, or was that just to give you some
2 guidance? Do you know?

3 A. It's really -- depends on the purpose of
4 the report. On the subject of leukemia and
5 benzene, I can write a book, or I can write a
6 couple pages. It really depends on what the
7 purpose of the report is.

8 Q. What do you understand the purpose of
9 your report was in this lawsuit?

10 A. The understanding I had at that time was
11 just a summary of what my opinion would be.

12 Q. Have you talked to any of the other
13 experts employed by Mr. Tyler and his clients,
14 concerning this lawsuit?

15 A. No. I have not. Other than yesterday
16 when I was at Mr. Tyler's office, one of the
17 experts called, and I joined in, I guess -- I
18 don't think we should call it conference call,
19 but we talked on the speaker phone.

20 Q. Let me guess. I bet you that was Dr.
21 Thomas.

22 A. You are a very smart man. You guessed
23 right.

24 Q. About how long did you all talk with Dr.
25 Thomas yesterday on this telephone call?

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1 A. No more than five minutes or so.

2 Q. What did -- what was discussed in that
3 conversation with Dr. Thomas? What was the
4 subject matter?

5 A. Dr. Thomas and Mr. Tyler were talking
6 about something that I was really not involved
7 in. The only reason I joined their conversation
8 was that I know Dr. Thomas, and I kind of say hi
9 to him, joined in, we didn't really talk about
10 any substance of the case.

11 Q. What was the subject that Mr. Tyler and
12 Mr. Thomas were discussing that you were not
13 involved in? What was that?

14 A. I didn't pay attention. It's not
15 something that I was really interested in.

16 Q. Did it deal with benzene?

17 A. I think they talked about some
18 toxicological aspects of benzene and leukemia.
19 Since I am not a toxicologist, I -- I wasn't very
20 interested.

21 Q. Talked about B3, C6, F1 mice or
22 something like that?

23 A. I don't remember.

24 MR. TYLER: Off the record a
25 second.

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1 (There was a discussion held off
2 the record.)

3

4 Q. (By Mr. Hyde) Dr. Wong, do you know Gail
5 Jenkins?

6 A. No, I don't.

7 Q. Prior to meeting Mr. Revack, who is
8 sitting to me -- on my right, prior -- well,
9 strike that. Let's start that question over.

10 Prior to this morning, did you ever meet
11 Mr. Revack, and this is the fellow that's sitting
12 to my right? Had you ever met him before?

13 A. Yes. I had the pleasure of meeting him
14 yesterday.

15 Q. So yesterday was the first time you met
16 Mr. Revack?

17 A. Yes, sir.

18 Q. Who does Mr. Revack represent in this
19 case?

20 A. Good question. We met for about five
21 minutes.

22 Q. What did you and Mr. Revack talk about
23 for five minutes yesterday?

24 A. He was interested in some studies or my
25 opinion on the issue of leukemia and ethylene
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1 oxide exposure.

2 Q. Is Mr. Revack employing you today as an
3 expert in this lawsuit?

4 A. Not to my knowledge.

5 Q. Okay. And prior to today, did you ever
6 receive any information -- or let's strike that.

7 Have you ever received any information from Mr.
8 Revack, or his clients, in this lawsuit?

9 A. No.

10 Q. Do you know where his client's plants
11 are located, as it concerns this lawsuit?

12 A. That was not explained to me.

13 Q. Have you received any correspondence
14 from Mr. Revack, Ms. Jenkins, or any other person
15 at their law firm concerning this lawsuit?

16 A. No.

17 Q. Did Mr. Revack ask you to write a report
18 for him concerning this lawsuit?

19 A. No.

20 Q. Did any attorney from Mr. Revack's firm
21 or any person from Mr. Revack's firm ask you to
22 write a report concerning this lawsuit?

23 A. No.

24 Q. The bottom line is you just don't know
25 anything about him or his clients, as it concerns
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1 this lawsuit, do you?

2 A. No.

3 Q. I have a few general questions I'd like

4 to start the deposition off with.

5 Dr. Wong, what is-the fundamental

6 purpose of the study of epidemiology, in your own
7 words?

8 A. Okay. I think the principal use of

9 epidemiology is to identify high risk groups of

10 certain disease in the general population. And

11 once we have identified a high risk group, we

12 would like to identify the risk factors that

13 produce the high rate of disease, and hopefully

14 we can do something about the risk factor so that

15 we can reduce the high rate of disease in that -

16 in those populations.

17 Q. Would you agree with me that safety

18 professionals, industrial hygienists, physicians,

19 that these type -- these types of individuals

20 often rely upon the work of epidemiologists and

21 ep -- ep -- in the field of epidemiology in their

22 work? Would you -- would you agree with that to

23 some extent?

24 A. Can you repeat your question?

25 Q. Sure. I will make it -- try to make it

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1 a little shorter.

2 Would you agree with me that physicians,
3 health care providers, industrial hygienists,
4 safety professionals, that these are occupations
5 that rely upon the work of-epidemiologists to do
6 their work oftentimes?

7 A. Yes, I do.

8 Q. Recently there was a publication
9 concerning ethics published by one of the
10 professional societies in epidemiology. Are you
11 familiar with that publication? A little
12 hard-bound book?

13 A. Can you give me the name of the
14 publication?

15 Q. I didn't bring it with me today.

16 MR. TYLER: Do you remember the
17 name of the group?

18 MR. HYDE: Off the top of my head,
19 no. It's a little blue book, hard bound.

20 A. I don't remember any blue books.

21 Q. (By Mr. Hyde) Have you ever published
22 any articles concerning ethics and epidemiology?

23 A. No, I have not.

24 Q. Have you ever sat on any committees
25 concerning ethics in epidemiology? I am talking
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1 about committees within professional societies.

2 A. The only thing that I can think of that
3 would be related to that issue is I was asked to
4 participate in so called Good Epidemiology
5 Practice Workshop in Washington, sponsored by the
6 Chemical Manufacturers Association that was a
7 workshop consisting of epidemiologists from the
8 government, from university, as well as from
9 consultants, and I was one of the consultants
10 invited to participate in that -- at that
11 meeting.

12 Q. Did you receive any kind of documents
13 from this Good Epidemiology Workshop sponsored by
14 the CMA?

15 A. Good Epidemiology Practice Workshop.

16 Q. Practice Workshop, sorry.

17 A. No, I did not.

18 Q. Were there any manuals, or any kind of
19 documents at all that were passed out at that
20 workshop?

21 A. Not at that workshop.

22 Q. Were there documents passed out after
23 the workshop that reflected some of the
24 presentations in the workshop?

25 A. There might have been, but I -- I do not
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1 remember receiving any.

2 Q. Who are some of the speakers who
3 presented at the Good Epidemiology Practice
4 Workshop, sponsored by the CMA?

5 A. There was quite a-large group. I just
6 don't remember all the names off the top of my
7 head.

8 Q. Do you remember any of them, of who
9 presented at the workshop?

10 A. I remember some of the names of the
11 industrial epidemiologists. These are the people
12 who work for the industry. Dr. Ralph Cook of Dow
13 Chemical, Dr. Bill Fairwetter at Dupont. There
14 were a couple of professors from Johns Hopkins
15 University. I just don't recall their names
16 right away. And there were some people from
17 NIOSH, from the National Institute of Health. I
18 just don't recall their names right now.

19 Q. Did Jerry Raabe give a presentation at
20 that workshop?

21 A. I don't think he was there.

22 Q. As an epidemiologist, you strive to do
23 your studies scientifically correct, is that --
24 is that right?

25 A. Yes.

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1 Q. And as far as when there is a difference
2 between your client and you as the investigator,
3 it's always your position to present the facts
4 scientifically correct, is that -- is that right?

5 A. Yes, sir.

6 Q. Whether the study comes out favorable to
7 your client or not, it's your goal to present the
8 facts; is that right?

9 A. Yes, sir.

10 Q. Is it also your goal to present the
11 facts in an unbiased way, or unbiased
12 presentation; is that right?

13 A. Yes, sir.

14 Q. And you have worked with industry
15 associations such as the CMA and API; is that
16 correct?

17 A. Yes.

18 Q. Isn't it true that you recently
19 produced, or was part of a study concerning a
20 worker population exposed to gasoline vapors. Is
21 that right?

22 A. Yes, sir.

23 Q. And did you recently issue a report on
24 that study?

25 A. Yes.

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1 Q. And over the years, you have worked for
2 companies like Tabershaw, and you have done work
3 for CMA; is that right?

4 A. Yes.

5 Q. Through all those-years, working with
6 companies and the trade associations such as API
7 and CMA, have you always presented your results
8 in an unbiased and factual nature?

9 A. Yes.

10 Q. Have you ever been pressured by any
11 company or trade association ever to change any
12 of your reports?

13 A. No.

14 Q. What type of work did Mr. Wing perform
15 out at these various plants?

16 A. He worked as an insulator basically.

17 Q. And do you know the time period that

18 Mr. Wing worked as an insulator?

19 A. He worked part-time in 1952, '53, and
20 then started full-time in 1954.

21 Q. And then -

22 A. Continued -

23 Q. Thereafter?

24 A. Right.

25 Q. He was a contract employee at these
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1 facilities; is that right?

2 A. That's my understanding.

3 Q. Now, on any of the studies that you've
4 conducted within the CMA, or the API, did any of
5 those studies include contract workers such as
6 Mr. Wing?

7 A. In those studies, we do have different
8 job categories including maintenance employees.
9 Those people would perform similar tasks as
10 Mr. Wing, but to answer your question, I don't
11 think contract workers would be part of our
12 study.

13 Q. Do you know of any company wide or
14 industry wide epidemiological study that includes
15 contract employees in the study? And I am
16 talking about epidemiological study.

17 A. Right. I would think the only way a
18 contract employee could get into one of those
19 studies would be that if he was also employed for
20 part of the time by the company itself;
21 otherwise, I don't think that group would be part
22 of the study.

23 Q. Would you agree with me that that is a
24 vital group of people; i.e., the contract work
25 force in the petroleum industry, that has not
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1 been studied epidemiologically with respect to
2 the incidence of malignancies, and the exposure
3 to chemicals such as benzene, butadiene, and
4 ethylene oxide?

5 A. I don't quite understand the word you
6 use, "vital." I don't understand what that
7 means.

8 Q. Important.

9 A. In what sense is it important?

10 Q. It's data that is missing. In other
11 words, isn't it likely that the contractor
12 information would be an important piece of the
13 puzzle in the entire epidemiological picture
14 concerning worker disease as a result of exposure
15 to chemicals such as benzene, butadiene and
16 ethylene oxide?

17 A. I don't think there is anything unique
18 in itself between contract employees as opposed
19 to employees of, let's say, oil companies per
20 se. The important question is really are -- the
21 pattern of exposure.

22 Basically, in epidemiologic studies
23 we're interested in a relationship between
24 exposure and the subsequent disease, if there is
25 any. So to a large extent, you know, whether
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1 it's important or not to have that group depends
2 on whether their exposure was similar to or
3 different from some of the employees of the
4 companies. If the contract employee's exposure
5 is similar to the exposure-of the maintenance
6 workers employed by the companies, then I don't
7 think we are missing anything.

8 Q. And that's -- that's assuming the same
9 type of exposure profile to the same type of
10 chemicals over the same duration of time?
11 Those are some of the assumptions that
12 you're making, is that right, between contract
13 employees and noncontract employees?

14 A. No, I am not making any assumption. I
15 am just saying that depends on what question you
16 want to ask. If you're interested in the
17 relationship between exposure and disease, there
18 is nothing wrong to study employees of companies,
19 because certainly they would have the longer
20 exposure to that particular chemical, and in that
21 sense, we can eliminate some of the other
22 confounding exposure resulting from other places
23 of employment, or of contract employees.

24 Q. Have you ever interviewed contract
25 employees at a refinery or petrochemical plant to
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1 determine what contract employees may do
2 differently than, let's say, company employees at
3 the same facility?

4 A. In some studies, we talk with company
5 industrial hygienists to determine whether there
6 is any difference in exposure, but talking to the
7 contract employees, no, I have not.

8 Q. So you're -- one of your baseses -
9 bases, rather, for opining that contract worker
10 exposures versus company maintenance worker
11 exposures are essentially similar is based on
12 your discussions with company industrial
13 hygienists; is that correct?

14 A. To a large extent, yes.

15 Q. Now -

16 MR. TYLER: Like you.

17 MR. HYDE: Object to the sidebar
18 comment by counsel, and move that it be stricken
19 from the record.

20 Q. (By Mr. Hyde) Do you know back in the
21 '40s and '50s and '60s the types of work that
22 were conducted by laborers at the various
23 refineries? And I am talking the largely black
24 population of workers who worked out at the
25 refineries as contract employees.

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1 Do you know what those kind of
2 individuals were doing out at -- at refineries
3 and chemical plants during the '40s, '50s and
4 '60 s?

5 A. okay. You started your question with
6 laborers and then you changed it to contract
7 workers.

8 Q. Yes. Well, we can keep them all -- all
9 contract laborers slash workers, primarily black
10 men, and for the time period '40s, '50s and '60s,
11 do you know what kind of work those individuals
12 were doing out at the refineries and chemical
13 plants?

14 A. In some of our studies, we do have
15 company employees whose job title was general
16 laborer, so we do have, you know, those people in
17 our studies.

18 In your question, you refer to black men
19 in the '40s and '50s. I am not so sure all of
20 them were black. Certainly in our study we had
21 both white and black and in that job category.

22 Q. But the men that primarily were the
23 individuals that cleaned out the bottoms of
24 tanks, or cleaned out the trays in process towers
25 back in the '40s and '50s, a big population, or a
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1 big -- a large number of the workers who were
2 doing that kind of work were black men who were
3 contract employees. Is that right or wrong?

4 What is your understanding?

5 A. I don't know. I -have to go back to some
6 studies and look at that.

7 Q. And it goes back to my original
8 question. There is a fairly large population of
9 workers who have been excluded from
10 epidemiological study in the refineries and
11 petrochemical plants. Would you agree with that
12 statement?

13 A. That they have not been studied? Yes.

14 Q. Yes.

15 A. That's correct.

16 Q. And, of course, you do know that
17 during -- well, do you know what a turnaround is,
18 when I use the word "turnaround"? Shutdown?

19 A. I have some basic ideas.

20 Q. Okay. What is your understanding of
21 what a turnaround is?

22 A. It's to shut down the system, do major
23 maintenance, and then start up again.

24 Q. Okay. Assuming that basically means
25 that a process is operating, the process is then
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1 deinventoried, some of which to the sewers, some
2 of which to the atmosphere, the material -- the
3 vessels, rather, are then opened up and work is
4 done on those vessels of process equipment.

5 That's your understanding of turnaround, right?

6 A. Yes.

7 Q. Okay. For large turnarounds in
8 refineries and large petrochemical plants, would
9 you agree with me that a lot of that work is
10 conducted by contract employees?

11 A. I don't know.

12 Q. You have never seen a quantification of
13 what percentage of employees working on a
14 turnaround would be contract versus company
15 employees? You have not seen that kind of data
16 broken down, have you?

17 A. No, I have not.

18 Q. Now, a couple of things I want to make
19 sure I have an idea of -- of exactly what you're
20 going to be testifying to at the time of trial.

21 You're not a toxicologist?

22 A. No. I am not.

23 Q. You're not a physician?

24 A. No, I am not.

25 Q. You're not a safety professional such as
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1 a certified safety professional?

2 A. No.

3 Q. You're not a warnings expert?

4 A. A warnings expert?

5 Q. Warnings like Material Safety Data

6 Sheets, that kind of -

7 A. Okay. I am not.

8 Q. You are not an industrial hygienist?

9 A. No, I'm not.

10 Q. AS a matter of fact, have you ever taken

11 an industrial hygiene exposure sample in a plant,

12 for any chemical?

13 A. Yes. When I was a graduate student.

14 Q. Tell me about your work collecting

15 industrial hygiene samples as a graduate

16 student. Tell me about that.

17 A. Part of my program at the Graduate

18 School of Public Health, at the University of

19 Pittsburgh, I have to take several courses of

20 industrial hygiene, and that's just part of the

21 training that I -- I went through.

22 Basically we went out to some work

23 sites, and collect some samples, and bring them

24 back to the lab, and do some analysis.

25 Q. What year was that?

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1 A. A couple of centuries ago. 1973, around
2 that area.

3 Q. Did you collect any samples for solvents
4 such as benzene, or gases such as butadiene and
5 ethylene oxide?

6 A. We did that several times, but I just
7 don't remember exactly what chemicals I
8 collected.

9 Q. Okay. As we sit here today, you have no
10 specific recollection whether you have conducted
11 industrial hygiene samples for solvents, benzene,
12 ethylene oxide, or butadiene? Is that correct?
13 No specific recollection?

14 A. I just don't remember.

15 Q. Do you know how a sample would be
16 collected for butadiene, if you wanted to collect
17 the sample?

18 A. I would not offer any opinion on that.

19 Q. As it relates to the collection of any
20 type of sample, be it benzene, butadiene, or
21 ethylene oxide, you're not going to offer any
22 opinions in that area?

23 A. No.

24 Q. Have you ever observed workers washing
25 their tools with solvents?

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1 A. I don't recall any instances that I
2 observed.

3 Q. Have you ever been in a butadiene plant?

4 A. I have been to many refineries and
5 chemical plants. I just cannot rule out that
6 part of a refinery, or part of a chemical plant
7 would produce, or use butadiene, so I -- I can't
8 give you a "yes" or "no" answer.

9 Q. Let me make it a little more specific so
10 that maybe it will assist you in giving a more
11 definite answer. Have you ever been inside a
12 unit within a refinery or chemical plant that the
13 primary product of that unit is the chemical
14 1,3 butadiene?

15 A. Not that I can remember.

16 Q. Okay. And the same question as to
17 ethylene oxide, have you ever been in a refinery
18 or chemical plant specifically in the unit that
19 produces ethylene oxide?

20 A. Produced ethylene oxide?

21 Q. Yes.

22 A. No.

23 Q. Have you ever been in a refinery or
24 chemical plant, specifically in a process unit,
25 that produces 99.9 percent benzene in that unit?

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1 A. Units that produce benzene, I would say
2 yes. 99.9 percent, I don't think I asked the
3 question, "Is this 99.9 percent benzene?"

4 Q. Okay.

5 A. I am not as specific as you.

6 Q. Okay. Have you been in a process unit
7 at a refinery or petrochemical plant where that
8 unit is called "the benzene unit"?

9 A. I think so. I believe so.

10 Q. What refineries or chemical plants have
11 you visited that had a unit that was called the
12 benzene unit, or primarily produced benzene?

13 A. I have been to the huge chemical plant
14 owned by Union Carbide in West Virginia. They
15 have some benzene units there. I have been to
16 the huge chemical plant owned by Dow in Freeport
17 in Texas. I have been to the refinery owned
18 by -- now owned by Chevron in Port Arthur, and
19 there are other refineries that -- that I have
20 been to.

21 Q. Have you ever been to a Conoco refinery?

22 A. I have been to Conoco, Conoco's offices
23 in Pon -- Ponca City.

24 Q. Okla -

25 A. Ponca City, Oklahoma. I just don't
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1 remember exactly. There might be a refinery
2 adjacent to that, and I might have, you know,
3 toured that, that complex.

4 Q. So you may have been to the Ponca City
5 refinery, but you're not certain?

6 A. I'm not certain, but I have been to
7 their offices.

8 Q. Now, have you ever been to a Cities
9 Service, or CITGO refinery or chemical plant?

10 A. I don't think so.

11 Q. Have you ever been to any chemical plant
12 owned or operated by Allied?

13 A. No.

14 Q. Now, have you ever observed an insulator
15 performing insulation work out in any refinery or
16 petrochemical plant?

17 A. No.

18 Q. Dr. Wong, can you name me the defendants
19 in this lawsuit, as you understand it?

20 A. Good question. Can I look at my notes?

21 Q. Sure.

22 A. Shell Oil, Chevron, Fina Oil and
23 Chemical, Conoco, Allied Chemical, Firestone Tire
24 and Rubber Company, Jefferson Chemical Company.

25 Q. Do you know who the defendants are that
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1 are remaining in this lawsuit right now?

2 A. No, I don't.

3 Q. I guess it would be fair to say that as
4 for the defendants that are remaining in this
5 lawsuit, you don't know the locations of their
6 facilities involved in this lawsuit, do you?

7 A. I believe it's in Saint -- Lake
8 Charles.

9 Q. Now, the plants that are in Lake
10 Charles, do you know whether they are
11 petrochemical plants, refineries or anything such
12 as that?

13 A. My understanding is refinery, but also
14 there are some chemical facilities there as well.

15 Q. okay. Do you know about any of -- do
16 you know whether the Allied plant is located in
17 Lake Charles, or is it some other city?

18 A. No, I don't.

19 Q. Do you know when the first industrial
20 hygiene samples were collected at the Conoco
21 refinery in Lake Charles?

22 A. No, I don't.

23 Q. Do you know when the first industrial
24 hygiene samples were collected at the City
25 Service Refinery in Lake Charles?

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1 A. No, I don't.

2 Q. You are familiar with the field of
3 industrial hygiene tangentially anyway; is that
4 correct?

5 A. Yes, sir.

6 Q. What is the purpose of collecting
7 industrial hygiene samples, as you understand
8 it?

9 A. To determine the level of exposure of
10 employees.

11 Q. For what purpose?

12 A. Well, I can think of a number of
13 purposes. From my selfish point of view, it
14 would be a major piece of information in
15 epidemiologic study.

16 Q. Have you ever conducted an
17 epidemiological study concerning the workers at
18 the City Service Refinery located in Lake
19 Charles, now known as CITGO?

20 A. Whether I have done a study there?

21 Q. Yeah. Have you participated in any way
22 in any epidemiological study of the Lake Charles
23 Cities Service, or CITGO, refinery?

24 A. No, I have not.

25 Q. Have you ever participated in any
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1 epidemiological study of the Conoco Refinery
2 located in Lake Charles, Louisiana?

3 A. No, I have not.

4 Q. And have you ever participated in any
5 epidemiological study concerning the Allied
6 Chemical Plant located in Orange, Texas?

7 A. No.

8 Q. Dr. Wong, earlier you had identified
9 Deposition Exhibit Number 3 as your report in
10 this matter. Is that correct?

11 A. Yes, sir.

12 Q. Now, does that report still accurately
13 reflect your opinions in this lawsuit, concerning
14 this lawsuit?

15 A. Yes.

16 Q. Do you want to change this report in any
17 way?

18 A. I don't see any reason at this point.

19 MR. TYLER: Keith, let me go grab
20 my copy of that real quick to refer to. Do you
21 want to take a break?

22 THE WITNESS: Can we stretch for a
23 couple minutes?

24 MR. HYDE: Sure. Take a break.

25

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1 (After a brief recess, the
2 deposition continued as follows:)

3

4 Q. (By Mr. Hyde) Dr. Wong, when did you
5 write the report?

6 A. The report is dated May 16th, 1991. I
7 must have written that around that time.

8 Q. Did you type that yourself?

9 A. I did most of the -- I mean basically I
10 don't use pen and paper anymore. I do all my
11 work on word processor.

12 Q. And then the secretary adjusts it?

13 A. Makes it look pretty.

14 Q. Now, did you write any drafts of this
15 re -- final report? Did -- you know, were there
16 any of those type of drafts written concerning
17 this lawsuit?

18 A. Yeah, there was no draft. This is it.

19 Q. So it was typed up one time, did a spell
20 check, and that was the final report? Is that
21 correct?

22 A. I don't know whether we did spell check
23 or not. I can't tell you that. But this is the
24 copy that we sent out to Mr. Tyler, and this is
25 the copy that we're looking at now.

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1 Q. Well, were there any reports before this
2 final report that you wrote -

3 A. No.

4 Q. -- concerning this case?

5 A. No.

6 Q. Now, before you sent that report to Mr.
7 Tyler, did you have any conversation with Mr.
8 Tyler concerning the contents of the report as
9 written?

10 A. Yes. We had a phone conversation.

11 Q. And basically you went over the report
12 as you had written it; is that right?

13 A. The format, and also basically what I -
14 what I said in the report.

15 Q. And then you sent him the final report?

16 A. Yes.

17 Q. Now, when you were discussing with him
18 the report, did you -- did you make any changes
19 after the discussion with Mr. Tyler on that
20 report?

21 A. No. I did not.

22 MR. HYDE: Let's go off the record
23 for a second.

24 (There was a discussion held off
25 the record.)

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1 Q. (By Mr. Hyde) Back on the record. So
2 after you and Mr. Tyler discussed the report over
3 the telephone, you sent out the final report, and
4 you had not made any changes to the report that
5 you discussed with Mr. Tyler originally? Is that
6 right?

7 A. That's correct.

8 Q. How long did it take you to write that
9 report?

10 A. I don't remember. It took place over
11 several days, on and off.

12 Q. Eight hours? Four hours? Ten hours?

13 A. I can't give you an answer to that
14 because part of that, the preparation of the
15 report, yes, you know, going through some
16 studies, and reading materials that Mr. Tyler's
17 office sent me, the actual writing may only take
18 a few hours.

19 Q. But the actual writing was -- kind of
20 took place over several days? Is that right?

21 A. Yeah, a couple hours, you know, a day,
22 and then put it down and came back to it.

23 Q. Now, how much research did you do before
24 writing your report concerning this loss or
25 lawsuit?

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1 A. Well, I look into the studies that would
2 be pertinent to -- to this case. I don't
3 understand exactly what you want me to -

4 Q. Okay.

5 A. How you want me to answer, how much
6 research I went into.

7 Q. Okay. I'm sorry. How much time did you
8 put in either doing research, or looking at
9 depositions, that kind of work? How much total
10 time did you spend before you actually wrote the
11 report that you have given in this case?

12 A. Okay. There was a lot of material that
13 Mr. Tyler's office sent me. First I went through
14 all of that material, and then I identified some
15 of the studies that would be pertinent to the
16 case. I would say I spent about -- the major
17 part of four or five days going over the
18 material, looking at studies, and then write the
19 report.

20 Q. Did anybody help you write the report?

21 A. No.

22 Q. Nobody from Applied Health Sciences
23 provided you any assistance?

24 A. No.

25 Q. Is that correct? Did anybody from
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1 Applied Health Sciences review your report?

2 A. No.

I

3 MR. TYLER: I take it you mean

4 other than typing?

5 MR. HYDE: Yeah. Other than

6 typing.

7 MR. TYLER: Did you type it

8 yourself, Dr. Wong, or did someone from your

i

9 office?

10 A. Again, like I just said, when I wrote

11 the report, I wrote it on -- on a P.C. The only

12 thing that I didn't do was to justify it and, you

13 know, put it in the right space and so on.

14 MR. TYLER: When you say "justify"

15 you mean get the margins correct?

16 A. Yes. Not in the legal sense. You

17 lawyers.

18 Q. (By Mr. Hyde) Dr. Wong, the next area of

19 my examination of you deals with financial

20 aspects of your participation in this lawsuit,

21 and I don't mean to get personal in this area.

22 A. Then don't.

23 Q. Yeah. But I have to, in the interest of

24 my client.

25 What are your present fees associated

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1 with your deposition today? How much are you
2 charging?

3 A. I charge \$280.00 an hour.

4 Q. Do you have a daily rate?

5 A. No, I don't.

6 Q. Now, the fees for trial testimony, will
7 that also be at \$280.00 an hour?

8 A. If it happens this year, yes.

9 Q. Now, if it happens next year, which this
10 case is set to be tried in March of 1992, what -
11 what do you think the fees will be at that time?

12 A. We have not decided what 1992 rates will
13 be. Most likely there will be a small increase.

14 Q. They are not going down? Is that
15 right?

16 A. I don't think so.

17 Q. Now, do you have a hourly fee for doing
18 literature or -- literature reviews, research,
19 that type of work?

20 A. As opposed to deposition or trial?

21 Q. Yes.

22 A. No. I don't make a distinction.

23 Q. So for every hour that Mr. Tyler employs
24 you, or you're working for him, it's costing him
25 \$280.00 an hour? Is that right?

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1 A. Costs his client \$280.00 an hour.

2 Q. Again, whether you're on a computer,
3 whether you're meeting with him, if you're
4 working on this case, it's \$280.00 an hour?

5 A. Yes.

6 Q. Now, somewhere in this stack of
7 documents, I believe you have produced
8 information that would indicate the amount of
9 expenses to date that -- or your amount of
10 charges associated with your work in this case.
11 Do you know where that is?

12 A. It's probably toward the end at the
13 bottom of the pile. Maybe -

14 Q. Yeah. As of June 1st, 1991, you had
15 invoiced Mr. Tyler and his clients \$8,988.80. Is
16 that -- is that correct?

17 A. That's correct.

18 Q. Now, since the date of this document,
19 which is Deposition Exhibit 46, has there been
20 any other charges to Mr. Tyler concerning your
21 work in this matter?

22 A. I did a fair amount of work in May, and
23 we invoiced Mr. Tyler's firm on June 1st for the
24 work that we did in May. ,I don't think there was
25 a whole lot of activity since then, after we
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1 finished the report. I think he can expect
2 another invoice pretty soon.

3 MR. TYLER: Keith, my secretary is
4 out with the flu and we tried yesterday to pull
5 up copies to see if there were any others. I
6 think that there has been, perhaps, one more
7 since these but she keeps the correspondence, and
8 I couldn't find where she had it filed. When she
9 gets back, we will report -

10 MR. HYDE: Will you supplement?

11 MR. TYLER: Yeah, we will
12 supplement. We are are not trying to -- I mean
13 we don't have any privilege or anything that
14 we're claiming on that.

15 Q. (By Mr. Hyde) And then you -- there may
16 be one other -- let's say there may be one other
17 invoice, but now in the last week or two, have
18 you spent time working on this litigation matter
19 for Mr. Tyler?

20 A. Yes, I have.

21 Q. Okay. About how much time have you
22 spent in the last two to four weeks or so,
23 associated with this matter?

24 A. A day or so going over some of the
25 materials that I looked at way back in May, just
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1 to refresh my memory.

2 Q. And when was this work performed?

3 A. A week or two ago.

4 Q. Okay. Now, then, you flew here

5 yesterday?

6 A. No. That's not correct.

7 Q. Okay.

8 A. I came in on Monday.

9 Q. So you flew in Monday afternoon?

10 A. Yes.

11 Q. Now, is that -- you came here Monday for

12 this lawsuit or something else?

I

13 A. For this case.

14 Q. So you spent all day Monday working on

15 this case; is that right? Would that be another

16 eight hours?

17 A. I think I am being kind to Mr. Tyler.

18 The travel only totaled about six hours, so it's

19 going to be six hours.

20 Q. So you have six hours on Monday

21 associated with this case. Now, yesterday did

22 you work eight hours on this case?

23 A. Pretty much so.

24 Q. Well, how many hours are you going to

25 bill Mr. Tyler for?

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1 A. Probably a full day.

2 Q. Yesterday? Full day? Eight hours? And
3 then more than likely you will bill him for eight
4 hours today; is that right?

5 A. Most likely more than that.

6 Q. Yeah.

7 A. I am going to spend a few hours with you
8 today and then another -

9 Q. Transportation?

10 A. -- six hours or so going home at least.

11 Q. So it could be anywhere from maybe even
12 twelve hours today?

13 A. I don't know.

14 Q. If we spent -

15 A. How long do you plan to keep me here?

16 Q. Well, if we were here six hours and you
17 traveled six hours is -- that would be the
18 twelve hours. Is that -

19 A. Right.

20 Q. So approximately this week you will
21 spend somewhere -- we can make this a range,
22 maybe somewhere between 20 and 30 total hours
23 this week on this case? Does that sound about
24 right?

25 A. We will know about it by the end of the
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1 week.

2 Q. Okay. Of course, Mr. Tyler paid your
3 expenses to come to this deposition, or is going
4 to pay your expenses; is that right?

5 A. Yes. You really look out for his
6 interests, don't you?

7 MR. TYLER: It's my clients, sir.

8 You keep referring to me, but -

9 MR. HYDE: Yeah.

10 MR. TYLER: -- I'm reimbursed by
11 the clients and use their money to pay him.

12 MR. HYDE: I tried to explain that
13 to Dr. Levin and he never would -

14 Q. (By Mr. Hyde) Did you fly first class
15 here?

16 A. I wish. No. I did not.

17 Q. You didn't? What hotel did you stay
18 at? What hotel are you staying at?

19 A. The one next door, Hyatt Regency.

20 Q. Hyatt Regency?

21 A. Room number 2926.

22 Q. Up on the top floor, huh?

23 A. No. The top floor was 30.

24 Q. Your normal -- you expect payment on
25 your bills, on your invoices, within thirty days;
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1 is that right?

2 A. I expect that, but you know how lawyers
3 pay their bills. I must say that Mr. Tyler has
4 been very on time.

5 MR. TYLER: And I do not plan to
6 run for Congress or cash any checks from
7 Washington.

8 Q. (By Mr. Hyde) Dr. Wong, you have been
9 doing consulting in legal matters for several
10 years, haven't you?

11 A. As part of my work, yes.

12 Q. In 1990, last year -

13 A. Uh-huh.

14 Q. -- about how much of your time was spent
15 consulting in legal matters of your total time
16 throughout the year? 10 percent? 20 percent?

17 A. I would say about 25 to 30 percent of my
18 total time.

19 Q.' And now, as far as 1991, year-to-date,
20 about how much of your time has been spent
21 consulting in legal matters?

22 A. About the same.

23 Q. In 1990, what was your annual salary?

24 A. I don't think I should answer that.

25 MR. TYLER: I will let him testify

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1 with regard to expert fees, but if he doesn't
2 want to go into his total salary, I don't see
3 that that is pertinent.

4 MR. HYDE: Let me talk to you one
5 second.

6 MR. TYLER: Yeah.

7

8 (After a brief recess, the
9 deposition continued as follows:)

10

11 Q. (By Mr. Hyde) What was the last
12 question?

13 MR. TYLER: I will -

14 MR. HYDE: Go ahead.

15 MR. TYLER: Let me state something
16 on the record. Are we back on record? Okay.

17 I have talked to the witness for a few
18 moments during our break, Mr. Hyde, and he has a
19 privacy concern, which is understandable, with
20 regard to his total annual salary. He is willing
21 to answer and has answered questions with regard
22 to what his hourly rate is, as to what percentage
23 of his time a year is involved in consulting and
24 testifying as an expert in litigation.

25 He has even told you -- you even asked,
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1 I have allowed you to ask, allowed him to answer,
2 on whether he has a first class airplane ticket,
3 what hotel he stays in, et cetera, et cetera, and
4 I think that you have been given adequate or fair
5 information in that regard

6 So, because of his privacy concern, I
7 told Dr. Wong that you and I had talked, and that
8 you had a series of questions, and I have told
9 him that it may be something that we need to take
10 up with Judge Sanderson, but I mean we will
11 probably agree to disagree on this.

12 So, let's go ahead through the questions
13 that you wanted to ask.

14 Q. (By Mr. Hyde) Dr. Wong, I had asked you
15 if you would please tell me what your annual
16 salary is for 1990, and you have refused to
17 answer that question. Is that correct?

18 A. Yes.

19 Q. Okay. And would you please tell me what
20 your annual salary is for 1991?

21 A. I will decline to answer that as well.

22 Q. You understand that I may have to go to
23 the trial Judge to compel your answer in this,
24 which I think can be done, not that you will be
25 deposed again, but probably through -- if he
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1 compels you, may be required to be done by a
2 letter, or something like that.

3 Do you understand that if you don't
4 answer it today, I am going to try to seek the
5 aid of the trial court in getting that answer?

6 A. I understand that.

7 Q. Have you ever testified on behalf of a
8 plaintiff in any litigation matter?

9 A. I have worked as a consultant in a
10 plaintiff case.

11 Q. One case?

12 A. As far as I can recall, yes, one case.

13 Q. What was the disease process associated
14 with that one plaintiff's case?

15 A. It was exposure to some cleaning fluid.

16 Q. And what was the alleged disease or
17 medical problem associated with this exposure?

18 A. Some pulmonary reaction to the
19 exposure.

20 Q. What kind of pulmonary reaction?

21 A. Irritation.

22 Q. And you were hired as an epidemiologist
23 to express an opinion for this plaintiff's
24 lawyer; is that correct?

25 A. Yes, sir.

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1 Q. Did you testify at trial, or in
2 deposition?

3 A. I don't know what happened to the case.
4 I have not talked to the plaintiff lawyer for
5 several months. He may have settled it.

6 Q. Now, the consulting firm -- firm that
7 you work for, what -- what's the principal
8 business of Applied Health Sciences? What do you
9 all do?

10 A. Mainly epidemiology, provide services in
11 epidemiology.

12 Q. Now, when you say "mainly," is there
13 some division, areas or sections that do other
14 work other than epidemiology?

15 A. Well, we can get into some related area
16 of epidemiology, sometimes when you look at a
17 health issue, you cannot just limit it to
18 epidemiology alone. You may have to look at, for
19 example, exposure data, how epidemiologists use
20 exposure data. I would say risk assessment would
21 be something related to the area. Mainly
22 epidemiology.

23 Q. Now, this is a -- a private company; is
24 that right?

25 A. Yes.

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1 Q. Who are the owners of Applied Health
2 Sciences?

3 A. I am.

4 Q. Are there any other owners other than
5 yourself?

6 A. No.

7 Q. Are there any officers of your company,
8 other than yourself?

9 A. No.

10 MR. TYLER: You said officers or
11 offices?

12 MR. HYDE: Officers.

13 MR. TYLER: I'm sorry, I thought
14 you said offices.

15 Q. (By Mr. Hyde) Are you also the
16 president of Applied Health Sciences?

17 A. Everything rolled into one.

18 Q. Are there any other principals employed
19 by Applied Health Sciences other than yourself?

20 A. No.

21 Q. Do you have any other employees other
22 than yourself, who work for Applied Health
23 Sciences?

24 A. We have a part-time office support, and
25 I work with consultants that I rely on for other
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1 support.

2 Q. But they are not employees of Applied
3 Health Sciences?

4 A. Not employees, but through subcontract
5 arrangement.

6 Q. Did you subcontract any of the work
7 associated with this litigation matter?

8 A. No, I have not.

9 Q. When did your business -- when did
10 Applied Health Sciences become the company known
11 as Applied Health Sciences? Was that January of
12 1991?

13 A. Yes, sir.

14 Q. And is this a company that's
15 incorporated in California?

16 A. Yes, sir.

17 Q. And your principal place of business is
18 in California? Is that right?

19 A. Yes.

20 Q. San Francisco- area?

21 A. San Mateo.

V

22 Q. Okay. I would like to go over with you
23 your history as it relates to giving testimony at
24 either trial or deposition. In other words, I am
25 asking you to give me those cases that you recall
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1 that you've been deposed, or you've given trial
2 testimony in. Would you tell me about those
3 cases that you can recall?

4 A. Start -

5 Q. And you can start chronologically.

6 A. Starting from when?

7 Q. Starting from the very first time you
8 can remember giving your deposition in a lawsuit,
9 or trial testimony.

10 A. Okay.

11 Q. And going up to today. And if you -- do
12 you have -- well, first of all, do you have a
13 list that would show your appearances in
14 litigation matters?

15 A. No. I don't.

16 Q. You don't keep such a document?

17 A. No.

18 Q. Do you keep any kind of documents in
19 your personal files, or at the files at Applied
20 Health Sciences that would reflect your
21 participation in various litigation matters?

22 A. No.

23 Q. Okay. Starting back to the very first
24 time that you recall giving a deposition or trial
25 testimony, would you tell me about that case?

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1 A. The very first case that I testified in
2 court would be one up in Portland, Oregon, back
3 in '86 or '87. It's four -- around four years
4 ago. I think that the title of the case was Ryan

5 vs. Chevron. What else do you want to know?

6 Q. Who is the defense attorney who you were
7 working with in the Ryan vs. Chevron case?

8 A. Laurence Jensen.

9 Q. Jensen?

10 A. Right. J-E-S-S -

11 Q. N?

12 A. -- E-N.

13 Q. And where does Mr. Jensen practice at?

14 A. I think he just moved to Los Angeles.

15 Used to be up in Portland, Oregon.

16 Q. Okay. Do you recall the name of the
17 plaintiff's attorney in the Ryan case?

18 A. No, I don't.

19 Q. What type of illness did Mr. Ryan allege
20 to have?

21 A. Diagnosis you mean?

22 Q. Yes.

23 A. Leukemia.

24 Q. What type of leukemia, cell type?

25 A. I think it was either AML or CML.

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1 Q. And what was the alleged chemical that
2 Mr. Ryan alleged caused his leukemia?

3 A. Some solvents that -- that was
4 manufactured by Chevron.

5 Q. Would that include the solvent benzene?

6 A. There was some benzene -- benzene was a
7 component of that.

8 Q. And who were you working for at the time
9 that you were -- that you gave testimony in the
10 Ryan case -- case? How were you employed?

11 A. I was an employee and a principal of -
12 at that time, Environmental Health Associates.

13 Q. Okay. After Ryan, what was the next
14 case you can recall testifying in?

15 A. I believe the next case that I testified
16 in court would be one up in Seattle, Washington.
17 The case was Frankhauser vs. Allied Signal.

18 Q. And what was the alleged illness?

19 A. Mesothelioma.

20 Q. Obviously alleged to have been caused by
21 asbestos?

22 A. Exposure to brake lining dust.

23 Q. Was there asbestos in the brick lining
24 dust?

25 A. A very small amount.

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1 Q. What was your opinion in that matter?

2 A. That most of the asbestos in brake
3 lining would be transformed into something that's
4 not asbestos when you apply the brake. So there
5 is very little asbestos fiber surviving the
6 braking process. And the fiber concentration, in
7 a typical garage would be very small, not
8 sufficient to increase a garage mechanic's
9 mesothelioma risk.

10 Q. He was a garage mechanic?

11 A. I don't remember exactly now. I do
12 remember that Frankhauser was a long-term
13 insulator working at the Naval shipyards up in
14 the Seattle area.

15 His exposure to brake lining dust, I
16 don't know if that was through his profession
17 later on, or was through personal, you know,
18 changing brakes for his -- you know, on his own
19 cars, or his friends and so on. I don't remember
20 that point.

21 Q. Your participation in that litigation
22 was, you were employed by the attorney for the
23 defendant involved in bricks? Is that right?

24 A. I was retained through a lawyer by I
25 guess Allied Signal, who is the parent company of
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1 Bendix, and Bendix was or is a brake
2 manufacturer.

3 Q. I'm sorry, I thought you said "brick,"
4 and you're saying "brake"?

5 A. Yeah, brake.

6 Q. I'm sorry. Obviously, as an
7 epidemiologist, you disagree that there is an
8 association between workers exposed to asbestos,
9 and the disease mesothelioma?

10 A. No.

11 Q. You don't?

12 A. I think you simplified that.

13 Q. Okay.

14 A. You simplify, oversimplify a very
15 complex issue.

16 Q. You don't find an association between
17 workers exposed to asbestos and mesothelioma? Is
18 that right?

19 A. No. Again you're oversimplifying a very
20 complex issue.

21 MR. TYLER: Regarding complex
22 issues, why don't you give me some sandwich
23 orders and we will have lunch brought in for us?

24 MR. HYDE: Off the record.

25

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1 (There was a discussion held off
2 the record.)

3

4 Q. (By Mr. Hyde) My last question I asked
5 you about an association between workers exposed .
6 to asbestos and the disease mesothelioma, and you
7 indicated, and rightfully so, that it's a
8 complicated matter. But in general terms, I am
9 asking you, do you recognize an association
10 between exposure to asbestos, long-term exposure
11 to asbestos, and the disease mesothelioma?

12 A. I can give you an answer provided we put
13 in a couple of other conditions in there and that
14 is we need to discuss what kind of fiber type,
15 what kind of asbestos fiber we're talking about.
16 I think correctly so, you have pointed
17 out long-term exposure. But at the same time we
18 need to know about fiber concentration as well.
19 So, I am not trying to avoid your question. I
20 think you have been a scientist once, and so I
21 know you understand the complicated issues
22 involved.

23 MR. TYLER: Doctor, can you express
24 a positive opinion with regard to some type of
25 asbestos being associated with mesothelioma?

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1 THE WITNESS: Absolutely.

2 MR. TYLER: I think that's what

3 Keith is going after.

4 A. Okay. Yeah. I think for someone like

5 an insulator exposed to amphibole fibers, either

6 chrysolites or amesites for a long period of

7 time, in general terms I think that -- you know,

8 that the chance of getting mesothelioma would be

9 increased.

10 Q. (By Mr. Hyde) But in this case, you

11 opined that Mr. Houser's exposure to brake lining

12 dust, that would not have been a cause of his

13 mesothelioma? Is that correct?

14 A. In fact, I offer basically two

15 opinions: One is his mesothelioma was not likely

16 associated with his minimal exposure to

17 Chrysotile fiber through brake lining dust. More

18 likely than not, his mesothelioma was associated

19 with his long-term exposure as an insulator to

20 amphibole fibers.

21 Q. Your opinion in the Ryan case, involving

22 a leukemia and solvent exposure, was it your

23 opinion that Mr. Ryan's leukemia was not caused

24 by the solvents that he was exposed to, or worked

25 with? Is that right?

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1 A. Yes. Let me give you some specifics on
2 that case. Mr. Ryan was exposed to a Chevron
3 product six months prior to diagnosis. Just
4 based on the short duration prior to diagnosis,
5 it's almost impossible to link the two together.

6 Q. Based on latency period?

7 A. Yes, sir.

8 Q. Okay. After the Houser -

9 A. Frankhauser.

10 Q. Frankhauser case, what was the -- what

11 year was that approximately?

12 A. '88.

13 Q. The next case after the Frankhauser

14 case, what -- what do you recall about that

15 case?

16 A. The Skeen vs. Monsanto case down in

17 Galveston, Texas.

18 Q. And that would have been Skeen Two, is

19 that right, as it's referred to?

20 A. I guess so.

21 Q. And that was around 1989?

22 A. Yes, sir.

23 MR. HYDE: Is that right, John?

24 MR. TYLER: I have it in my file

25 but I think it's roughly right. A lot of things

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1 have happened in the last, gosh, can it only be
2 two years? It's been an amazing two years. We
3 have spent every day, all day, and many nights
4 together. Mr. Hyde and I have, on one of the
5 cases.

6 MR. HYDE: Off the record.

7

8 (There was a discussion held off
9 the record.)

10

11 Q. (By Mr. Hyde) Okay. In the Skeen case,
12 you were employed ultimately by Monsanto in that
13 case, isn't that right?

14 A. Yes, sir.

15 Q. And Mr. Skeen, I believe, had CML; is
16 that right?

17 A. Yes, sir.

18 Q. And the allegation was that he was
19 exposed to benzene or materials that contain
20 benzene at the facility that he worked at, isn't
21 that correct?

22 A. Yes.

23 Q. And what was your opinion in this
24 matter?

25 A. My opinion was that -- and still is,
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1 there is no epidemiologic data to support the
2 relationship between benzene exposure and CML.

3 Q. And were you working for Enviornmental
4 Health Associates during the time period that you
5 gave your testimony in the Skeen case?

6 A. Yes, sir.

7 Q. Do you have any idea of what
8 Environmental Health Associates billed Monsanto
9 for your work in that matter?

10 A. We did a fair amount of work. Number 1,
11 we went through all the related studies. We also
12 did something called meta-analysis M-E-T-A hyphen
13 A-N-A-L-Y-S-I-S. Basically, we summarized all of
14 the studies specific to the kind of cell type
15 that we were interested in, and I also gave two
16 depositions in that -- in that case, plus I was
17 down in Galveston for -- too long anyway.

18 Several days. So I -- I would expect that the
19 budget for the entire project would be very high.

20 Q. Would you think close to \$100,000.00?

21 A. I would say less than that. We probably
22 spent about 70, 80, around the area. That
23 includes all expenses, you know, travel and so
24 on. And not just on my time, but also my support
25 staff at Environmental Health Associates doing
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1 that analysis for me.

2 Q. Of course, you worked with Richard Irons
3 in the Skeen matter, didn't you? He was one of
4 the other expert witnesses?

5 A. I missed the first part of your
6 question.

7 Q. You worked with -- well, not worked
8 with, but you were familiar that Richard Irons
9 also was an expert in the Skeen Two lawsuit, did
10 you know that?

11 A. I knew he was one of the other experts,
12 yes.

13 Q. And that he billed somewhere around
14 \$78,000.00 for that -- that case, and that's
15 pretty consistent with your fees in that matter.
16 Is that right?

17 A. I did not know how much he billed until
18 two seconds ago.

19 Q. Okay. Yours is somewhere \$70 to
20 \$80,000.00, your firm, not you necessarily, but
21 your firm was \$70 to \$80,000.00 in the Skeen
22 case?

23 A. Right. That's the best estimate I can
24 give you.

25 Q. Okay. Now, after the Skeen case,
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1 what -- where did you next give deposition or
2 trial testimony?

3 A. The next case I testified would be in
4 San Francisco. The plaintiff's name was Hansen,
5 H-A-N-S-E-N. Hansen Vs. Chevron.

6 Q. And what was the allegation of injury?

7 A. I believe it was a leukemia case.

8 Q. And, again, was this as a result of
9 exposure to benzene or solvents that contained
10 benzene?

11 A. Exposed to solvents containing benzene.

12 Q. What type of leukemia did Mr. Hansen
13 have?

14 A. I believe it was acute myeloid
15 leukemia.

16 Q. And who was the plaintiff's attorney in
17 that matter?

18 A. Mary Alexander. You nodded, you must
19 have -- you must know her.

20 Q. Heard of her.

21 A. She was also an industrial hygienist
22 attorney.

23 MR. TYLER: Where is she located?

24 A. In San Francisco.

25 Q. (By Mr. Hyde) And what was your opinion
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1 in that matter?

2 A. That the amount of exposure would not
3 have -- would not have been related to
4 Mr. Hansen's acute myeloid leukemia.

5 Q. What was his exposure level to benzene
6 as a result of his solvent exposure? Do you
7 know?

8 A. I don't remember.

9 Q. How did that suit end up? Do you know?
10 Was it settled, or did it -

11 A. No, we went to trial.

12 Q. Was it a defense verdict or a plaintiff
13 verdict?

14 A. The truth won.

15 MR. TYLER: May I repeat his
16 question?

17 Q. (By Mr. Hyde) Okay. After -- and this
18 was in what year? '89 also, or '90?

19 A. In that area, '89 or '90. I can't say
20 for sure.

21 Q. Now -

22 A. I think most likely either the end of
23 '89 or beginning of '90.

24 Q. Were there any other companies involved
25 other than Chevron? Were there any other
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1 companies' solvents involved other than Chevron
2 in the Hansen case?

3 A. As a matter of fact, I -- I cannot tell
4 you today now whether Chevron was still in the
5 case when the case went to- trial. There were
6 some other companies involved, I just don't
7 remember their names.

8 Q. Other oil companies?

9 A. I believe so.

10 Q. In the Ryan case, were there any other
11 companies involved other than Chevron in that
12 matter?

13 A. I believe I was retained by the lawyer
14 on behalf of Chevron, and by the time we -- we
15 went to trial, I believe Chevron was the only
16 defendant left.

17 Q. Okay. After Hansen, what was the next
18 case that you testified in either by a deposition
19 or trial? And that's or at trial?

20 A. For trial, I believe the next case was
21 in New Jersey. It was the garage mechanic case
22 and the disease involved was again mesothelioma.

23 Q. And were you employed by Allied Signal
24 in that case?

25 A. No, General Motors.

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1 Q. Excuse me?

2 A. General Motors.

3 Q. And in this -- what was the style of the
4 case? Or what was the name of the case?

5 A. I am sorry, I don't remember the name of
6 the plaintiff.

7 Q. And what was your opinion in that case?

8 A. The same opinion as I offered in the
9 Frankhauser case.

10 Q. That this plaintiff's mesothelioma was
11 not caused by his exposure to friction products;
12 is that right?

13 A. Yes, sir.

14 Q. And what year was this again, the new
15 Jersey case?

16 A. I would say end of '89 or beginning of
17 '90.

18 Q. Do you recall who the plaintiff's
19 attorney was, or the defendant's attorney was in
20 that case?

21 A. I think the first name is Rudy, but I
22 just don't remember the last name.

23 Q. Was it the plaintiff's attorney or the
24 defense attorney?

25 A. I'm sorry. Defense -- the lawyer for
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1 General Motors.

2 Q. Was Rudy something or other?

3 A. Yes.

4 Q. And you don't remember the plaintiff's
5 attorney?

6 A. No, I don't. When I started on that
7 case, I was working for Allied Signal, but they
8 settled a couple of days before the trial, and I
9 ended up testifying on behalf of General Motors.
10 So, I actually did not have that much contact
11 with their lawyer before that.

12 Q. Okay. The next -- and you gave some
13 depositions in that case, other than -- is that
14 right?

15 A. I gave some?

16 Q. Depositions in the '89 or '90 New Jersey
17 mesothelioma case, did you give any depositions?

18 A. I don't think there was any depositions
19 taken.

20 Q. Just went straight to trial?

21 A. Yes, sir.

22 Q. Okay. What was your next deposition, or
23 trial testimony after the New Jersey meso case?

24 A. I can remember trials better than
25 depositions. The next one was again a friction
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1 product case down in Los Angeles.

2 Q. Do you remember the name of the
3 plaintiff?

4 A. Yes. Dick vs. Allied Signal.

5 Q. Would you spell that, please?

6 A. A-L-L-I-E-D.

7 Q. No. No.

8 A. Dick. D-I-C-K.

9 Q. Okay. This was in Los Angeles?

10 A. Right.

11 Q. Was it a mesothelioma?

12 A. Yes.

13 Q. And you were employed by Allied? Is
14 that right?

15 A. On behalf of Allied Signal, right.

16 Q. And, again, you opined that Mr. Dick's
17 mesothelioma was not caused by exposure to
18 friction products?

19 A. That's the same opinion.

20 Q. The next case and, again, was this

21 '89/'90 time period or -

22 A. No, that's a few months ago.

23 Q. Few months ago? '91?

24 A. '91.

25 Q. That was trial testimony?

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1 A. Yes, sir.

2 Q. Okay. What was your next deposition or
3 trial testimony?

4 A. That was the last trial testimony.

5 Q. Okay. How about your last deposition
6 testimony?

7 A. Last deposition? My last deposition was
8 taken either in October or in September.

9 Q. Of '91?

10 A. This year, 1991, on the friction product
11 case.

12 Q. Another meso case, or lung cancer?

13 A. I believe there was some question as to
14 the final diagnosis, whether it was meso or a
15 lung cancer, and I offered opinion on both since
16 I am not questioning the diagnosis.

17 Q. What -- what was the -- what was the
18 name of that case?

19 A. The plaintiff's name was Hartwell,
20 H-A-R-T-W-E-L-L.

21 Q. And where was that case pending?

22 A. Some place in Michigan.

23 Q. And, again, you opined in that case that
24 either -- whatever the malignancy was, was not
25 caused by exposure to friction products; is that
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1 correct?

2 A. That's correct.

3 Q. Okay. What's the next deposition before

4 that deposition?

5 A. I don't know whether that would be the

6 one right before that or not, but that one -- the

7 one that comes into my mind now is an ethylene

8 oxide case up in Chicago.

9 Q. Do you remember the name of the

10 plaintiff?

11 A. There were several cases. I think they

12 tried it together. I don't remember the names of

13 the plaintiffs.

14 Q. And what kind of diseases were

15 associated or alleged to have been caused by the

16 ethylene oxide?

17 A. Neuroimpairment.

18 Q. Neuroimpairment? Such as? What do you

19 mean by neuroimpairment?

20 A. The slowdown of reaction time, learning

21 ability, you know, being able to remember things.

22 Q. Some kind of organic brain disease type

23 of -

24 A. Loosely you could label it that, yes.

25 Q. And what was your opinion in that

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1 matter?

2 A. There is no epidemiologic data to
3 associate any neurological impairment with low
4 level chronic exposure of ethylene oxide.

5 Q. And that you just-gave deposition
6 testimony in that case?

7 A. Correct.

8 Q. Okay. What is the next deposition?

9 We're still in '91 because we're working
10 backwards now in depositions. What was the next
11 deposition that you gave in 1991 concerning a
12 litigation matter?

13 A. In fact, I just remembered there was
14 another deposition I gave on, again,
15 neurotoxicity and ethylene oxide. I would say,
16 in August or around that time, this year, in
17 1991.

18 Q. Okay. When did you give the Chicago
19 ethylene oxide deposition? Is that --.

20 A. The first part of 1991. I don't
21 remember the month.

22 Q. Okay. First part of '91?

23 A. Right.

24 Q. And then you have given another
25 deposition in a ethylene ox -- ethylene oxide
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1 neuroimpairment case in August of this year? Is
2 that right?

3 A. August or September.

4 Q. August, September? And the same opinion
5 as in the previous case, that ethylene oxide is
6 not associated epidemiologically with
7 neuroimpairment? Is that correct?

8 A. Yes, sir.

9 Q. Who were your clients in those cases?

10 A. A company called M.D.T.

11 MR. HYDE: I think we need to
12 change tape here.

13

14 (After a brief recess, the
15 deposition continued as follows:)

16

17 Q. (By Mr. Hyde) I take it that the M.D.T.
18 Company is a company that makes some type of
19 sanitizing machinery that uses ethylene oxide?
20 Is that right?

21 A. They make sterilizers to sterilize
22 medical equipment at hospitals.

23 Q. Okay. Now, again, in 1991, what other
24 depositions have you given?

25 A. That's all I can remember at this
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1 point.

2 Q. Have you given -- let me see if I can
3 jog your memory as it relates to chemicals.

4 A. Okay.

5 Q. Have you given any depositions in 1991
6 that concern the chemical benzene, or the
7 chemical butadiene?

8 A. I can't think of any at this point.

9 Q. Okay. In 1990, did you give any
10 depositions where the allegation in the lawsuit
11 concerned butadiene, ethylene oxide, or benzene?
12 This is in 1990 now?

13 A. 1990?

14 Q. Yes.

15 A. I believe in 199 -- 1990, or even 1989,
16 I don't remember the exact time, I was deposed on
17 another ethylene oxide neurotoxicity case.

18 Q. The same defendant as before, M.D.T.?

19 A. No. I think the company involved in
20 that lawsuit was AMSCO, A-M-S-C-O, American
21 Sterilizer Company.

22 Q. And your opinion was the same as in the
23 other ethylene oxide cases; is that right?

24 A. I am very consistent.

25 Q. Now, in 1990 and 1991, do you recall any
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1 other cases that you have given deposition or
2 trial testimony where the allegation involved the
3 chemical benzene, or butadiene?

4 A. Butadiene for sure. I don't have any
5 other depositions. Benzene, I just can't think
6 of any at this point.

7 Q. Okay. And any time before 1989, through
8 all the way back, other than the cases that you
9 have talked about, have you given any depositions
10 involving ethylene oxide, benzene, or butadiene,
11 that you have not told me about, and you have
12 been retained as an expert in that case?

13 A. Right. For ethylene oxide, I think
14 those three depositions would be -- would be
15 all. For benzene, or benzene-related solvents, I
16 am not 100 percent sure. I may have left out one
17 or two, but by and large, I have told you about
18 all that I can remember.

19 Q. Now, as we sit here today, have you been
20 retained as a testifying expert in any litigation
21 matters -

22 MR. TYLER: Well, obviously -

23 Q. (By Mr. Hyde) -- involving -- other than
24 Wing, involving benzene, butadiene, or ethylene
25 oxide?

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1 A. The deposition -- the case that I talked
2 about that I gave a deposition on ethylene oxide,
3 around August or September of this year, that
4 case is still ongoing. I assume that, you know,
5 if it goes to trial I will-be asked to testify.
6 So that's that case. In terms of benzene, I am
7 working on another case.

8 Q. Who are you working for in that case?

9 A. Working for a lawyer by the name of
10 Barbara Harris, down in New Orleans.

11 Q. Okay. Would that be the Ellis case?

12 A. How do you know?

13 Q. Just guessing.

14 A. Good guess.

15 Q. And have you been retained in any other
16 cases?

17 A. No. Oh, I remember one thing. I did
18 give a deposition on another case related to
19 benzene, or benzene-related solvents, and that
20 was -- there were several cases lumped together.
21 It was called Carter vs. Shell, and your partner
22 deposed me in 1990, out in San Francisco.

23 Q. And, again, those were three diseases of
24 the blood-forming organs, so-to-speak, and the
25 allegation was that benzene caused malignancies
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1 in these individuals; is that right?

2 A. Yes, sir.

3 Q. And your opinion was that these
4 benzene-contaminated solvents did not contribute
5 to causing these three plaintiffs' malignancies;
6 is that right?

7 A. Yes, sir. But that case got settled two
8 hours before I testified. You knew that.

9 Q. In that case, you were employed by
10 Shell, Ashland, and Unocal; is that correct?

11 A. Yes, sir.

12 Q. What were your total charges associated
13 with the Carter case?

14 A. I started working on that case back in
15 the end of '89 or beginning of '90, so some of
16 the billing, you know, if you're talking about
17 the entire history of that case, would be through
18 my previous employer, so I won't be able to give
19 you a figure.

20 Since 1991, when I started Applied
21 Health Sciences, I don't think there was a lot of
22 work until closer to the trial date. I would say
23 I probably have spent about -- a couple of weeks.

24 Q. Eighty hours, approximately?

25 A. Approximately, including going down
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1 to -- going to -- what's that place called? Some
2 place in Virginia.

3 Q. Virginia? Roanoke?

4 A. That's right.

5 Q. Now, when you first got in the case, I
6 suppose you were working for Enviornmental Health
7 Associates. Is that right?

8 A. Yes. The name was changed later on to
9 ENSR, E-N-S-R, Health Sciences.

10 Q. Now, the total, did you put in about
11 eighty hours when the case first started? Would
12 that be a good approximate -- two weeks?

13 A. About two -- two weeks or something.

14 Q. So the grand total of total hours would
15 be somewhere around 160 hours, is that a good
16 ballpark guess?

17 A. I misunderstood your question.

18 Q. No. Eighty hours or so with either
19 Environmental Health Associates and ENSR, about
20 eighty hours there and then about eighty hours
21 with Applied Health Sciences?

22 A. No, I didn't say eighty hours.

23 Q. Oh, I'm sorry.

24 A. In 1990, no.

25 Q. Okay.

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1 A. I only said that I spent approximately
2 two weeks in 1991.

3 Q. Okay. And I guess I equated that to
4 eighty hours.

5 A. No. In 1991, that's correct.

6 Q. Okay.

7 A. But then you make -

8 Q. The jump?

9 A. -- the assumption of 1990. No.

10 Q. You have no idea?

11 A. I did not know that. No.

12 Q. And you have been retained by a firm in
13 New Orleans concerning the Ellis case? Is that
14 right?

15 A. Yes, sir.

16 Q. Okay. Are you familiar with the case
17 called "Eubanks"?

18 A. No.

19 Q. You have not been retained in a matter
20 called the Eubanks case?

21 A. Not that I am aware of, you know, but
22 some lawyers put down my name without telling me
23 from time to time.

24 Q. They are not supposed to do that, are
25 they? I mean you don't give them -- you don't
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1 give defense lawyers a free hand in naming you in
2 cases without first talking to you, do you?

3 A. Absolutely not.

4 Q. Now, as an epidemiologist, you know that
5 Mr. Wing worked with asbestos. You know that?

6 A. He was an insulator, yes.

7 Q. Yeah. In his job as an insulator, he
8 worked with asbestos back in the '50s, '60s and
9 '70 s?

10 A. Yes.

11 Q. I mean you -- okay. As a question -
12 which I think I know the answer to, but there -
13 you have seen no association between asbestos and
14 any malignancy of the blood-forming organs; is
15 that correct?

16 A. I don't think so.

17 Q. From your standpoint, the malignancies
18 associated with asbestos would be malignancies
19 associated with the lungs, or respiratory tract?
20 Is that correct?

21 A. Yes, sir.

22 Q. Or mesothelioma?

23 A. Yes, sir.

24 Q. Okay. Now, as it relates to
25 mesothelioma, would you expect most
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1 epidemiologists to recognize an association
2 generally between asbestos fibers, amphiboles,
3 and mesothelioma?

4 A. I think as a general statement, I would
5 say that's true.

6 Q. I mean most epidemiologists who study
7 occupational -- or work in occupational
8 epidemiology would know that, isn't that right?

9 A. I can't tell you what other people
10 should or should not know. I can only tell you
11 what I know.

12 Q. But it is still something that's fairly
13 widely known, asbestos and mesothelioma and that
14 relationship with amphibole asbestos?

15 A. That's a fair statement.

16 Q. Now, you were talking about the
17 meta-analysis that you conducted in the Skeen
18 case for Monsanto. Do you recall saying that
19 today?

20 A. Yes, sir.

21 Q. Did you -- and in some point in time you
22 have published an article on meta-analysis, and
23 benzene; isn't that right?

24 A. No, sir.

25 Q. You have never published an article
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1 concerning meta-analysis and workers exposed to
2 benzene? Is that right?

3 A. Not specifically on benzene. I think
4 you're referring to my 1989 article on a critical
5 review of epidemiologic studies of employees in
6 the petroleum industry with a meta-analysis.
7 There is some distinction between that group and,
8 you know, the people exposed to benzene.

9 Q. That article that you have just
10 mentioned, is that essentially the work that you
11 did while you were employed by Monsanto for the
12 Skeen case, or had you already started your
13 article in the preparation for that work before
14 you started working for Monsanto in the Skeen
15 matter?

16 A. That was subsequent to the Skeen case.

17 Q. So you worked on the Skeen case, then
18 you published the article; is that right?

19 A. No. No, there is no relationship
20 between the two.

21 Q. On your meta-analysis, in your report on
22 petroleum or petrochemical workers, you have
23 included in your meta-analysis surveys conducted
24 by various oil company epidemiologists; is that
25 right?

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1 A. I just want to be clear. Which
2 meta-analysis are you talking about?

3 Q. The '89 paper.

4 A. Talking about -

5 MR. TYLER: You would like -

6 MR. HYDE: Yeah. Yeah, I would
7 like.

8 MR. TYLER: Keith, it -

9 MR. HYDE: Off the record one
10 second.

11

12 (There was a discussion held off
13 the record.)

14

15 Q. (By Mr. Hyde) Dr. Wong, in your article,
16 "Critical Review of Cancer Epidemiology,
17 Petroleum Industry Employees, with a Quantitative
18 Meta-analysis by Cancer Site," which was written
19 by yourself and Dr. Raabe, did you speak with all
20 of the authors or rather all of the investigators
21 that are mentioned on Table 1 of your article?

22 And let me show you this table.

23 Did you speak with each one of these
24 investigators or authors prior to using their
25 study in your meta-analysis?

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1 A. Not all of them.

2 Q. Which ones do you recall speaking with
3 prior to your writing this article? And when I
4 say talking with, or speaking with, I mean
5 specifically on the subject of the use of their
6 epidemiological study in your meta-analysis.

7 A. I have known some of the authors or the
8 investigators long before I wrote this article.
9 I don't remember any specific -- excuse me, any
10 specific conversation with any of the authors
11 immediately -- immediately before writing this
12 article.

13 Q. Now, the first study that you utilized
14 in your meta-analysis was the Tabershaw, Cooper
15 Associates study involving 17 refineries, isn't
16 that -- I mean do you need this?

17 A. Can I have another copy?

18 MR. TYLER: Yes, you certainly
19 can.

20 A. Thank you. You're looking at Table 1?

21 Q. (By Mr. Hyde) Yes, I am.

22 A. Okay. You were asking some questions on
23 the first study.

24 Q. On the first study. Was that an API
25 study or study funded by API?

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1 A. That was a study funded by American
2 Petroleum Institute, and the study was actually
3 conducted by a group called Tabershaw Cooper
4 Associates.

5 Q. And you were employed by Tabershaw at
6 that time; is that right?

7 A. No, I was not.

8 Q. You were not? Okay. The -- your
9 second -- the second study listed was "Wong 1980,
10 Industrywide, 17 Refineries." Is that a
11 follow-up to the initial API Tabershaw study?

12 A. No, it was not. The investigation I
13 did, you know, under the heading of Wong 1980,
14 that was a specific analysis of brain tumors
15 within the study done by Tabershaw Cooper
16 Associates.

17 Q. Using the same general information
18 that -- or the same epidemiological information
19 gathered in the Tabershaw Cooper 1974 study, you
20 took that data, and used it for examining the
21 incidence of brain cancer? Is that correct,
22 basically?

23 A. Everything is correct except for
24 "incidence of brain cancer." It was not
25 incidence. It was mortality.

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1 Q. Mortality? Excuse me. The Kaplan, the
2 next study is Kaplan 1986, was that again
3 additional work done on the original API
4 epidemiological study conducted by Tabershaw?

5 A. That was an update of the same study.

6 If you look at the column under follow-up period,
7 you will see that the follow-up period now for
8 the Kaplan study was up to 1980, as opposed to
9 1971. So there was additional nine years of
10 follow-up.

11 Q. In this -- who was paying, I guess Dr.
12 Kaplan, to perform this epidemiological work
13 mentioned in Kaplan 1986? Do you know?

14 A. My understanding is API paid for the
15 update, and the contract was given to S.R.I.
16 International out in Palo Alto, in the bay area,
17 and Dr. Kaplan was employed by S.R.I.

i

18 International at that time, and he was the
19 principal investigator of that project.

20 Q. Okay. Now, in your paper that you
21 wrote, Wong 1980, who was paying for your work
22 associated with that study?

23 A. Okay. I was employed by Tabershaw
24 Occupational Medicine Associates at that time.
25 That was in 1979, 1980 or so. The funding for
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1 that project came from American Petroleum
2 Institute.

3 Q. Your 1986 study: Wong, et al, 1986;
4 Company, Chevron, I take it Chevron funded that
5 study; is that correct?

6 A. Yes, sir.

7 Q. Morgan and Wong in 1984, the Mobil
8 Refinery in Beaumont, Texas, that was -- it says,
9 I

9 "Morgan and Wong 1984," that was a study funded
10 by Mobil. Is that correct?

11 A. Yes, sir.

12 Q. The same with the 1985 study of the
13 Paulsboro Refinery, Mobil paid for that, isn't
14 that right?

15 A. Yes, sir.

16 Q. Now, in the 1984 Morgan and Wong study
17 of the Beaumont refinery, that did not include
18 the chemical plant, did it, in Beaumont?

19 A. Good question. I don't recall. I don't
20 know whether we include as part of that the
21 refinery or not.

22 Q. Did -- and if you need to look at --
23 further in the paper, was there an increased
24 incidence in lymphohematopoietic disease noted,
25 or increased mortality, one or the other, as
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1 was -- that was reflected in the Morgan and Wong
2 1984 study of the Mobil Beaumont Refinery?

3 A. For all lymphopoietic cancer?

4 Q. Yes.

5 A. Combined? Yes, t-here was.

6 Q. Was there an increased incidence or
7 mortality of leukemia at the Beaumont refinery,
8 pursuant to your 1984 Morgan and Wong study?

9 A. In 1984?

10 Q. Yes.

11 A. For leukemia mortality, yes.

12 Q. Okay. Now, assume with me that the
13 chemical plant at Beaumont, or the refinery, are
14 two different facilities, divided only by a metal
15 fence. Have you been to that refinery before?

16 A. I believe I have been there.

17 MR. TYLER: Which company are we
18 talking about?

19 MR. HYDE: Mobil.

20 MR. TYLER: Okay.

21 Q. (By Mr. Hyde) Now, assume with me that
22 there -- that the chemical plant and refinery are
23 only divided by a fence. Did you know that?

24 A. I believe so, yes.

25 MR. REVACK: At the present time,
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1 Keith?

2 MR. HYDE: Yeah. Throughout all
3 time.

4 A. I don't know about throughout all time.

5 Q. (By Mr. Hyde) Okay. Now, the chemical
6 plant, to -- assume with me has never been
7 studied epidemiologically, the Mobil chemical
8 plant located in Beaumont, that is right next to
9 the refinery.

10 MR. REVACK: Keith -

11 MR. HYDE: Did you know that?

12 MR. REVACK: Before you go on, let
13 me object to that. Do you know if a chemical
14 plant even exists in Beaumont separate from the
15 refinery for Mobil?

16 THE WITNESS: Sitting here today,
17 no, I don't.

18 Q. (By Mr. Hyde) Assume with me that Mobil
19 has a chemical plant that has a benzene unit and
20 a butadiene unit. Have you ever seen any
21 epidemiological information from that facility,
22 that being a chemical plant in Beaumont?

23 A. I am not -

24 MR. REVACK: Same objection.

25 MR. HYDE: What is your objection?

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1 MR. REVACK: Form of the question,
2 no basis has been laid he even knows a chemical
3 plant exists for Mobil. You're asking him
4 questions he cannot answer fairly.

5 MR. HYDE: Sure he can.

6 MR. REVACK: I object to your
7 sidebar, Keith, and this case doesn't involve
8 Mobil, Keith.

9 MR. HYDE: So what? State your
10 objection, and go -- let's move on with it.

11 MR. REVACK: Objection is
12 rendered.

13 MR. TYLER: Doctor, answer any
14 questions that you can, but do not speculate to
15 the questions you cannot answer.

16 A. I am not aware of any studies.

17 Q. (By Mr. Hyde) You are not aware of any
18 studies? Do you know why the chemical plant
19 where the benzene and butadiene are manufactured
20 at the Beaumont refinery, why the employees at
21 that plant were not included in Morgan and Wong
22 1984 study of the Beaumont refinery, given that
23 the chemical plant produces the benzene and the
24 butadiene?

25 MR. REVACK: Objection, assumes
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1 facts not in evidence.

2 A. We are talking about petroleum industry,
3 refinery studies. That may be a simple -- that's
4 the simple explanation I can think of now. We
5 are talking about refinery-studies. We do not
6 include any chemical plants in -- in our study.
7 Again, I want to make it clear because
8 early on, I think one of your questions confused
9 me, this is a summary, a critical review and
10 meta-analysis of refinery workers in the
11 petroleum industry. It's not specifically on
12 benzene per se.

13 Q. Right. You have never been asked to do
14 an epidemiological study of the Beaumont Mobil
15 chemical plant, isn't that right?

16 A. No.

17 Q. You have never been asked?

18 A. No.

19 Q. Okay. I asked -- I am going to rephrase
20 that.

21 MR. TYLER: Do we have a
22 double-negative there?

23 Q. (By Mr. Hyde) We had a double-negative.
24 Have you been asked to do an epidemiological
25 study for the Beaumont Mobil Chemical Plant that
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1 is located next to the refinery in Beaumont?

2 A. No. But I do want to make it clear that
3 in the study, the benzene study, that I did for
4 the Chemical Manufacturers Association, there was
5 one Mobil chemical plant in this study,
6 participating in that study, and that plant was
7 somewhere in Texas. I do not remember the exact
8 location. Okay? And I don't know whether that
9 is the Beaumont plant or not. I cannot answer
10 your question today.

11 Q. If you, Dr. Wong, were going out to
12 investigate the incidence of malignant disease at
13 a facility, and there were two facilities
14 side-by-side, would you select the facility that
15 has a chemical that's been associated with
16 malignancy, would you select that unit or plant
17 for epidemiological study first or would you
18 select the plant that does not have the chemical
19 that's associated with a pure -- I'm going to
20 strike all that.

21 A. Good.

22 MR. TYLER: I got lost in there.

23 A. I got lost.

24 Q. (By Mr. Hyde) It's too difficult. How
25 long have you been working or had contracts with
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1 Mobil, you being your -- the employer who you
2 were working for, or you personally, how long
3 have you been associated with Mobil?

4 A. I think the first couple of studies that
5 we did for Mobil that I was involved in would be
6 the '84 and '85 studies stated in Table 1.

7 Q. Okay. Well, before the paper was
8 written, how much before that did you start
9 working for Mobil?

10 A. Probably a couple of -- couple years
11 before that, because those studies probably took
12 about two years to complete.

13 Q. Okay. And ever since the '84, '85
14 Morgan and Wong studies, you have continued to
15 have some business relationship with Mobil over
16 those years, isn't that right? You or the
17 company that you have worked for?

18 A. Actually there wasn't any substantial
19 projects since those two that we have completed
20 for Mobil.

21 Q. But you still continue some sort of
22 business relationship with Mobil ever since '84
23 and '85?

24 A. From time to time, we would review
25 papers for them, but not any major projects.

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1 Q. I am going to give you some names of
2 some companies. I would like to know if you
3 have, as an epidemiologist, done work with these
4 companies, either you personally or the company
5 that you were working for at the time of your
6 employment.

7 A. Sure.

8 Q. And we can just go down this and I will
9 say a name of a company, and if you would say
10 yes, then I may ask you what kind of work you
11 did, and the time period.

12 MR. TYLER: Keith, before you
13 start, I see a long list there. Would it help
14 you to have your C.V. in front of you, Dr. Wong?

15 THE WITNESS: No.

16 MR. TYLER: Publications?

17 THE WITNESS: No. I will try to
18 answer my question.

19 Q. (By Mr. Hyde) Sure. Yeah.

20 A. If I need some help looking up
21 something, I will say so.

22 MR. TYLER: Let me hand you a copy
23 of your C.V.

24 A. Okay.

25 Q. (By Mr. Hyde) Have you at any time ever
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1 worked with Dow Chemical, either in a legal
2 matter or as -- or doing epidemiological
3 consulting work?

4 A. Not directly with Dow Chemical, the
5 company. But some of the studies that I have
6 done through Chemical Manufacturers Association,
7 from time to time Dow would be one of the
8 participating companies in those industrywide
9 studies.

10 Q. So, if there is any connection between
11 you and Dow, it would have been through the
12 CMA -

13 A. That's right.

14 Q. -- basically? How about Union Carbide?

15 A. What I just said for Dow would be also
16 true for Union Carbide.

17 Q. Okay.

18 A. On top of that, I might have many years
19 ago worked as a consultant to them, to Union
20 Carbide, on a very limited basis.

21 Q. Doing what kind of consulting work?

22 A. Probably review some papers for them, or
23 reports for them.

24 Q. Okay. Who within Union Carbide did you
25 review papers for, if you did?

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1 A. At that time? It would be Dr. Susan

2 Austin.

3 Q. Have you ever done any work with Shell?

4 A. Yes.

5 Q. Give me the nature of the work you have
6 done with Shell, other than the Carter lawsuit.

7 MR. TYLER: May I borrow this

8 back? Were you through with the meta-analysis?

9 Thanks.

10 A. At Environmental Health Associates,
11 probably about four years ago, we completed a
12 major study for Shell on DPCP in drinking water
13 in Fresno County out in California.

14 Q. (By Mr. Hyde) And what was your opinion
15 after doing that study as it relates to the
16 toxicity of that material?

17 A. Well, in those studies specifically we
18 looked at leukemia and gastric cancer in relation
19 to DPCP in drinking water in Fresno County. We
20 did not find any relationship between the level
21 of DPCP contamination and mortality of either
22 leukemia or gastric cancer.

23 Q. Did you find any increased incidence of
24 sterilization of men?

25 A. This was not part of the study.

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1 Q. Isn't that one of the principal hazards
2 of DPCP is -- no, it's not. Strike that
3 question. Sorry. Got the wrong chemical. Don't
4 say that.

5

6 (There was a discussion held off
7 the record.)

8

9 Q. (By Mr. Hyde) Okay. Any other work
10 with Shell other than Carter and that study that
11 you just mentioned?

12 A. That was the major projects I can think
13 of .

14 Q. Okay. Have you done any work with
15 Arco?

16 A. No.

17 Q. Have you ever done any work with
18 Tenneco?

19 A. No.

20 Q. Have you ever done any work with
21 Phillips?

22 A. No.

23 Q. Have you ever done any work with Texaco,
24 or Texaco Chemical, or Star Enterprises?

25 A. No. I took it back. About a year ago,
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1 when I was still at ENSR Health Sciences, I think
2 we did some matching, matching on some mortality
3 rates for Texaco. It was a very limited kind of
4 consultation.

5 Q. This was matching for which Texaco
6 facility? Do you know?

7 A. We don't know. There is an in-house
8 study that Texaco epidemiologists were doing, but
9 they need to find out whether some of those
10 people have died or not. And we have some
11 database that would tell us the vital status of
12 those employees. So we ran a tape that was
13 supplied to us against our database, and
14 identified those people who have died. That was
15 the extent of our services.

16 Q. And have you ever testified on behalf of
17 Texaco?

18 A. I don't believe so.

19 Q. Other than the Skeen matter, have you
20 ever done any work for Monsanto?

21 A. Not directly. Monsanto, one of their
22 plants was in the CMA benzene study.

23 MR. TYLER: Off the record a
24 second.

25

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1 (There was a discussion held off
2 the record.)

3

4 Q. (By Mr. Hyde) Any other work with
5 Monsanto other than the CMA benzene study and the
6 Skeen case?

7 A. No.

8 Q. Other than the Walker case, have you
9 done any work for Ashland? No, I said Walker, I
10 meant Carter.

11 A. You scared me.

12 Q. Strike that. Strike that. Other than
13 the Carter case, have you done any work for
14 Ashland Oil or Ashland Chemical?

15 A. Not that I can think of now.

16 Q. Have you ever done any work for Fina?

17 A. Fina? I am trying to think because
18 there was one plant in a CMA benzene study. It
19 was a small chemical plant, and I seem to
20 remember that was owned by Fina, but I don't know
21 for sure.

22 Q. Do you know where that plant was
23 located?

24 A. In Texas some place.

25 Q. Okay. Have you ever done any work for
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1 Unocal other than the Carter case?

2 A. No.

3 Q. Have you ever done any work for British

4 Petroleum or Sohio?

5 A. No.

6 Q. Have you ever done any work for B. F

7 Goodrich?

8 A. No.

9 Q. Have you ever done any work for

10 Uniroyal?

11 A. No.

12 Q. Have you ever done any work for

13 Chevron?

14 A. Yes.

15 Q. Okay. Other than the cases that you

16 have already told me about, have you done any

17 epidemiological studies?

18 A. Yes, there was one in Table 1 that you

19 asked me questions about. 1986.

20 Q. Okay.

21 MR. TYLER: Okay.

22 Q. (By Mr. Hyde) How much time did you

23 spend working on that study? Was that a year or

24 two?

25 A. I was the principal investigator for

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1 that study. That study took about, oh, two or
2 three years to complete.

3 Q. That entire period, were you funded by
4 Chevron, partly -- in part? In other words,
5 Chevron funded that entire study?

6 A. Yes.

7 Q. Okay. Do you know how much Chevron paid
8 to have that study conducted?

9 A. Actually there was one of the three
10 projects that we worked for Chevron at the same
11 time, around the same time. Out in the Bay Area,
12 there was a chemical plant as well, belonged to
13 Chevron.

14 We also did a similar study on the
15 chemical plant, and there was also a research
16 facility in the Bay Area. We also did a
17 mortality study of the employees at that company,
18 so it was all together three projects, and the
19 total budget was about \$700,000.00.

20 Q. Any other work other than that study
21 involving three plants, and the litigation? Have
22 you been involved with Chevron in any of your
23 work?

24 A. We critiqued papers, review reports, and
25 small consulting jobs from time to time for
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1 Chevron.

2 Q. Who have you worked with in Chevron?

3 A. Mainly the -- the manager for

4 epidemiology, Will Bailey.

5 Q. Have you ever done any work with C.P.

6 Wen?

7 A. C.P.? No. In fact, I have not -- I

8 haven't talked that much out there, the two

9 companies merged.

10 Q. Did you do any work for Gulf either in

11 litigation, or just in pure epidemiology or

12 consulting?

13 A. Many years ago when I was an employee of

14 Tabershaw Occupational Medicine Associates, I was

15 involved in a mortality study, the Port Arthur

16 refinery study.

17 Q. But that was in conjunction with the API

18 overall study of refineries; is that right?

19 A. No, not the appointment.

20 Q. It's a separate study?

21 A. It's a separate study.

22 Q. What was the title of that study? I

23 mean do you have any idea? Would it be in your

24 C.V.?

25 A. No. I don't think that study was

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1 published, but we have a -- we wrote a report to
2 Gulf, and subsequently they did additional work,
3 and they have published several papers based
4 on -- on that data.

5 Q. And would those be papers written by
6 Wen, et al, 1983 or 1984?

7 A. Those will be two -- two of them, yes.

8 Q. Any other work with Gulf that you can
9 recall?

10 A. That's about it.

11 Q. Have you done any work with Eastman
12 Kodak?

13 A. No. No.

14 Q. Have you ever done any work with Amoco?

15 A. No.

16 Q. Have you ever done any work with
17 Occidental Petroleum, Oxy Chem, Oxy
18 Petrochemicals, Oxy U.S.A., any of the Oxy
19 entities, Occidental entities?

20 A. I don't think so.

21 Q. And how about your work with Conoco?

22 Have you done work with Conoco?

23 A. No.

24 Q. Now, the -- you had said earlier about
25 Ponca City, and you have maybe visited the Ponca
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1 City refinery. What -- what was your purpose of
2 that visit?

3 A. That was part of an API preliminary
4 study, just looking to what kind of records some
5 of those companies would have, and make a
6 recommendation to API as to which companies would
7 have sufficient records to be included in a
8 subsequent study.

9 Q. And you looked at Conoco's records, and
10 they were not sufficient; is that correct?

11 A. I don't remember exactly what my
12 conclusion on the Conoco portion was. But a
13 subsequent study was never funded.

14 Q. How about work with Dupont?

15 A. As I mentioned to you, Dupont was one of
16 the participants in the CMA benzene study.
17 Outside of that, I don't have any work with them.

18 Q. Any other work with Dupont other than
19 that?

20 A. I just said no.

21 Q. Sorry. Have you done any work with
22 Firestone?

23 A. No. Except many years ago, we were
24 asked to look into the possibility of conducting
25 a mortality study for them. That study was never
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1 funded.

2 Q. Did you give Firestone a proposal for
3 the study?

4 A. We might have a written proposal. If
5 not we must have a -- some-kind of oral
6 presentation.

7 Q. Have you ever done any work with PPG?

8 A. Yes.

9 Q. Tell me about the work you have done
10 with PPG.

11 A. When I was at ENSR Health Sciences, we
12 did a mortality study of their so-called paints
13 and coatings division.

14 Q. Did you find any increased -- was it a
15 mortality study or was it -

16 A. Yes, it is a mortality study.

17 Q. Did you find any increased mortality in
18 any particular area of disease, or -

19 A. Well, I am not so sure I can disclose
20 the results at this point. That study is still
21 ongoing. We have submitted a preliminary report
22 to PPG. I am still working with ENSR Health
23 Sciences to finish up the project. I am sure I
24 will be able to talk about that once we finalize
25 the report, finish all the analysis.

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1 Q. Have you done any work with Olin?
2 Olin?

3 A. No.

4 Q. Have you ever testified on behalf of PPG
5 before?

6 A. I don't think so.

7 Q. Have you done any work with the IISRP?

8 A. On a very limited scale. You want a
9 long story?

10 Q. Well, tell me about the work you have -
11 you have had with the IISRP?

12 A. When I worked for Dr. Tabershaw, he was
13 the scientific advisor to IISRP on the Johns
14 Hopkins study. And after he hired me as the
15 Director of Epidemiology, I replaced him in that
16 function, so I did go up to Baltimore and go over
17 some of the progress with Dr. Gene Matanoski on
18 that study. That was only for a short period of
19 time.

20 Q. Have you been keeping up with Dr.
21 Matanoski's activities associated with the IISRP
22 study that she's been working on over the years?
23 Have you been keeping up with what's been going
24 on?

25 A. Nothing other than reading her
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1 publications and reports. I am not involved with
2 IISRP anymore.

3 Q. And are you presently involved with the
4 CMA on any research activities?

5 A. No.

6 Q. And right now are you presently being
7 funded for any activities by the API?

8 A. Other than the gasoline study that you
9 talk about, we're into the final stage of that
10 project.

11 Q. Have you presented your report yet on
12 the gasoline workers? Has that been -- I guess I
13 haven't seen it yet. Have you presented it?

14 A. Yes, sir. There was a international
15 symposium on the health effects of gasoline
16 sponsored by a number of organizations including
17 U.S. EPA, API, and other organizations and I
18 presented a paper -

19 Q. When was that?

20 A. -- on that study.

21 Q. How long ago was that?

22 A. Actually, exactly, a week ago. Last
23 Wednesday.

24 Q. As a result of your study, did you find
25 any increased incidence or mortality associated
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1 with worker exposure to gasoline vapors?

2 A. Any disease category?

3 Q. Yes.

4 A. We found some increase of acute myeloid
5 leukemia associated with people who were hired
6 before 1948. The increase was not statistically
7 significant, but there was a marked significant
8 increase.

9 Q. How increased was it? What was -- what
10 was the S.M.R. for acute myeloid leukemia?

11 A. Okay. There were two cohorts or
12 subcohorts, depends on how it -- what you want to
13 call them, in our study. One group of the
14 employees came from land-based terminals. We are
15 talking about distribution workers. Another one
16 come from the shipping company of -- of the
17 petroleum industry, these are marine employees.
18 In the land -- land-based terminal
19 cohorts we find an S.M.R. of 150. But the
20 increase was, as I mentioned, not statistically
21 significant, and, again, we are talking about
22 AML. There were 13 AML's. Eleven of the 13 were
23 exposed before 1948. On the other hand, there
24 was no increase of AML in the marine side.

25 Q. So the S.M.R. for the marine-based

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1 shipping workers was less than 100; is that
2 right?

3 A. Was less than a hundred percent, yes.

4 Q. Okay. Now, when you say that eleven of
5 the workers were exposed before 1948, were all
6 eleven of those AML -- those workers with AML,
7 were they also exposed after 1948 to gasoline?

8 A. Some of them were.

9 Q. What percentage of those individuals
10 were exposed to gasoline after 1948?

11 A. I don't remember.

12 Q. Now, looking at all lymphohematopoietic
13 disease, was there an increased incidence among
14 workers exposed to gasoline vapors, pursuant to
15 the study that you have just presented?

16 A. What was the diagnostic category?

17 Q. All lymphohematopoietic disease.

18 A. I don't think so.

19 Q. Do you have that report with .you?

20 A. No, I don't.

21 Q. Will you be relying upon that report at
22 the time of trial?

23 A. Depends on what questions I am asked.

24 Q. Okay. Well -

25 MR. TYLER: Which report is it? If
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1 I have got it, I will get it.

2 MR. HYDE: It's the new API

3 gasoline workers study.

4 MR. TYLER: Oh, is that the one you

5 were telling me about before?

6 THE WITNESS: That was the report

7 that we submitted to API a week ago.

8 Q. (By Mr. Hyde) I guess why I asked that,

9 because I recall reading your report that you

10 talked about. "In my refinery study, there was

11 no increased leukemia risk found among those

12 hired after 1948."

13 Does that line in your second page of

14 your report, does that have anything to do with

15 your study that we have just been talking about?

16 A. No. The statement that I made, in that

17 report, dated May 16th.

18 Q. Yes.

19 A. Okay? Of course, in May, I did not -- I

20 had not finished my gasoline study at that

21 point. That statement was based on refinery

22 studies. It has nothing to do with the study we

23 just talked about.

24 Q. Okay. John, I would like -- on the

25 outside chance --

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1 MR. TYLER: Yeah. No, let me say
2 this. I -- I have not seen the study myself, do
3 not intend to rely on it. However, after I see
4 it, you know, if there is something that I think
5 is relevant, I might want to -- why don't we go
6 ahead with the agreement? Is it -- is it a -
7 something you can give us, Dr. Wong, or is there
8 any kind of confidentiality agreement at this
9 point with the API?

10 THE WITNESS: It's a draft report.
11 My application is to provide copies to API, and
12 what API wants to do with the report is up to
13 them.

14 MR. TYLER: Okay.

15 THE WITNESS: I cannot give you a
16 copy.

17 MR. TYLER: I will make the request
18 from the API. If that request is turned down,
19 then we will not use it. If it is granted to me,
20 then I will give you a copy immediately, and if
21 you need to question Dr. Wong -- Dr. Wong
22 further, perhaps -

23 MR. HYDE: Telephone deposition.

24 MR. TYLER: -- we could do it by
25 telephone, as opposed to having him come back
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1 from San Francisco, and my clients will agree at
2 a convenient time for you -- to reproduce you for
3 questioning and that stuff.

4 MR. HYDE: Plaintiffs would agree
5 to a telephone deposition -

6 MR. TYLER: Okay.

7 MR. HYDE: -- on that subject.

8 MR. TYLER: You will be on a
9 telephone in San Francisco, as opposed to being
10 here.

11 THE WITNESS: Okay. I may want to
12 just add that the proceedings of the symposium
13 will be published in Environmental Health
14 Perspectives. I don't know when that will
15 appear. I assume that that will be another
16 source of getting some findings of those
17 studies.

18 MR. TYLER: Off the record a
19 second.

20

21 (After a brief recess, the
22 deposition continued as follows:)

23

24 Q. (By Mr. Hyde) Doctor, I think you stated
25 earlier, and correct me if I am wrong, that you
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1 have not seen an epidemiological study that shows
2 an association between benzene-exposed workers
3 and acute myeloid leukemia; is that correct?

4 A. Please read the question again.

5 Q. Okay. Let me restate it: Did you state
6 earlier that you had not seen a epidemiological
7 study that showed a relationship or an
8 association between benzene exposure and the
9 disease, acute myeloid leukemia? Did you say
10 that?

11 A. No, I did not.

12 Q. Okay. Then I must have misunderstood.
13 Have you seen -- have you ever seen or heard of
14 an epidemiological study that indicates an
15 association between exposure to benzene to a
16 worker and acute myeloid leukemia?

17 A. Yes.

18 Q. Okay. What studies have you seen that
19 show that association?

20 A. A study done by Rinsky in Oakland.

21 Q. And that's the Pliofilm study; is that
22 correct?

23 A. Yes, sir.

24 Q. Have you ever talked with Mr. Rinsky
25 about his study?

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1 A. I have talked to Dr. Rinsky in the past,
2 but not particularly on that study.

3 Q. Now, but as per that particular Pliofilm
4 study, you have never had a discussion with
5 Mr. Rinsky on that; is that correct?

6 A. No, sir.

7 Q. Have you written articles before
8 critical of Mr. Rinsky's Pliofilm study?

9 A. I have written reports commenting on the
10 Pliofilm study, yes.

11 Q. You also -- have you ever talked with
12 Peter Infante concerning any of the studies that
13 he's conducted that show an association between
14 benzene and AML?

15 A. Yes, I have.

16 Q. You have talked with him?

17 A. Yes.

18 Q. Do you have any criticisms of his work?

19 A. I am not making a distinction between
20 Rinsky and Infante -

21 Q. Okay. Right.

22 A. -- study. I look at that as one single
23 study.

24 Q. Okay.

25 MR. TYLER: Is this essentially,
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1 Doctor, that -- what you referred to as the NIOSH
2 studies in my conversations with you?

3 THE WITNESS: That would be the

4 NIOSH study.

5 MR. HYDE: Okay.

6 MR. TYLER: I would like -- maybe

7 is there something you could look at, sir, that

8 we can identify the studies just for

9 housekeeping?

10 Q. (By Mr. Hyde) Do you have it here?

11 A. I believe there are two publications on

12 the same study.

13 MR. TYLER: There should be some

14 document here that refers to the citations. As a

15 matter of fact, let's go off the record. I think

16 I know where it is.

17

18 (There was a discussion held off

19 the record.)

20

21 MR. TYLER: Okay. Let's go back on

22 the record, then, and have him just identify

23 these exhibit numbers, so that the testimony will

24 refer to what he meant it to refer to.

25

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1 (There was a discussion held off
2 the record.)

3

4 MR. HYDE: Back on the record. I
5 think, John, you had asked the doctor a question.

6 MR. TYLER: Yes. Doctor, just -
7 you have been talking with Mr. Hyde about
8 Infante/Rinsky benzene studies, and could you,
9 please, just give the deposition exhibit numbers
10 that are shown on these documents to identify
11 these as the studies you were referring to?

12 THE WITNESS: Exhibit 33 and
13 Exhibit 10.

14 MR. TYLER: No, that's -- yeah.
15 I'm sorry.

16 Q. (By Mr. Hyde) Are there any other
17 studies by Dr. Rinsky -- by, excuse me,
18 Mr. Rinsky or Dr. Infante concerning benzene in
19 association between AML, that you're familiar
20 with, other than those two documents?

21 A. There was some previous publications on
22 the same study, but essentially present the same
23 data.

24 Q. Certainly, Mr. Rinsky is a competent
25 epidemiologist. You would agree with that?

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1 A. I would like to judge a study-by-study.

2 Q. Do you have any criticisms of either of
3 those papers, that Exhibit 10 or Exhibit 33?

4 A. Yes, I have.

5 Q. Okay. Would you -tell me your criticisms
6 of Exhibit 10, first?

7 A. Exhibit 10, I think the major criticism
8 is that the exposure -- historical exposure was
9 substantially underestimated in their -- in their
10 analysis.

11 I also feel that once they have done a
12 cohort analysis, I don't see much point in
13 doing -- in Exhibit 10, they also did a case
14 control analysis without any new information,
15 basically using the same information. I don't
16 see any point of doing that, either. And I
17 certainly question some of the people included in
18 the study with extremely short duration of
19 employment. I question them, as well.

20 Q. Why -- why do you criticize the fact
21 that there were employees with short duration
22 exposures or short work periods at the plant as
23 far as employment? Why is that a criticism?

24 A. Just give you an example. If someone
25 worked there for only a few days or a month, I
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1 don't think that -- that the disease that that
2 person had subsequent to that would be reasonably
3 related to his one-month employment, assuming
4 that that person got another 50 years -- 50 years
5 or so exposure at other employment places.

6 Q. Okay. Generally, wouldn't -- if you
7 were including -- I'm going to strike that and
8 start over. Generally, if you were including all
9 individuals, whoever worked at a plant, even for
10 just one day, wouldn't that serve to dilute the
11 study, in that you would have way more
12 individuals in the study than you would really -
13 that would be meaningful, such as if you said,
14 "We're going to take every employee whoever
15 worked at Plant Number A, who worked one day at
16 that plant, and we're going to include them in
17 the study," wouldn't that be diluting the actual
18 exposed worker who has, let's say, worked five,
19 seven, or ten years?

20 A. No. If you're interested in the
21 exposure and the health effects of exposure at
22 Plant A, in your example, you would like to study
23 people with long-term exposure. You don't want
24 to study people with short-term exposure at Plant
25 A, when 95 percent of their working life was
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1 spent elsewhere.

2 Q. But by including those workers who just
3 worked one day, it really serves to just dilute
4 the total number of -- and make the actual
5 exposed population? It's-just a dilution factor?

6 A. No.

7 Q. You don't agree with that?

8 A. No. Because, you know the other 95
9 percent or 99 percent of employment elsewhere
10 would -- may entail other exposures. In fact, in
11 Exhibit 33, Rinsky talked about other employments
12 outside of the Pliofilm plant. Some of those
13 cases with leukemia, entry work of substantial
14 amount of time at rubber tire companies, and they
15 were exposed to all kinds of chemicals, as well.

16 Q. Including benzene?

17 A. So you -- so you are really talking -- I
18 don't know about benzene, most likely it would
19 be -- include benzene, but essentially you are
20 talking about confounding exposure.

21 Q. What I am saying is if you had a
22 refinery, and the refinery over a 40-year period
23 had 10,000 workers who at least worked one day,
24 but you only had 2,000 of those workers who spent
25 over two years at that refinery, wouldn't adding
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1 the other 8,000 employees who only worked between
2 one day and two years, wouldn't that only serve
3 to dilute the workforce as it concerns the
4 exposed workforce?

5 A. I don't think you can make a general
6 statement. It depends on what they -- what those
7 guys did elsewhere.

8 Q. Okay.

9 A. You know, if the exposure was also -
10 also increased their risk, and I would say you
11 are confounding your finding.

12 Q. So someone who works at a plant one day
13 or one year, that exposure is -- could be
14 significant as it relates to the total
15 epidemiology of a plant. Would you agree with
16 that?

17 A. No, not very likely.

18 Q. Okay. From your standpoint as a -- as
19 an epidemiologist, how long of a period of time
20 should a worker work at a facility before that
21 worker is included in an epidemiological study?

22 A. Most of the time, we would like to
23 include people with six-months to a year
24 employment.

25 Q. Okay. For instance, C.P. Wen in his
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1 Gulf studies from '83 and '84, there was no
2 requirement as to minimum employment. In other
3 words, if a person worked there one day, then
4 that employee would be counted in the
5 epidemiological study. Do you -

6 A. That's what he did. By the way, I want
7 to point out that's the same study.

8 Q. Okay.

9 A. Although there were two publications.

10 Q. A continuation?

11 A. That was just one study.

12 Q. Okay. It's an update?

13 A. Right.

14 Q. Okay. Well, in that study, isn't that
15 by taking every employee who worked even one day,
16 that that just serves to dilute the actual
17 worker -- the actual cohort of exposed
18 individuals?

19 A. No. I've answered your question many
20 times, the same question many times this
21 afternoon. I am going to give you the same
22 answer again. The answer is "no."

23 Q. Now, I asked you earlier about
24 contractors in the deposition, and someone like
25 Mr. Wing worked several years out at the City
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1 Service Refinery in Lake Charles.

2 MR. TYLER: Without interruption?

3 Q. (By Mr. Hyde) Over a period of time,
4 he's worked several years in the '50s at the Lake
5 Charles refinery. He now has AML. More than
6 likely, he will not be included in any
7 epidemiological study.

8 You would agree with that?

9 A. Most likely not.

10 Q. Okay. Do you agree that contractors
11 probably should be included in epidemiological
12 studies if that information is available to the
13 company?

14 A. Depends on what questions you want to
15 ask.

16 Q. Well, if you're asking the question as
17 to whether there is an association between
18 benzene worker exposure and lymphohematopoietic
19 disease, and you have thousands of workers who
20 were exposed to benzene, but not being counted,
21 wouldn't you think that those workers should be
22 counted in an epidemiological study?

23 MR. TYLER: Before you answer, as
24 you know, Keith, it's not my practice to object
25 to questions. I am not required to at this
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1 point, but let me just go ahead and make the
2 objection that assumes a number of facts, a
3 number of variables that aren't in evidence.

4 Now, I hope I haven't made you forget
5 the question. Go ahead and answer the question,
6 but I just want to make that objection.

7 A. My answer would be "no." If we want to
8 study the health effect, you know, cancer
9 mortality of people exposed to benzene or
10 petrochemicals, we -- the most logical group to
11 study would be long-term employees at the plant
12 working for those companies, rather than people
13 whose work sites may change every two months.
14 Again, we do not want to introduce confounding
15 exposure into our studies.

16 Q. So when you take, let's say, pipefitters
17 out of a union hall that worked primarily in one
18 geographic area, be it, let's say, Jefferson
19 County or Calcasieu Parish, you see no benefit in
20 adding those types of employees into any
21 epidemiological studies for that area; is that
22 right? You see no benefit?

23 A. Your question is being very general, but
24 I think I know which direction you are heading.
25 If we want to study asbestos-related diseases, we
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1 would study insulators. If we want to study
2 benzene-related diseases, we would like to study
3 people who worked day-in and day-out for a long
4 period of time in the same location exposed to
5 benzene, and that would not be the insulators.

6 Q. Mr. Wing testified that for several
7 years at either the Conoco or City Service
8 Refinery, that he used benzene or process
9 chemicals, process streams to clean his tools.
10 In your mind, would that be -- would
11 Mr. Wing have been exposed to benzene doing that
12 kind of task?

13 MR. TYLER: Assuming his testimony
14 is correct.

15 A. Assuming that's the case, I would
16 think -

17 MR. TYLER: Assuming without
18 admitting. Let me say -- pardon me, Doctor, I
19 didn't mean to step over your answer.

20 A. Whatever legal language you want to put
21 in there, I would think he would be exposed to a
22 small concentration of benzene.

23 Q. (By Mr. Hyde) Assuming that Mr. Wing
24 washed his tools on occasion with pure benzene
25 for 15 minutes a day, would that task be, in your
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1 mind, a task that is a low exposure task as it
2 relates to benzene exposure?

3 A. I have not looked into an estimate
4 cleaning tools with pure benzene, as you put it,
5 so I cannot offer you an answer at this point.

6 Q. Okay. If someone, and I want to try to
7 get in relative terms, now, what you can consider
8 high benzene versus low benzene exposure on a
9 short-term basis, and let's limit this to 15
10 minutes or so.

11 A. Good.

12 Q. 15 minutes exposure task. Okay?

13 A. Okay.

14 MR. TYLER: Oh, I misunderstood
15 that. The hope was springing eternal that we had
16 15 minutes left in the deposition.

17 MR. HYDE: Off the record.

18

19 (There was a discussion held off
20 the record.)

21

22 Q. (By Mr. Hyde) Now, if someone washed a
23 bottle or a laboratory glass, or a flask with
24 benzene, let's say a small amount, a few
25 milliliters of -- let's say a few ounces of
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1 benzene, and poured it down a sink in a
2 laboratory, nonventilated, would that be a high
3 exposure task to you?

4 A. I think it depends on the benzene
5 content, how long it's going to be, you know, as
6 you mentioned in your ventilation system.

7 Q. Okay. A few ounces, cleaning glassware,
8 pouring down the sink, do you have any idea of -
9 and assuming pure benzene, do you have any idea
10 of what the exposure level might be when pouring
11 down that benzene into a sink?

12 A. No, I don't. Not at this point.

13 Q. Would you be surprised to find out that
14 the exposure level could be as high as 1,000
15 parts per million when pouring this benzene down
16 a sink? Would that surprise you?

17 A. That would surprise me, and it also
18 depends on how -- how you measure it, benzene
19 concentration.

20 Q. Assume with me that 15 minutes later,
21 after the benzene has been poured down the sink,
22 that the exposure level is still over 20 parts
23 per million in that same general area, would that
24 surprise you?

25 A. After 15 minutes?

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1 Q. Yes, after 15 minutes.

2 A. Without any ventilation?

3 Q. Just in a big lab room.

4 A. You didn't answer my question.

5 Q. Normal ventilation in any room.

6 MR. TYLER: Normal.

7 A. Maybe, maybe not. I don't know.

8 Q. (By Mr. Hyde) Now, if Mr. Wing -

9 assume -- assume that Mr. Wing used pure benzene

10 in a five-gallon -- in a -- in a five-gallon

11 bucket to clean his tools, do you have any

12 concept of the level of exposure that Mr. Wing

13 had to benzene, assuming that it was benzene?

14 A. You start with 100 percent benzene, now

15 you're saying it was benzene -

16 Q. Yeah, 100 percent benzene.

17 A. 100 percent benzene? No, I don't have

18 an opinion at this point. I haven't seen any

19 industrial hygiene data. I have not done any

20 estimate based on -- based on pure benzene.

21 Q. I would like for you to refer to your

22 report here. Looking at the first paragraph, and

23 I am going to go over this line-for-line with

24 you, you say in your first paragraph, "I have

25 been retained by the law firm of Tyler & Pearson

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1 in the case of Ray Wing vs. Shell Oil, et al. I
2 was asked by Mr. John Tyler to offer a
3 professional opinion on the relationship, if any,
4 between Mr. Wing's exposures at various
5 refineries and chemical plants and his acute
6 myeloid leukemia.
7 "My opinion is based on my understanding
8 of Mr. Wing's employment/exposure history,
9 epidemiologic studies which I have conducted, and
10 a critical assessment of epidemiologic studies of
11 persons with similar exposures."
12 Now, again, there is nothing in that
13 paragraph that you want to change; is that
14 right?

15 A. Except the name of the law firm has been
16 changed.

17 Q. Okay. Now, you indicate your opinion is
18 based on Mr. Wing's exposure history. That's
19 correct, isn't it?

20 A. Yes, sir.

21 Q. Where did you get Mr. Wing's exposure
22 history?

23 A. Part of that would come from his
24 deposition.

25 Q. Where else would you get it from?

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1 A. Some conversation that I had with
2 Mr. Tyler in terms of benzene concentration in
3 gasoline or other solvents that Mr. Wing used.

4 Q. When you read Mr. Wing's deposition,
5 didn't he say that he used benzene to clean
6 tools?

7 A. I believe that the word was "benzene and
8 other solvents."

9 Q. But he did say the word "benzene,"
10 didn't he?

11 A. Oh, he did use the word "benzene," yes.

12 Q. And you don't have any reason -- you
13 don't know of any reason why Mr. Wing would not
14 tell the truth concerning that statement, do you?

15 A. No, I am not saying he was not telling
16 the truth. I am not offering an opinion on that.

17 Q. You don't know whether he was or wasn't
18 using benzene; is that right?

19 A. No.

20 Q. Okay. Assume with me that Mr. Wing used
21 pure benzene on occasions to clean his insulator
22 tools. Would that have any effect on your
23 opinions in this case?

24 A. It may. Depends on what exposure would
25 be.

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1 Q. Were you given the deposition of any of
2 Mr. Wing's coworkers associated with this
3 lawsuit?

4 A. No.

5 Q. If some of Mr. Wing's coworkers have
6 indicated that they used pure benzene out at City
7 Services to clean their tools, could that change
8 your opinion in this matter?

9 MR. TYLER: Before you answer,
10 Dr. Wong, Keith, I prefer that you -- you're
11 asking the questions in such a way as requires
12 Dr. Wong to make a judgment as to the credibility
13 of the witnesses.

14 Would you please state your questions in
15 terms of "assume," and then whatever the facts
16 are, and -- because whenever -- you know, you ask
17 an expert anything, he was not personally there,
18 none of the experts were at the time, so I am
19 going to ask that he limit his questions to
20 assume what percentage of benzene, location,
21 temperature, whatever the assumptions are.

22 MR. HYDE: I will try to do that in
23 the -

24 MR. TYLER: And if you need other
25 information, tell him what other information you
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1 need so he can give you a hypothetical.

2 THE WITNESS: Okay.

3 Q. (By Mr. Hyde) The bottom line is you
4 didn't read any other coworkers' depositions in
5 this case?

6 A. I don't have any other depositions.

7 Q. Is gasoline a material that you would
8 recommend to anyone to clean their tools?

9 A. I am not in that line of business.

10 Q. But from a -- as an epidemiologist
11 knowledgeable of gasoline epidemiological
12 studies, benzene epidemiological studies, would

13 you recommend to someone that they clean their
14 tools with gasoline?

15 A. I don't know what other alternative
16 there would be available. I just cannot answer
17 your question.

18 Q. Well, you're -- you just can't answer
19 the question. Is that it?

20 A. That's what I said.

21 Q. Will you agree with me that Mr. Wing was
22 exposed to benzene in his work at Cities Service?

23 A. According to his deposition, he would be
24 exposed to some benzene, yes.

25 Q. Will you agree with me that Mr. Wing was
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1 exposed to butadiene at City Service?

2 A. I don't know about that.

3 MR. TYLER: I am going to object

4 insofar as you're asking for factual agreements.

5 He is not a fact witness; he is an expert

6 witness. Do not answer any questions that are

7 factual in nature, if you do not know the

8 answer.

9 THE WITNESS: Okay.

10 MR. TYLER: Okay? As is

11 applicable, he is saying did he use chemical "X"

12 at plant "Y." You were not present there, so

13 there is no way that you know that from your

14 personal knowledge, as opposed to asking for an

15 expert opinion.

16 Do you understand the distinction I am

17 making?

18 THE WITNESS: I understand after

19 all these years as the profferor.

20 MR. TYLER: I understand. Okay.

21 Q. (By Mr. Hyde) In your third paragraph,

22 the second sentence, you say, "In my study,

23 parenthesis, Wong, 1987 a and b, end parenthesis,

24 leukemia risk was analyzed by various benzene

25 exposure indices."

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1 What various benzene exposure indices

2 are you referring to?

3 A. Length of exposure by job category,

4 operators versus maintenance people; by latency;

5 by cumulative exposure, meaning the product of

6 intensity of exposure and duration of exposure;

7 by peak exposure, short-term exposure, 15-minute,

8 highest peak exposure; by age of -- age of first

9 exposure.

10 Q. Any others?

11 A. Those are the ones that I can think of.

12 Q. What is your assumption as to the length

13 of exposure Mr. Wing had to benzene? What

14 assumption did you make?

15 A. Based on his transcript, he was exposed

16 to benzene probably around 1954 or so, during

17 that period of time, until early 1970's, when he

18 switched to mastic water soluble cleaning

19 material.

20 Q. So he had somewhere 15-, 18-year length

21 of potential exposure?

22 A. Right, depending on when he stopped

23 using benzene, or benzene-containing solvents.

24 Q. Is there anything about his length of

25 exposure at 15 or 18 years, or potential exposure

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1 to benzene, that would exclude him as someone
2 whose AML was caused by benzene? What about his
3 length of exposure do you find would exclude him
4 as someone whose AML was caused by benzene? I
5 have said that twice now in one sentence. I
6 didn't mean to, but -

7 A. I think one major consideration in
8 Mr. Wing's case is that he was exposed for only a
9 very short period of time on a daily basis. He
10 was only exposed, according to his own
11 deposition, ten to 15 minutes.

12 .Q. Now -- and that's when he is washing
13 tools; is that correct?

14 A. Yes, sir.

15 Q. Okay. Now, when he was out in the
16 refinery, do you know whether or not he was
17 exposed to benzene from the sewer systems, or
18 from fugitive emissions in the plant? Do you
19 know one way or the other? What assumptions have
20 you made in that area?

21 A. If -- in any studies, or in Mr. Wing's
22 case, and in any study, there would be some
23 background level of exposure, whatever that may
24 be. And, again, I am trying to fit Mr. Wing into
25 populations that we have studied.

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1 In all those studies, we did take
2 background exposure into consideration that just
3 raise everybody's level of exposure up, so that
4 was not part of consideration.

5 Q. Have you ever seen any of the sewer
6 system surveys indicating the amount of benzene
7 in the sewer systems at the City Service Refinery
8 or the PCI complex, which was the chemical plant
9 associated with -- with City Service?

10 Have you ever seen any of those studies?

11 A. No, I have not.

12 Q. So as we sit here today, you do not know
13 whether there was any benzene in the sewer
14 systems at City Services; is that correct?

15 A. That's correct.

16 Q. If there were benzene -- assume with me
17 that there were benzene at the City Service
18 Refinery and PCI complex in substantial amounts,
19 would that change your opinion as to Mr. Wing's
20 exposure at that facility?

21 MR. TYLER: I need to ask you to
22 use something besides substantial amount. Can
23 you quantify it?

24 Q. (By Mr. Hyde) Over ten parts per
25 million.

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1 A. You are saying the background level at
2 that facility would be ten parts per million?

3 Q. Around some sewer systems.

4 A. Okay. To answer that hypothetical
5 question, then, you have to tell me where
6 Mr. Wing was. Was he standing right on top of
7 the sewage system?

8 Q. Assume with me that he was working in
9 areas right next to sewer outlets.

10 A. Okay. Why don't you make some
11 assumption, and, you know, in terms of his
12 personal exposure, rather than -

13 Q. I am just asking you. If the sewer was
14 contaminated, and if Mr. Wing worked there,
15 would -- would that be something that may change
16 your opinion in this matter as to his exposure
17 level?

18 A. It may or it may not. Depends on how
19 often that occurs, and what the actual exposure
20 was when Mr. Wing was actually there.

21 Q. You just haven't seen any of that
22 information as of today?

23 A. No, sir.

24 MR. TYLER: I might also add that
25 there still seems to be a lot of documentation
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1 that we have requested, particularly from
2 Mr. Baggett at the mediation hearing that still
3 has not been produced.

4 MR. HYDE: Since Micky was at the
5 Tulsa, Oklahoma witness, John, and had access to
6 every document that we had, and we don't have any
7 other documents other than what was produced at
8 Tulsa.

9 MR. TYLER: I don't know that you
10 can say that with certainty, given that, as we
11 pointed out in the mediation, Mr. Baggett had
12 several documents I had never seen before that
13 occurred prior to your trip up to Tulsa.

14 MR. HYDE: And those were all the
15 same documents that came from Tulsa, just have
16 been supplied from someone else before.

17 MR. TYLER: Well, I think there are
18 a lot of documents that you all have that you
19 have obtained in other lawsuits prior to this one
20 which I have not seen, and I have outstanding
21 requests on, which have not been objected to, and
22 I want to reurge that request now. If I don't
23 have it, I am not able to give it to Dr. Wong to
24 consider it.

25 MR. HYDE: Okay. I think we will
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1 probably have to take that up with the Judge, but
2 that's -

3 MR. TYLER: Let me also add that

4 Mr. Baggett promised to produce that to me the
5 day of the mediation, some months ago.

6 MR. HYDE: I will have to leave

7 that to Mr. Baggett and you to answer that.

8 THE WITNESS: With that friendly

9 exchange, can I take a stretch for a couple of
10 minutes -

11 MR. HYDE: Sure.

12 THE WITNESS: -- and get a drink?

13

14 (After a brief recess, the

15 deposition continued as follows:)

16

17 Q. (By Mr. Hyde) Back on the record.

18 Dr. Wong, have you seen any documents

19 that would indicate the amount of butadiene

20 released, if any, from the PCI plant in Lake

21 Charles, Louisiana at any time in the 1950's,

22 1960's, in that time period?

23 A. No, I have not.

24 Q. Have you seen any industrial -- well,

25 any documents that would indicate the amount of
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1 butadiene releases at any time the butadiene
2 plant was operating at the PCI plant in Lake
3 Charles, Louisiana?

4 A. No, I have not.

5 Q. Have you seen any documents that would
6 indicate insulator employees' exposure to
7 butadiene at the PCI plant at any time in the
8 operate -- during the operation of the PCI
9 butadiene plant?

10 A. No.

11 Q. In the 1950's, did you see any
12 industrial hygiene information at the Cities
13 Service refinery that would reflect insulator
14 workers' exposure to benzene, either on a
15 short-term or long-term basis?

16 A. No.

17 Q. "Short-term" being 15 minutes,
18 "long-term" being eight hours. You have not
19 seen any kind of data from the 1950's concerning
20 benzene exposure; is that right?

21 A. No.

22 Q. And the same question for insulators'
23 exposure to benzene during the 1960's. Have you
24 seen any information at all?

25 A. No.

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1 Q. As it concerns industrial hygiene
2 monitoring at the Cities Service plant, what is
3 the first year of -- what was the first year that
4 the samples were being taken to determine worker
5 exposure to benzene?

6 A. I don't know.

7 Q. Now, another variable that you discussed
8 was job category. Is there anything about
9 Mr. Wing's work as an insulator that would
10 suggest that he was not exposed to benzene in his
11 work?

12 A. Specifically to Mr. Wing?

13 Q. Yes.

14 A. I have no idea.

15 Q. Well, because he's an insulator would
16 not exclude him from being exposed to benzene.
17 That's my point.

18 A. Are you asking me for a fact?

19 Q. For an opinion.

20 A. For an opinion?

21 Q. Yes. Just because he is an insulator,
22 is -- is that enough for you that would suggest
23 that he was not exposed to benzene, just because
24 he was called an insulator?

25 A. By "hissself," you mean -- by the fact
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1 that he was an insulator, he does not say one way
2 or another whether he was or was not exposed to
3 benzene.

4 Q. Okay. Now, the next category, this is
5 the same as it concerns exposure to ethylene
6 oxide and butadiene. Just because he is an
7 insulator does not mean that he was not exposed
8 to that material; is that right?

9 A. That's true.

10 Q. Okay. Now, your next variable that you
11 discussed was latency. Is there any -- is there
12 anything about Mr. Wing's work and the date of
13 diagnosis as it concerns latency that would
14 suggest that the latency for his disease was
15 impossible or not possible to occur as a result
16 of benzene exposure?

17 A. There is no such testimony.

18 Q. Okay. And I want to make sure I
19 understand your answer. If Mr. Wing was exposed
20 from 19 -- assume with me that Mr. Wing was
21 exposed from the mid 1950's through the early
22 1970's to some amounts of benzene, that 15, 18,
23 whatever period of time, and then was diagnosed
24 in '87, is there anything about those time
25 periods that would indicate that his disease
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1 could not have been caused by benzene?

2 A. I think you have changed the question
3 somewhat. You started with a question on
4 latency, and now you make that into a more
5 general question. If you do that, then we have
6 to bring back the -- the amount and duration of
7 exposure on a daily basis.

8 Q. Okay. Now, I just want to limit to
9 latency.

10 A. Then please do so.

11 Q. Okay. And we can assume, if you would,
12 assume an elevated exposure level just for this
13 question. Assume that Mr. Wing was exposed to
14 benzene at an elevated level. Is there anything
15 about his work from the 1950's through the '70s,
16 with that assumed high exposure to benzene, then
17 the subsequent diagnosis of -- in 1987 of acute
18 my -- myelogenous leukemia; is there anything
19 about those time periods and the assumed high
20 exposure that would suggest that the latency
21 period is just not correct, or is -- is just -
22 it is not feasible that his disease could have
23 been caused by benzene?

24 MR. TYLER: You're asking does
25 laten -- does Dr. Wong's opinion regarding
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1 latency periods rule out benzene as a cause of
2 the AML in Mr. Wing?

3 MR. HYDE: Very well put.

4 MR. TYLER: Did you understand
5 that?

6 THE WITNESS: Yes.

7 MR. TYLER: You were going after
8 that awhile ago.

9 A. Making all the assumptions that you make
10 in your statement, in your question, I don't see
11 latency being an issue here.

12 Q. (By Mr. Hyde) That's with the
13 assumptions that I have made, you don't see
14 latency as being an issue; is that correct?

15 A. That's correct.

16 Q. Now, another variance that you have
17 talked about is age of first exposure.

18 A. Correct.

19 Q. How old was Mr. Wing when he was first
20 exposed to solvents, including benzene?

21 A. According to his transcript, he was
22 exposed around 1954 or so, and he was born in
23 1935; is that right?

24 Q. So give or take a few years,
25 approximately 20 years old is when he was first
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1 exposed; is that right?

2 A. Right.

3 MR. DAS: That's what his

4 allegations are.

5 MR. HYDE: One riot, one ranger.

6 MR. DAS: Just want to make it

7 clear.

8 MR. HYDE: No, that's fine.

9 MR. TYLER: We have gone over this

10 before. I want you to know, however, sir, not

11 that plaintiffs in this case would do it, but I

12 have seen plaintiffs in other cases take things

13 out of context and try to use the video as -

14 take it out of context, as getting you to admit

15 that Mr. Wing's factual allegations are true.

16 So if you are making an assumption,

17 please, in giving your answer, please point that

18 out each time.

19 THE WITNESS: I did point out that

20 according to the transcript he was exposed around

21 1954 or so.

22 Q. (By Mr. Hyde) And assuming that

23 everything is correct in Mr. Wing's testimony, as

24 it concerns his exposure, and he would have been

25 approximately late teens, early 20's when those

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1 exposures first occurred; is that correct? Is
2 that your understanding?

3 A. Yes.

4 Q. Okay. Now, is there anything about him
5 receiving his first exposures, now, assuming that
6 they were exposures to benzene, is there anything
7 about that age, late teens to early 20's, that
8 would serve to exclude him, or exclude benzene as
9 possibly causing his AML?

10 A. In the study that we talked about, the
11 study that I have done published in 1987,
12 identified as 1987 a and b, age of first exposure
13 was not related to leukemia risk at all.

14 Q. So that is not a factor as you're
15 concerned with Mr. Wing?

16 A. No.

17 Q. The last two categories that we have not
18 discussed is cumulative exposure and peak
19 exposures of the variables that you first gave me
20 when we started this discussion; is that -- is
21 that right?

22 A. Right.

23 Q. Okay. Now, what assumptions -
24 assumptions did you make as to Mr. Wing's peak
25 exposures relative to the allegations in this
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1 lawsuit, and the benzene causing his leukemia?

2 What -- what were the assumptions that you made

3 as to his peak exposure to benzene over a

4 15-minute period?

5 A. According to his-deposition, he was

6 exposed for about ten to 15 minutes on a daily

7 basis. That was the extent of short-term

8 exposure.

9 Q. But what assumption did you make as to

10 his level of benzene exposure for those ten or 15

11 minutes?

12 A. Number one, I wanted to point out that

13 according to my study, people exposed to it, no

14 matter how high the short-term exposure level

15 was, if the exposure was limited to short-term,

16 15 minutes or less, there was no relationship.

17 You do not have an increased risk of -- as a

18 result of such short-term exposure.

19 Q. No matter how high it is?

20 A. Right, as long as it's short-term. As I

21 stated here, cumulative exposure was the only

22 thing that's related to ben -- leukemia risk.

23 Q. What crafts out in a refinery would have

24 less than 15 minutes of benzene exposure on the

25 days that those crafts would work out in the

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1 plant? And when I say "crafts," I mean workers.

2 A. Maintenance people.

3 Q. That -- anybody else? Any other

4 occupation?

5 A. That's a large group, maintenance

6 people.

7 Q. So -- and as far as on a turnaround

8 situation, when -- when a unit is being shut

9 down, and the equipment is being deinventoried,

10 how long are workers exposed to the chemicals in

11 the processes during that kind of operation?

12 What assumptions did you make in Wong 1987 a and

13 b?

14 A. I think that has to depend on the

15 specific turnaround we are talking about. Some

16 of those maintenance people certainly work on the

17 turnaround.

18 Q. If Mr. Wing was exposed to benzene as a

19 result of fugitive emissions in the air, as well

20 as being involved in turnaround activities, and

21 also being exposed to benzene in the sewer

22 systems, would that information, assuming that

23 it's correct, could that change your opinion as

24 to Mr. Wing's exposure to benzene?

25 A. I need to know how much we are talking

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1 about, what kind of benzene concentration in the
2 air that Mr. Wing was exposed to.

3 Q. Okay. Have you seen Mr. Kwon's report
4 in this matter?

5 A. No, I have not.

6 Q. Have you -- and, of course, you read
7 Mr. -- you read Dr. Rose's deposition; isn't that
8 right?

9 A. Yes, sir.

10 Q. And, of course, Dr. Rose opined to what
11 he thought Mr. Wing's benzene exposure would have
12 been, specifically during the cleaning of tools.
13 Do you recall that?

14 A. Yes, sir.

15 Q. Okay. Do you have any reason to
16 disagree with Dr. Rose's opinion as to the level
17 of benzene Mr. Wing was exposed to while Mr. Wing
18 was cleaning his tools?

19 A. If I understand correctly, based on the
20 transcript of the deposition, that was just his
21 guess, Dr. Rose's guess.

22 Q. Well, do you have any reason to disagree
23 with that?

24 A. I would think that he overestimated
25 exposure.

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1 Q. And what is the basis of your opinion
2 that Dr. Rose overestimated?

3 MR. TYLER: Other than you're using
4 him?

5 MR. HYDE: I will object to the
6 sidebar and move that it be stricken.

7 THE WITNESS: I didn't hear that.

8 MR. TYLER: Other than the fact
9 that he is employed by the plaintiffs in the
10 lawsuit?

11 MR. HYDE: I will again object to
12 the sidebar, and move it be stricken from the
13 report.

14 MR. TYLER: I tell you what, just
15 take that out.

16 A. I am a scientist. I would like to rely
17 on the studies, experiments, rather than what
18 somebody says without any foundation in a
19 deposition. I did find one experiment that would
20 provide us with some information in the area, and
21 that experiment was published by the
22 investigators at NIOSH, and that report is
23 included in one of the exhibits that we have here
24 today.

25 Q. (By Mr. Hyde) But the truth is that in
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1 the 1950's, City Services didn't have industrial
2 hygienists monitoring exposures; isn't that
3 right?

4 MR. TYLER: Answer it -

5 A. The truth? I don't know about the
6 truth.

7 MR. TYLER: Answer -- answer if you
8 know. If you do not know, then do not guess,
9 even though Dr. Rose guessed -- guesses.

10 A. I do not know. I do not guess.

11 Q. (By Mr. Hyde) Now, do you have any idea
12 of what Mr. Wing's cumulative benzene exposure
13 was as a result of his work at the Conoco
14 refinery, the City Service Refinery, or Allied
15 over in Orange? Do you have any -

16 A. I have some estimates.

17 Q. Okay. What is that estimate?

18 A. We can go through some simple
19 calculations here today, if you want to.

20 Q. Okay. We will do that in a minute.

21 Now, over -- as it concerns Allied, did you read
22 any testimony about Mr. Wing using gasoline or
23 benzene over at Allied?

24 A. I don't have any information on that.

25 Q. Now, as far as the -- do you have any
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1 idea of what Mr. Wing's exposure to ethylene
2 oxide was at Allied?

3 A. No, I don't.

4 Q. And so if Mr. Wing has testified that he
5 used benzene at Allied, you have no reason to
6 believe that he didn't; isn't that right?

7 A. I am not offering you -- I am not a fact
8 witness.

9 MR. TYLER: Answer if you know. If
10 you don't know -

11 A. No, I don't.

12 MR. TYLER: -- say you don't know.

13 Have you ever met Mr. Wing?

14 THE WITNESS: No.

15 MR. TYLER: Do you have any
16 knowledge as to his reputation for telling the
17 truth, or his veracity?

18 THE WITNESS: No.

19 MR. TYLER: Were you aware that he
20 testified many times that his memory was
21 incorrect and incomplete, and he could be
22 mistaken about almost everything he said?

23 MR. HYDE: I'm going to object to
24 the form of the question, that you're leading the
25 witness, too, and I'm still not finished with my
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1 examination of him. Appreciate it if you
2 finished it.

3 Q. (By Mr. Hyde) Okay. Tell me what you
4 have -- what your opinion is as to Mr. Wing's
5 cumulative exposure level to benzene.

6 A. Okay. Based on the study done by Ronald
7 Young, Bob -- something I said made you laugh?

8 MR. HYDE: No. No, I'm sorry.

9 MR. TYLER: Off the record a
10 second.

11

12 (There was a discussion held off
13 the record.)

14

15 A. Okay. Basically, I rely on a study done
16 by Ronald Young, Bob Rinsky, Peter Infante, and
17 published in the Journal of Science.

18 Q. (By Mr. Hyde) What deposition exhibit
19 number is that?

20 A. Let me look for that.

21 MR. TYLER: Let's see. I
22 already -- it's the one identified earlier,
23 Keith, Number 30. Is it -

24 THE WITNESS: Number 28.

25 MR. TYLER: -- 28?

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1 A. Based -

2 MR. TYLER: That's -- let him ask
3 you the questions.

4 Q. (By Mr. Hyde) Go ahead and finish,
5 because I was still on the same question. We
6 just wanted -- we got off, side-tracked here for
7 just a second as to which document you're
8 referring to, but still, you were explaining to
9 me how the nature of your opinion -- how you came
10 to that conclusion as to the level of Mr. Wing's
11 exposure to benzene.

12 A. This is an article entitled "Benzene" -
13 entitled "Benzene" -- "Benzene in Consumer
14 Products." It is in Science, 1978. That's the
15 article I relied on.

16 Q. Okay. Now, with that article, and what
17 information you have gotten from Mr. Tyler, and
18 what you have looked at in depositions, what is
19 your opinion as to Mr. Wing's cumulative exposure
20 to benzene? What's the level?

21 A. Okay. To do that, number one, we have
22 to estimate what the benzene concentration in air
23 would be during the ten or 15 minutes that
24 Mr. Wing was exposed to benzene-containing
25 solvent.

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1 Based on this study, during the first
2 ten or 15 minutes, the air concentration of
3 benzene would be about 76 ppm, coming from a
4 solution containing 52 percent benzene in a
5 fairly unventilated garage, a small garage.

6 Okay. And based on the information I
7 obtained from Mr. Tyler, the solvents that -- or
8 gasoline that Mr. Wing used to wash his tools
9 would contain about two percent benzene.

10 MR. TYLER: That's incorrect. The
11 information that I gave you is what my client
12 believes the benzene content was in a stream that
13 Mr. McBurn testified he let the contractors use
14 in cigarette lighters.

15 A. Is that -- so I used that -- that
16 information. And what we are saying is 50
17 percent benzene concentration in solution, under
18 the worst case scenario, with no ventilation in a
19 very small, enclosed space, the air concentration
20 within the first 15 minutes or so would be about
21 76 ppm.

22 So I use a very simple straightforward
23 proportion, two percent, or in that area, or in
24 the neighborhood, two percent benzene
25 concentration in solution would be equivalent
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1 to -- I think we can -- anybody with a
2 calculator?

3 MR. TYLER: I will be glad to go
4 get one if you -- if you need it.

5 MR. HYDE: Can you use a pen or
6 anything? Would that help?

7 THE WITNESS: People tend to forget
8 how to do longhand multiplications with the -

9 MR. TYLER: I will be right back.

10

11 (After a brief recess, the
12 deposition continued as follows:)

13

14 A. I would say the ben -- the benzene
15 concentration in the air during that ten or 15
16 minutes would be about two to three ppm, in that
17 neighborhood.

18 Q. (By Mr. Hyde) Now, how did you take the
19 information that Mr. Tyler's clients provided as
20 to one stream that may have been used that
21 contained two percent, versus the study that
22 showed 52 percent in -- in concentration, 52
23 percent benzene. How -- what assumptions did you
24 make mathematically to -- to get to that number
25 of two parts per million? What did you do?

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1 A. By simple proportion, 52 percent
2 concentration in solution gives off 76 ppm
3 concentration in the air. Two percent
4 concentration in solution gives about three ppm
5 in the air.

6 Q. Okay. Now -

7 MR. TYLER: Do your algebra; 55 is
8 to two, 76 is to X.

9 Q. (By Mr. Hyde) Now, scientifically, based
10 on the physical characteristics of benzene, and
11 the flash point of benzene, and standard
12 temperature and pressure, gas laws, anything
13 else, can you really set up such a simple
14 proportion as that and have that be
15 scientifically accurate?

16 A. As I said, ventilation would be one of
17 the major considerations in such an estimate, and
18 in this experiment, we are talking about the
19 worst case scenario in the small garage, 21 feet
20 by 20 feet, with no ventilation at all, we are
21 making some assumptions, but I think overall it
22 would give us a very -- a good picture of what
23 the exposure would be. It may not be accurate
24 down to the -- the right decimal place that we
25 would -- we would like, but I think it gives us
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1 the ballpark figure.

2 Q. Now, assume with me that Mr. Wing was
3 using a bucket filled with pure benzene, or 99.9
4 percent benzene. What would his exposure level
5 have been under that -- using that material?

6 A. I don't know.

7 Q. Well, would it be -- since you set up
8 the proportionality of going from 52 percent to
9 two percent, and therefore the ratio was
10 virtually 1/26th, or something close to that, if
11 you went from 50 percent to 100 percent, wouldn't
12 you then double that exposure level, using your
13 proportionality rule?

14 A. When you go to the extreme of 100
15 percent benzene solution, I think that may be a
16 question of, you know, whether that would
17 saturate the air or not. That is something I
18 would like to -

19 Q. Okay. Well, certainly you're not -

20 A. Can I finish my answer?

21 Q. Sure. I'm sorry.

22 A. I would like to talk to some industrial
23 hygienists about that.

24 Q. Okay. That's just not your area of
25 expertise? That --

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1 A. Not in the area of, you know, 100
2 percent concentration.

3 Q. Well, practicality, two percent is not
4 if you're setting up that proportion, because you
5 have no basis to set up that proportion, do you?

6 A. That would just give me some idea, some
7 rough estimates.

8 Q. But using this proportionality, you have
9 never done any experiments that would support
10 your opinion in that area, have you?

11 A. I, myself?

12 Q. Yes.

13 A. I have done any experiment? No.

14 Q. Yes. Have you seen any literature that
15 would say that that is the right type of formula
16 to use in estimating worker exposure under those
17 conditions? Have you seen anything to say that's
18 the right way to do it?

19 A. No, but the reason that NIOSH would
20 carry out such an experiment would certainly
21 provide some information to estimate exposure of
22 benzene concentration as a result of use of
23 consumer products containing benzene. That's the
24 whole idea of, you know, doing that experiment.

25 Q. Doesn't the NIOSH paper say that when
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1 you're using a solvent that has 52 percent
2 benzene under the conditions that they said -
3 that they set up, that it produces an exposure
4 level of 78 parts per million? Isn't that all
5 that it says? Does it sale that you can use -
6 use those numbers, and extrapolate upwards or
7 downwards?

8 A. One of the beauty of science is to be
9 able to generalize certain results. I think if
10 we limit the utility of this paper to only 52
11 percent concentration benzene solvents, and limit
12 this to only the application of such a solvent in
13 a garage, then I would say the government wastes
14 its money in sponsoring this study.

15 Q. You're assuming a linear relationship as
16 it relates to the flashing off of benzene; isn't
17 that correct?

18 A. Roughly, yes.

19 Q. Okay. And, then, you have no. idea of
20 what the flash point is of the material used in
21 the NIOSH study; isn't that right?

22 A. That's correct.

23 Q. You have no idea of what the flash point
24 is of this two percent benzene solvent that
25 Mr. Tyler's clients spoke about; isn't that
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1 right?

2 A. That's correct.

3 Q. As a matter of fact, do you even know

4 what the flash point of benzene is?

5 A. A long time ago. I don't -

6 Q. Do you know what the vapor pressure of

7 benzene is?

8 A. I cannot give you a number today.

9 Q. Wouldn't you agree with me that vapor

10 pressure and flash point are maybe some things

11 that you would have to consider before you could

12 set up a linear relationship or proportional

13 relationship like you have set up?

14 A. If you want a very accurate estimate.

15 That's not my point here.

_16 Q. I guess the point is, you have no idea

17 whether that two or three part per million number

18 that you've estimated is in any way correct?

19 MR. TYLER: Before you answer,

20 Dr. Wong, object on the basis that it's

21 argumentative. He has explained in detail the

22 basis of his reliance, and unlike Dr. Rose, does

23 have authority to back it up, and does have some

24 way to get there other than a blind guess. So, I

25 am going to instruct you not to answer the

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1 argumentative question.

2 An argumentative question is a question

3 that's not really said for you to get -- to get

4 information from you, it's to try to make a point
5 by the lawyer.

6 MR. HYDE: I will object to -

7 THE WITNESS: I'm happy not to

8 answer the question.

9 MR. HYDE: Okay. I will object to

10 all the sidebar not directly related to the

11 objection.

12 Q. (By Mr. Hyde) I guess the point is this:

13 You have no basis to believe that your estimation

14 of two to three parts per million is correct?

15 MR. TYLER: You can answer, but the

16 real point is that he doesn't like your answer,

17 and he is going to try to get you to contradict

18 yourself, however long it takes.

19 Q. (By Mr. Hyde) You may answer the

20 question.

21 A. I have relied on the scientific study

22 done by investigators at NIOSH, and I told you

23 the estimate would be an approximate one, but I

24 think it's a good one.

25 Q. If you have estimated Mr. Wing's

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1 exposure at two parts per million on his peak
2 exposures in those 15-minute exposure periods, if
3 you have underestimated that, let's say by a
4 factor of 50 or 75 -

5 MR. TYLER: ppm or percent?

6 MR. HYDE: No, percent.

7 Q. (By Mr. Hyde) Assume with me that you
8 may have done that. If -- if you are wrong,
9 would that change? Yes. If you were wrong,
10 would that potentially change your opinion in
11 this lawsuit?

12 If Mr. Wing's exposure level was
13 determined to be 100 to 150 parts per million,
14 and assume with me -- well, would that affect
15 your opinion in this case at all, if you have
16 miscalculated?

17 A. You keep changing the assumptions in
18 your question.

19 Q. I'm sorry, let me -

20 A. First you started with -

21 Q. Let me start it over. I will make it
22 very simple.

23 Assume with me that you have
24 miscalculated his exposure levels by a factor of
25 50 to 75?

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1 A. What? 50, 75 what?

2 Q. Parts per million. You know -- well,
3 strike that.

4 A. Because you used percentage, you know,
5 early on, so you really confused me.

6 Q. Okay. I have changed the hypothetical.

7 I want to start it all over one more time.

8 Assume with me that you have underestimated his
9 exposure, and that his exposure is actually 100
10 to 150 parts per million.

11 Would that affect your opinions in this
12 case?

13 A. If he was exposed to 100 ppm?

14 Q. To 150 ppm.

15 A. For ten or 15 minutes a day?

16 Q. Yes. Yes.

17 A. Over what period of time?

18 Q. Over the years of time that Mr. Wing
19 worked out in the Conoco, City Service, and
20 Allied facilities.

21 MR. TYLER: Is that the 20-year
22 plus or minus that you discussed, roughly?

23 MR. HYDE: Yes.

24 MR. TYLER: Okay.

25 Q. (By Mr. Hyde) Now, Doctor, do not assume
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1 that he was there everyday, because he also
2 testified he was present at 20 or 30 other
3 places?

4 A. No, you are not.

5 Q. It is not going to change your opinion?

6 A. No.

7 Q. And do you have a cumulative exposure
8 number for Mr. Wing as it pertains to his
9 benzene, butadiene, or ethylene oxide exposure,
10 assuming he had exposures?

11 A. I don't get the point of your question.

12 Q. Have you made an assumption as to
13 Mr. Wing's cumulative benzene, butadiene, and
14 ethylene oxide exposures?

15 A. I only have enough information to come
16 up with an estimate of his benzene cumulative
17 exposure.

18 Q. Okay.

19 A. And not for the other two chemicals.

20 Q. Okay. Would you tell me what you have
21 assumed for Mr. Wing's cumulative benzene
22 exposure?

23 A. Okay. I think when we -- a few minutes
24 ago, we came to the conclusion that based on two
25 percent concentration benzene in a solution, his
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1 exposure during the ten or 15 minutes when he
2 washed his tools with the solution would be about
3 3 ppm. That was my -- my calculation.

4 The next thing we want to do would be to
5 calculate his eight-hour time-weighted average.

6 Okay? Assuming that he was exposed for ten
7 minutes at 3 ppm, his eight-hour time-weighted
8 average would be .06 ppm.

9 Q. And that is the number that you have
10 used for his cumulative benzene exposure; is that
11 correct?

12 A. I used that as a rough estimate.

13 Q. Okay. And now, to assume that that is
14 his cumulative exposure level, that being .06,
15 you have assumed ten minutes at two to three
16 parts per million; is that right?

17 A. No, you didn't hear me right. The .06
18 ppm was his eight-hour -

19 Q. Right.

20 A. -- time weighted average.

21 Q. I understand that.

22 A. But you incorrectly said that was his
23 cumulative exposure. I didn't say that.

24 Q. Okay. His cumulative daily exposure.

25 How was that?

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1 A. No, his average exposure on a daily
2 basis.

3 Q. His average eight-hour time-weighted
4 average -

5 A. Right. .

6 Q. -- was .06?

7 A. Right.

8 Q. And you got that by using three parts
9 per million for ten minutes, or two parts per
10 million for ten minutes? Which one?

11 A. I think I just used three. I don't
12 know. Let me try again. I used 3 ppm.

13 Q. Okay. Now, eight-hour day, it's 408
14 minutes, right?

15 A. Yes.

16 Q. So, in order to get to .06, have you
17 assumed that the other 470 minutes of Mr. Wing's
18 work out at these refineries, that he had no
19 exposure to benzene? Is that your assumption?

20 A. That's correct.

21 Q. And what do you base that assumption on?
i

22 A. It's the only time he would be exposed
23 directly to Benzene, would be the ten minutes
24 when he used solvents to wash his tools.

25 Q. And, again, he wasn't exposed to benzene
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1 as a fugitive emission; is that right?

2 A. That's correct.

3 Q. He wasn't exposed to benzene from the

4 sewer systems; is that right?

5 A. That's correct.

6 Q. He didn't work around turnarounds; is

7 that right?

8 A. That's correct.

9 Q. What if you're wrong on those areas, and

10 his -- and he was exposed? Would that have any

11 effect on your opinion?

12 A. The reason I want to come up with a

13 cumulative exposure is really try to fit Mr. Wing

14 into my study or the Rinsky study, because those

15 were the only two studies with quantitative

16 relationship between exposure and leukemia risk.

17 And in both studies, we do not count

18 background exposure, so it would be correct to

19 not -- not to count Mr. Wing's background

20 exposure at the refinery, since we did not do

21 that in our studies.

22 MR. HYDE: Read that question,

23 please.

24 (The requested testimony was read

25 back by the Court Reporter.)

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1 Q. (By Mr. Hyde) And my -- again, my
2 question was: If you're wrong, Mr. Wing was
3 exposed to fugitive emissions, and they were
4 significant, and he was exposed to benzene in -
5 from the sewer system, and he did work
6 turnarounds, would that change your opinion?

7 A. No, because we would count those as
8 background, except for the turnaround.
9 Turnaround would be identified separately in our
10 studies.

11 Q. And the other assumption that you have
12 made is that he used only a two-percent solution
13 of benzene; is that right?

14 A. Yes.

15 Q. And so if you're wrong, and he used a
16 material that is 50 percent or 100 percent
17 benzene, that could, therefore, make his exposure
18 level higher, couldn't it?

19 A. It could.

20 Q. And if Mr. Ben -- if Mr. Wing did use
21 the higher concentration material that had higher
22 concentration of benzene, would that change your
23 opin -- ultimate opinion in this matter?

24 A. It may or it may not, depends on what
25 the concentration is.

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1 Q. Now, you go on, as we're still in the
2 third paragraph of your report, it says, "In my
3 study, Wong, 1987 a and b, leukemia risk was
4 analyzed by various benzene exposure indices."
5 The next one, "Only one variable
6 'cumulative exposure,' duration times,
7 eight-hour time-weighted average concentration,
8 was significant."

9 How significant was that variable in
10 your study?

11 A. "Significant" meaning that was the only
12 meaningful exposure index to -- to use the
13 quantified risk.

14 Q. So only -- only long-term eight-hour
15 exposures were of any importance, is that
16 correct, as it relates to your study?

17 A. The index called cumulative exposure,
18 which is, you know, the eight-hour time-weighted
19 average, multiplied by duration.

20 Q. Okay. What was that level, that
21 eight-hour time-weighted average? What was that
22 cumulative exposure level that you found
23 significant in your study?

24 A. Okay. In my study, a cumulative
25 exposure higher than 720 ppm months, or 60 ppm
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1 years, would result in a nonsignificant increase
2 of leukemia SMI's, so that would be the suggested
3 level.

4 Q. Okay. Now, do you have a cumulative
5 exposure number for Mr. Wing over his working
6 lifetime?

7 A. Okay -

8 Q. You know we have talked about 60 ppm
9 years or 720 ppm months. What is Mr. Wing's
10 cumulative exposure?

11 A. Okay. A few minutes ago, we arrived at
12 the calculation of .06 ppm as Mr. Wing's
13 eight-hour time-weighted average. So the only
14 unknown we have is what do we want to put in the
15 equation as his length of exposure. Okay? I
16 understand that that part is not that easy to
17 connect, although he was exposed from '54 to the
18 early '70s. That process was not continuous.

19 Q. Okay. Assume with me, then, two time
20 periods. Assume that Mr. Wing had a continuous
21 20-year exposure at that level. What would his
22 cumulative exposure be?

23 A. Okay. That would be very simple. If we
24 assume 20 years noninterrupted exposure, it would
25 be 20 years times .06 ppm, AL time-weighted
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1 average. That would give you 1.2 ppm.

2 Q. And, then, if it was half of that and it
3 would be ten years, then it would be .6 ppm
4 years; is that right?

5 A. Yes, sir.

6 Q. And that's the assumption you have made
7 for Mr. Wing. Is that roughly correct?

8 A. Right.

9 Q. Did you actually figure out a number, a
10 cumulative exposure number for Mr. Wing prior to
11 you writing this report?

12 A. Yes, I did some rough estimate.

13 Q. Okay. Do you remember what the numbers
14 were that you came up with in this case?

15 A. It was about a one or two ppm year.

16 Q. Okay. You go on, and going to the next
17 sentence of interest say, "Furthermore, in my
18 study, there was no significant association
19 between leukemia risk and exposure to -- of short
20 durations."

21 When you say Sig -- "no significant
22 association," do you mean that there was no
23 statistically significant association?

24 A. What I mean was we analyze people with
25 high, medium, and low short-term exposure. We
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1 don't see any pattern of that, so short-term
2 exposure, no matter how high the level was, would
3 not be a predictor, you know, what we call a
4 predictor of leukemia risk.

5 Q. And, again, the exposure of short
6 durations are those exposures less than 15
7 minutes?

8 A. We defined that as 15 minutes or less.

9 Q. Again, other than the exposure levels
10 that you have assigned for Mr. Wing, going
11 through the exercise that we have just been over,
12 you have not seen any other exposure levels for
13 Mr. Wing from any other source; is that right?

14 A. No, I have not.

15 Q. And, I'm sorry, I put "is that right,"
16 and I am -- it makes it -- it makes it -- the
17 answer vague.

18 Have you seen any other projected
19 exposure levels for Mr. Wing, other than the ones
20 that you have conducted yourself?

21 A. No, I have not, sir.

22 Q. On your next paragraph, you go in and
23 discuss the concept of first day of exposure, and
24 relate that to Mr. Wing and his exposure.

25 How does the first date of exposure fit

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1 into Mr. Wing's exposure profile?

2 A. Okay. In many epidemiologic studies of
3 refinery workers, consistently we have found that
4 if we did find any leukemia risk, increased risk,
5 the risk was limited to those people who were
6 exposed prior to 1947 or '48.

7 And there is a very good reason for
8 that, because in 1947, the benzene standard was
9 lowered from 100 ppm to 50 ppm, and in the
10 following year, in 1948, the standard was further
11 reduced to 35 ppm.

12 So within a short period of two years,
13 the benzene standard was lowered from 100 to 35
14 ppm, significant reduction. And you would expect
15 to see such a reduction in the industry in
16 general. So before 1948, we can assume that the
17 exposure was much higher than exposure subsequent
18 to 1948.

19 Q. And you're basing that on two studies;
20 is that right?

21 A. Based on -- I mentioned one study that I
22 did myself, and certainly, if you look at the
23 NIOSH study, Rinsky's study, all the benzene
24 cases -- I'm sorry, all the leukemia cases were
25 exposed prior to 1948. I did not mention in the
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1 report, but, it's just, you know, general
2 observation.

3 Q. Okay. Well, is it your opinion that
4 people that were exposed after 1948, that they
5 can't have a benzene-caused leukemia? Is that -
6 is that it, if they were exposed after 1948?

7 A. Not necessarily so. I think you have to
8 look at different components of the case. A few
9 minutes ago, we talked about cumulative
10 exposure. Certainly, that is one of the major
11 criteria to -- to consider. And another factor
12 that we should consider is what I pointed out in
13 the first paragraph on page 2. Again, the timing
14 of exposure is not consistent with a
15 benzene-related leukemia.

16 Q. Okay.

17 A. That's what I wanted to point out.

18 Q. Okay. But the key point here is -- is
19 that in 1954, you don't know what his exposure
20 level was to benzene?

21 A. I don't have personal experience.

22 Q. There is no industrial hygiene
23 information that you have on Mr. Wing concerning
24 him cleaning his tools with solvents, possibly
25 benzene. That's right, isn't it?

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1 A. That's correct.

2 Q. And as -- factually, you don't know
3 whether he was exposed to 100 parts per million,
4 or two parts per million, do you?

5 A. No, I don't.

6 Q. Then as it relates to your comment that
7 he was exposed after 1948, and that therefore
8 means that it's doubtful that his AML could have
9 been caused by benzene, you don't have a factual
10 basis for that statement, do you?

11 A. I have a factual basis for that. The
12 fact that in all the epidemiologic studies, if
13 there is any increase of leukemia that would be
14 associated with exposure prior to 1948, and the
15 fact that Mr. Wing was not exposed at -- if any
16 at all, that would be in the mid '50s.

17 Q. Okay. But you don't know what his
18 exposure level was in the mid '50s?

19 A. I was not commenting on his level of
20 exposure -

21 Q. Okay.

22 A. -- in that paragraph.

23 Q. Okay.

24 A. I was commenting on the timing of his
25 exposure.

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1 Q. But timing is not the issue. Isn't it
2 the exposure level, whether or not it was high or
3 low, not whether it was 1948 or 1954, but what
4 was the exposure level? And isn't the point that
5 before 1948, you're saying that the exposure
6 levels were higher, as compared to after 1948? I
7 am right in that?

8 A. You're absolutely right. And, in fact,
9 we spent the last hour working on his exposure
10 level, and that is exactly what I describe on
11 page 1.

12 Q. Right.

13 A. And I point out -- let me finish,
14 please.

15 Q. Go ahead. I'm sorry.

16 A. And I do want to point out that that was
17 not the only consideration. The timing of
18 exposure was not the only consideration. I did
19 talk about level of exposure early on in the
20 report, so I do not want you to take those out of
21 context.

22 Q. Okay. Will you agree with me that
23 whether it was 1948 or 1954, as it relates to
24 Mr. Wing, that this parameter is probably of
25 little significance, that being whether he was
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1 exposed in 1954, rather than 1948?

2 A. No. I -- I disagree -

3 Q. Okay.

4 A. -- because that is a consistent picture
5 that we see. If there is any increase of
6 leukemia risk, that would be limited to people
7 hired prior to 1948.

8 Q. So people that are exposed to benzene
9 before 1948 and develop the disease, such as AML,
10 you put higher probability; in other words, there
11 is a higher probability that disease may have
12 been caused by the benzene because that person
13 was exposed to benzene before 1948; is that
14 right?

15 A. No, because he was exposed to a much
16 higher level of benzene before 1948. And I
17 stated very clear in the paragraph that exposure
18 in the industry prior to 1947 or '48 would be
19 much higher -

20 Q. Okay.

21 A. -- than exposure subsequent to that.

22 Q. And the bottom line is, you don't know
23 his exposure level in the 1950's to benzene?

24 MR. TYLER: Argumentative. It's
25 been asked and answered literally at least a
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1 dozen times. It's argumentative. You are trying
2 to get him to reverse the position that shows up
3 without contradiction in the literature, and I
4 would ask that you move on to something else,
5 because I don't think he is going to do it, and I
6 think you have got a plane to catch, too.

7 Q. (By Mr. Hyde) You have obviously looked
8 at the epidemiological information associated
9 with benzene and the risk assessments associated
10 with benzene, is that correct, specifically those
11 studies and risk assessments associated with the
12 1987 benzene standard, OSHA benzene standard?

13 A. No, I have not seen those.

14 Q. At 35 parts per million, do you believe
15 there was an excess risk of leukemia amongst
16 workers exposed to benzene?

17 A. Depends on how long the exposure would
18 be.

19 Q. Let's assume a 20-year time period.

20 MR. TYLER: Doctor, would it be
21 basically the same calculation you have already
22 gone through today?

23 THE WITNESS: Yes, exactly.

24 MR. TYLER: I am not trying to cut
25 you short and you can pursue it, but I know from
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1 talking with him before, I think he is going to
2 go back to that same calculation.

3 Q. (By Mr. Hyde) You have found, and I want
4 to make sure I understand this, on your 60 part
5 per million years -

6 A. Yes, sir.

7 Q. -- you found an elevated leukemia risk;
8 no elevated incidence of leukemia; elevated
9 mortality of leukemia. Okay? Let's start that
10 over.

11 At 60 parts per million years, you found
12 elevated benzene-related mortality, i.e.,
13 leukemia, in a study that you conducted; is that
14 right?

15 A. Right. And that's after that -- the
16 SMR, the standardized mortality ratio show was
17 not significant.

18 Q. It was -- that was the 150 SMR; is that
19 right? Was the SMR 150?

20 A. No, I think you are mixing up my benzene
21 study with the gasoline study.

22 Q. I'm sorry. Okay.

23 A. That's one of the hazards for someone
24 who has not made the studies.

25 Q. Okay. The 60 part per million years is
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1 equivalent to 20 years of three part per million
2 daily exposure to benzene over a -- over each
3 year; is that correct?

4 A. That's one million at 60 ppm years.

5 Q. Another way might be to have eight-hour
6 time-weighted averages of 30 parts per million
7 for two solid years; is that right?

8 A. I don't think so. That's not -- that's
9 not what we observed in our study. There is a
10 minimum length of exposure in our study.

11 Q. What was the minimum length of
12 exposure?

13 A. If I can have my 87B, in that group, the
14 shortest one was 12 years of exposure.

15 Q. So that would be five parts per million
16 for 12 years, gives you 60?

17 A. Yeah, about right.

18 Q. Okay. Do you disagree with the ACGIH
19 proposal to reduce the TLV to .1 parts per
20 million on an eight-hour time-weighted average?

21 MR. TYLER: Do you mean as a
22 regulatory policy, or as a cause and effect
23 scientific?

24 MR. HYDE: Cause and effect
25 scientific.

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1 MR. TYLER: Do you understand the
2 difference?

3 THE WITNESS: Yes, Sir.

4 MR. TYLER: Okay.

5 THE WITNESS: Yes, I would agree
6 with that.

7 MR. TYLER: You would what?

8 THE WITNESS: I would disagree with
9 that.

10 MR. TYLER: Okay. Thanks.

11 Q. (By Mr. Hyde) Do you disagree with
12 OSHA's one part per million eight-hour
13 time-weighted average for benzene exposure?

14 MR. TYLER: As an issue of science,
15 as opposed to regulatory policy?

16 A. Right.

17 Q. (By Mr. Hyde) You disagree with both
18 ways; is that right?

19 A. One part -- did you say one part?

20 Q. One part per million.

21 A. 1 ppm?

22 Q. Yes.

23 A. 1 ppm over a period of -- I don't know
24 what OSHA assumed. A working life would be 40
25 years. If that's the case, that would -- the
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1 maximum would be 40 ppm years, that would be
2 about 60-some percent of my estimate of 60 ppm
3 years, so I would say it is a little bit on the
4 conservative side.

5 Q. But you don't disagree with it?

6 A. At least the number is close, as opposed
7 to .1 ppm.

8 Q. I take it you strongly disagree with the
9 .1 part per million -

10 A. I don't think that is -

11 Q. -- issued by ACGIH LT?

12 A. I don't think there is any scientific
13 basis for that.

14 Q. Have you talked with any of the ACGIH
15 industrial hygienists concerning the proposed .1
16 eight-hour time-weighted average benzene exposure
17 TLV?

18 A. No, I have not.

19 Q. Have you reviewed the document?

20 A. No, I have not.

21 Q. Now, in your report, you don't talk
22 about butadiene in this report that you have
23 rendered to Mr. Tyler.

24 Do you feel that butadiene did not play
25 a role in Mr. Wing's leukemia?

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1 A. The answer to your question is "yes," I
2 do not think -- or is that the -- a
3 double-negative question.

4 MR. TYLER: We're at -

5 A. Let's start over again.

6 MR. TYLER: That's what I call a
7 "yes, we have no bananas," answer.

8 A. Let's start all over again.

9 MR. TYLER: What is your position,
10 sir?

11 THE WITNESS: My position is that I
12 don't think there is epidemiologic data to
13 support a relationship between exposure to
14 butadiene and -- and increased risk of leukemia.

15 Q. (By Mr. Hyde) Okay. Well, you didn't -
16 you didn't think there was an association between
17 Benzene and his leukemia, or ethylene oxide and
18 his leukemia, but you wrote that in your report.
19 How come you didn't write anything about
20 butadiene?

21 A. I think that was a matter of how much
22 time I have at that time. I was asked to write a
23 report in a matter of a week or so, and I think
24 that was a compromise. I could only do so much.

25 MR. TYLER: Let me explain the
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1 reason. At that point in time, we were involved,
2 I believe, in intense litigation in the Chargois
3 matter. I had to delegate getting the letters to
4 Andrea Moore of our office, but we have supplied
5 today copies not only of the bibliography of
6 butadiene documents, but also -- I mean in the
7 chronology, but also copies of relevant butadiene
8 articles, which are the same ones that we were
9 using in the Chargois case.

10 MR. HYDE: I guess, John, a minor
11 problem I have is being able to examine him on
12 his opinions as to PD without having anything
13 written about his -- you know, in the report.

14 MR. TYLER: Well, we will -- if
15 you -- we can -- he can either state it now, or
16 if you would like it in writing, we will be glad
17 to supply it in writing and provide him again for
18 inquiry on that by telephone, if you would like,
19 that would be perfectly fine.

20 MR. DAS: Kind of like we're going
21 to do with your experts on the plant inspection.

22 MR. HYDE: I think that would be a
23 fair deal.

24 MR. TYLER: It was an oversight and
25 not a calculated step to -- that butadiene was
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1 not discussed in there.

2 MR. HYDE: Okay.

3 MR. TYLER: The focus that I

4 originally requested Dr. Wong to hit on was

5 primarily butadiene, and then ethylene oxide,

6 because at that point -

7 THE WITNESS: You mean "benzene."

8 MR. TYLER: Yes. Thank you,

9 Doctor, benzene and ethylene oxide because of -

10 that was really the main thrust in the experts

11 that you all presented.

12 MR. HYDE: Okay.

13 MR. TYLER: Which, I think,

14 Dr. Teitelbaum being the only exception.

15 Q. (By Mr. Hyde) Of course, you opined here

16 that ethylene oxide did not contribute to cause

17 Mr. Wing's acute myeloid leukemia; isn't that

18 right?

19 A. That's correct.

20 Q. That would -- okay. Do you have any

21 opinions as to the level of exposure that

22 Mr. Wing had to ethylene oxide at either the PCI

23 plant in Lake Charles, or the Allied Chemical

24 plant in Orange, Texas?

25 A. No, and I don't think that is a factor,

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1 because based on my opinion, there is no
2 relationship between ethylene oxide and leukemia,
3 period.

4 Q. No matter what exposure level?

5 A. Right.

6 Q. Of course, OSHA regulates ethylene oxide
7 as a carcinogen, doesn't it?

8 A. That's before they knew about the study
9 that I quoted in my report.

10 Q. Okay. Well, but as of right now, OSHA
11 is still regulating ethylene oxide as a
12 carcinogen?

13 MR. REVACK: Let me object. If you
14 know that, Doctor, to be a fact, go ahead,
15 Counselor.

16 A. That's true. But again, you know, OSHA
17 is -- does not act immediately, you know, upon
18 new knowledge.

19 Q. (By Mr. Hyde) What is the IARC
20 classification of ethylene oxide?

21 A. I don't know.

22 Q. What is the IARC classification of
23 benzene as a carcinogen? Do you know what it
24 is? Is it 2A? 2B? Do you know?

25 A. I think 2A.

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1 Q. Okay. Do you know what the IARC
2 classification is of butadiene?

3 A. No.

4 Q. Now, you go on in your last paragraph
5 and you say, "Based on my review summarized here,
6 I do not find any occupational exposures in
7 Mr. Wing's employment history that would have
8 played a significant role in the development of
9 his AML."

10 What do you mean by "significant role"?

11 A. "Significant" meaning that would
12 increase his risks of AML.

13 MR. TYLER: I asked that question
14 in depo. Off the record.

15

16 (There was a discussion held off
17 the record.)

18

19 Q. (By Mr. Hyde) Dr. Wong, in other words,
20 when you say a "significant role," you don't even
21 see these chemicals as playing a contributory
22 role in the cause and development of Mr. Wing's
23 AML; is that right?

24 A. Yes, sir.

25 Q. There is no way that benzene contributed
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1 to his AML?

2 A. Not at that level.

3 Q. But you do think that cigarettes played

4 a role in his leukemia; is that right?

5 A. Yes, sir.

6 Q. There is benzene in cigarettes?

7 A. Yes, benzene cigarette smoke, yes.

8 Q. How much?

9 A. I don't recall. The exposure -- the

10 concentration can be fairly high.

11 Q. Is there benzene -- is there butadiene

12 in cigarette smoke?

13 A. There may be some. I am not sure.

14 Q. Okay. Could the benzene from the

15 cigarettes have contributed to cause Mr. Wing's

16 AML?

17 A. That point, nobody knows at this point.

18 Q. Okay.

19 A. All we know is based on the

20 epidemiologic studies, people who smoke have a

21 higher rate of AML than nonsmokers.

22 Q. Well, do you have an opinion whether or

23 not the benzene from the cigarette smoke could

24 have contributed or did contribute to Mr. Wing's

25 AML?

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1 A. I don't have an opinion on that. All I
2 am offering is people who do smoke have a higher
3 rate of AML than people who do not smoke.

4 Regarding the mechanism, I do not know.

5 Q. How do you know that Mr. Wing smoked two
6 packs a day?

7 A. That was based on a couple of documents,
8 his trans -- transcript of his deposition, and
9 also some medical records, as well.

10 Q. How many years did he smoke?

11 A. I have the pack years. One place he
12 mentioned ten to 12 pack years.

13 Q. Is that a significant smoking history to
14 you?

15 A. Ten to 12 pack years? Moderate.

16 Q. Moderate-low?

17 A. I didn't say low; you said low.

18 Q. You say -

19 A. You just changed it.

20 Q. You say "moderate"?

21 A. I said "moderate," yes.

22 MR. TYLER: He says "potato."

23 MR. REVACK: Keith says "low."

24 THE WITNESS: I have to be fully
25 awake even at 4:00 in the afternoon.
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1 MR. TYLER: Let's take a one-minute
2 break.

3 THE WITNESS: No. No.

4 MR. TYLER: He needs to collect his
5 thoughts, anyway.

6 MR. HYDE: I'm almost done.

7

8 (There was a discussion held off
9 the record.)

10

11 Q. (By Mr. Hyde) Do you plan on doing
12 anymore work in this case, Dr. Wong?

13 A. It depends on what -

14 Q. I mean do you -

15 A. -- what Mr. Tyler asks me.

16 MR. TYLER: I anticipate he is
17 going to testify.

18 MR. HYDE: At the trial.

19 Q. (By Mr. Hyde) Have you understood my
20 questions today? I mean do you need to change
21 any of your answers?

22 A. Would I change?

23 Q. Yeah. Do you have -

24 MR. TYLER: No. Were you confused
25 by his questions during the deposition today, so
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1 that you need to change your answer?

2 THE WITNESS: No, I don't think

3 so.

4

5 CROSS-EXAMINATION

6 QUESTIONS BY MR. TYLER:

7

8 Q. Just one, sir. Have I ever told you

9 specifically who my clients were in this case?

10 A. You must have told me when we first

11 talked.

12 Q. Okay. Does it make any difference with

13 regard to your opinion who the parties are in a

14 lawsuit?

15 A. Absolutely not.

16 MR. TYLER: That's it.

17 MR. HYDE: Pass. Reserve the rest

18 of my questions until either the telephone

19 deposition, if necessary, or time of trial.

20

21 (Deposition concluded)

22

23

24

25

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1 THE STATE OF TEXAS

2 COUNTY OF

3

4 I, OTTO WONG, Sc.D., F.A.C.E., hereby
5 certify that I have read the foregoing transcript
6 of my testimony given in the foregoing numbered
7 and styled case, and that same is true and
8 correct to the best of my knowledge and belief.

9

10 I further certify that any and all
11 corrections have been made on a separate page and
12 initialed by me.

13

14 This day of

15 1991.

16

17

18 OTTO WONG, Sc.D., F.A.C.E.

19

20 SUBSCRIBED AND SWORN to before me,
21 the undersigned authority, on this the
22 day of , 1991.

23

24

25 Notary Public in and for
The State of Texas

NELL MC CALLUM & ASSOCIATES. INC.

215

1 NO. B-134,406

2

RAY WING, ET UX IN THE DISTRICT COURT OF

3

4 VS. JEFFERSON COUNTY, TEXAS

5

SHELL OIL COMPANY,

6 ET AL. 60TH JUDICIAL DISTRICT

7

REPORTER'S CERTIFICATION

8 TO THE DEPOSITION OF

OTTO WONG, Sc.D., F.A.C.E.

9 TAKEN ON NOVEMBER 13, 1991

10

I, Kathy Schaefer Miller, Certified

11 Shorthand Reporter in and for the State of Texas,
hereby certify, pursuant to the Texas Rules of

12 Civil Procedure and/or agreement of the parties
to the following:

13

That this deposition transcript is a

14 true record of the testimony given by the witness
named herein, after said witness was duly sworn

15 by me.

16 SUBSCRIBED AND SWORN to on this the 15th
day of November, 1991.

17

18

19 _____

Kathy Schaefer 'Millet/

20 Certified Shorthand Reporter

in and for the State of Texas

21 Reporter Certification No. 739

Expiration: December 31, 1992

22

23 Nell McCallum & Associates, Inc.

2900 Smith, Suite 104

24 Houston, Texas 77006

(713) 523-3767

25

NELL MC CALLUM & ASSOCIATES, INC.